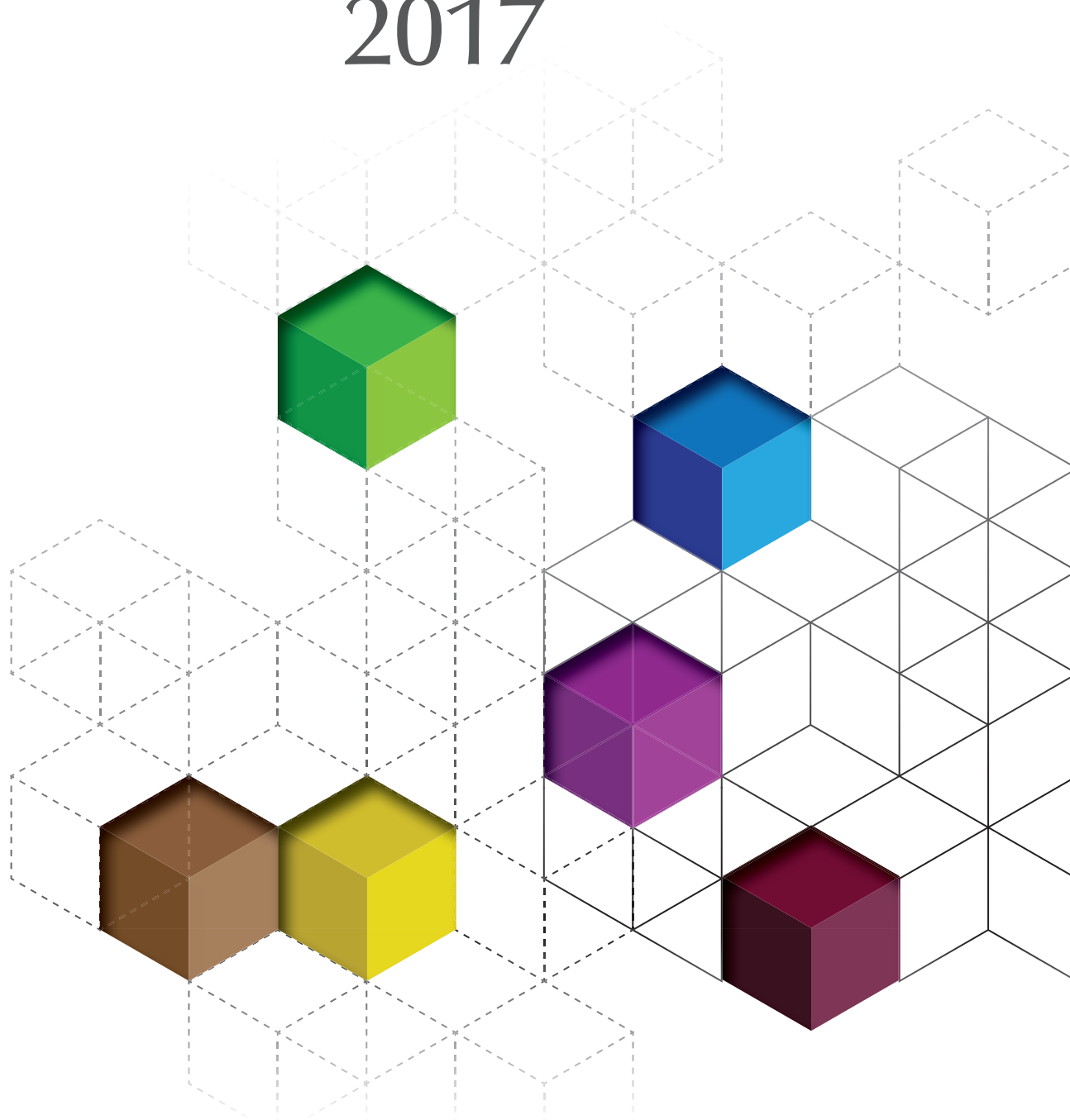


GOOD STATE AND GOVERNANCE REPORT 2017



BUDAPEST

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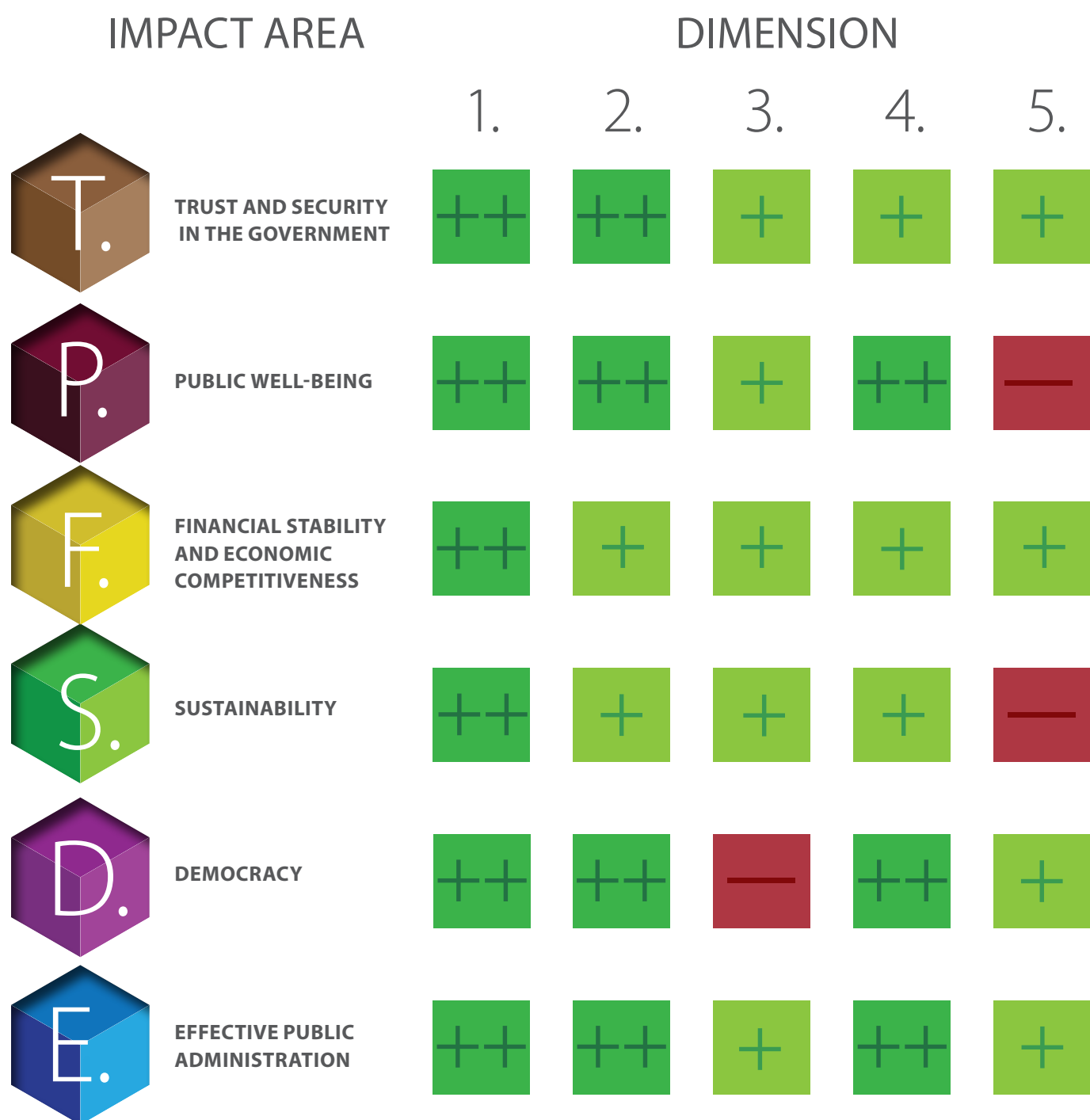
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GOOD STATE AND GOVERNANCE MOSAIC



Legend:



growth



positive expectations



in need of development

INTRODUCTION

THE CONCEPT, STRUCTURE AND FURTHER DEVELOPMENT OF THE *GOOD STATE AND GOVERNANCE REPORT*

Concept

The developments of recent years, the financial and economic crisis, the effects of the climate change, and measures to combat terrorism and illegal immigration have reinforced the government's state-centric approach and practice; on this basis the state must take on a role of creating and protecting value in the political, economic and social spheres in order to enforce the abstract system of ethical norms that serves the interests of the common good. The unique position of the government makes it capable of institutionalising the various rules and norms in its own territory, as well as coordinating all aspects of society, protecting and growing public assets, providing public services, and ensuring responsibility and accountability through its centrally managed bodies.

The *Good State* concept, which is closely related to the idea of good governance and good administration that underpins the ethical norms of the common good and good public service, gives expression to this paradigm shift. The increasing responsibility of the state and government, as well as the practice of an integrated approach necessary for performing increasingly multi-layered, often overlapping tasks requires increasingly significant capacities and institutional, administrative and human resources, the creation, *maintenance* and continuous development of which can be regarded as integral to the exercise of everyday governance. The gravity of the problem is demonstrated by the fact that numerous major international organisations (the Organisation for Economic Co-operation and Development, United Nations, World Bank, World Economic Forum and International Institute for Management Development) engage in the complex evaluation of government performance, developing indicator systems necessary for such and preparing and publishing averages, trends and rankings suitable for comparison. The theoretical diversity reflecting the extraordinarily rich scholarly literature of the applied social sciences and the varying methodologies of their measurements and evaluations express a government's dilemmas and choices with respect to value on the one hand, while triggering debates and cognitive learning processes that contribute in large measure to the development of the quality and effectiveness of governance on the other.

Of the widely applied core concepts adopted from international practice, we consider *state capacity* to be an explanatory factor referring to those potential institutional capabilities the state possesses through the constitution, Fundamental Law, government programme and various legal norms to implement and enforce the policies it has undertaken. From these quantitative variables, it is possible to draw conclusions about the development of governance capacities. The concept of *governance capability* refers to the instrumental dimension of the exercise of power, or rather its mobilisation, implementation and/or development as part of a means-ends relationship involving the institutional, administrative,

legal, financial, infrastructure and defence capabilities required to govern. These categories, however, are strongly context-dependent, that is, their real meaning actually emerges only from the practice of governance. It is precisely for this reason that, when measuring state capacities and governance capabilities, it is both important and essential to determine whether the relevant interpretive frameworks are formed by the concept of a *stateless*, self-limiting governance with restricted capability to act or, on the contrary, by an actively engaged, state-centric governance that is capable of action. The former emphasizes the checks and balances between the branches of power, as well as the importance of social self-regulation and *socially centric government*. The latter rejects the *hollowing out* of the state, and the weakening of state capacities and government capabilities, while at the same time considering it to be of fundamental importance that governments take primary responsibility of directing and coordinating society, but may also choose the method, tools and system of regulation for carrying out their tasks and responsibilities.

On the basis of the above, it becomes necessary, in the interest of achieving effective operation, sustainable results and the associated state reform capable of self-reflection, to develop and continuously operate a measurement and evaluation system that, by focusing on specific areas influenced by government activities (hereinafter referred to as impact areas) provide feedback on substantive elements of and changes to governmental effectiveness.

The National University of Public Service (NUPS) considers it a task of paramount importance for its faculties, institutions, doctoral programmes and research sites to contribute to the development of a system of conditions for the operation of a modern state and effective national public administration through an interdisciplinary approach and by developing a research-supported knowledge base. Government Decree 1602/2014. (XI. 4.) established that the Government agreed with the creation of the National University of Public Service as an institute of higher education dedicated to the sciences of state and governance in harmony with the State Reform II programme for reducing bureaucracy. In order to carry out this important task, the NUPS Senate established, with Resolution No. 114/2014 (X.15.), the Institute of the Sciences of State and Governance (ISSG), which operates workshops to carry out research in the field of political sciences and synthesise and integrate both existing and newly generated results. The name of the ISSG was amended to the Institute of State Governance and Public Policy (ISGPP) on 1 February 2016 to reflect the shift in the focus of its activities from education and research to development and its coordination.

The fundamental aim of the State Reform Centre (SRC), which operates within the organisational structure of the ISGPP, is to conduct research activities that are partially empirical and partially anticipatory to provide a theoretical and scientific background with the specialist support of the Measurement and Methodology Office (MMO) established within the framework of the centre. A key

element of its activities is to maintain the scientifically grounded measurement and evaluation methodology, database and set of indicators established in the interest of operating, developing and continuously reforming the Good State and Governance Report. All of this also means that the targets, conceptual frameworks and indicators of the Good State and Governance research attempt to evaluate and measure the aforementioned concept of a state and government that is capable of action.

The results of the Good State and Governance research were presented within the framework of workshop debates and academic conferences organised by the National University of Public Service, as well as a series of publications and workshop reports. Following the completion of the individual research phases, we will publish the Good State and Governance Report (hereinafter referred to as the Report) on an annual basis, the purpose of which is to develop and continuously operate an autonomous evaluation methodology drawing on its own database that provides feedback on changes in the effectiveness and quality of the government over a defined period of time.

Questions related to the conceptual and methodological basis for the report are addressed in the Measurability of Good State and Governance volume of studies. These studies introduce the assumptions and objectives of the research associated with the individual impact areas, and the criteria for selecting and evaluating the indicators that provide the basis for measurability. The researchers heading the impact areas accept and take full responsibility for the methodologies, analyses and conclusions provided in the reports. The Good State and Governance Report is the intellectual property of the National University of Public Service research community, and the methodologies used and associated analyses fall under the professional responsibility of the heads of each impact area.

Structure

The first phase of the research was completed with the publication of the 2015 Good State and Governance Report (hereinafter: 2015 Report) in June 2015, which also defined the structural and methodological framework of the subsequent reports.¹ The Report was not created with the aim of repeating and adhering to the normative perspective of international rankings, and the competitive and comparative approach based on such. Instead, it is built upon the approach taken by international evaluations of performance, whereby government performance is inseparable from the given country's socio-economic position, as well as its special attributes and problems, and is therefore better suited to the comprehensive measurement of government performance. The value of the Good State and Governance Report – as its own unique and varied *genre* adapted to the requirements of those preparing and using it – stems, first and foremost, from the merging of the specific methodological characteristics of the *scoreboard* and *government dashboard*. In

other words, the Report – as intended – is among the available scientifically grounded tools to support government decisions, so its primary target audience are the players and professional bodies and workshops involved in preparing decisions. The Report does not currently attempt to provide detailed data related to sector-specific strategies to directly support governmental decision-making and provide the basis for drafting laws. However, it is suitable as a form of thematic analysis and orientation providing a *bird's eye view* to support *measuring back* the various phases of decision-making. At the same time, allowing regular feedback from government and academic areas and research related to the Report to build on one another creates an opportunity for ongoing development of the technical and methodological elements of the Report, and for the measurements and analyses to be carried out for specific areas of individual industries and sectors.

The *scoreboard* function is an indicator-based approach that allows data to be systematically quantified numerically. Government capabilities can be determined on the basis of a set of general yet holistic indicators (e.g. GDP per capita, mortality rate, child mortality, road networks). Nevertheless, there are also *one-dimensional* measurements (wealth of the state, the budgetary situation, tax bureaucracy, quality of public services) that allow one to deduce the entirety of the state capacity from the quality of the chosen dimension. The most common solution is to *multi-dimensionally* break down capacities and capabilities in *multiple dimensions* based on specific criteria, where the dimensions evaluate the relationship between the characteristics intended to be measured and the corresponding indicator. The goal set by the Report to capture the added value of government capability across various impact areas is best served by a hierarchically devised, complex index indicator system developed, according to the expert opinions, by the Good State and Governance Research Working Group.

In accordance with this, the structure of each Good State and Governance Report is formed by four levels layered one over the other. The first level is the complex phenomenon of the Good State. Below this uppermost level are the impact areas. The impact areas express the interrelationships between major sectors from the perspectives of economics, society and public administration, which can be recorded either separately or comprehensively and together provide a measurable picture of the government capabilities fundamentally determining the functioning of the Good State. The indicators formulated during the Good State and Governance research measure the strengths and weaknesses of government capabilities across the six impact areas listed below:

1. Trust and Security in the Government
2. Public Well-being
3. Financial Stability and Economic Competitiveness
4. Sustainability
5. Democracy
6. Effective Public Administration

The third level is formed by the dimensions. While each impact area pertains to a major, general subject area, it is through the dimensions that the strongest specific phenomena are captured within a given impact area. A dimension can be homogeneous, that is, the indicators used in the system are really different measurements pertaining

¹ The 2015 Good State and Governance Report is available for download from the website of the Institute of State Governance and Public Policy: <https://akfi.uni-nke.hu/document/akfi-uni-nke-hu/good-state-and-governance-report-2015-final.original.pdf>

to a given area and are measured on the same scale accordingly. The approach of the reports, in contrast to this, is multi-dimensional (heterogeneous), since, according to their starting points, the impact areas of governance are not uniform and can thus be broken down into further sub-areas.

In order to measure these sub-areas, indicators associated with the individual dimensions are used to make up the fourth level. The complete set of all associated indicators forms the indicator system. Arranged into groups, the indicators fit into sub-areas, which go hand in hand with the methodological variegation in that the indicators measure a variety of scales that cannot be directly compared. Throughout development of the system of indicators, we continuously paid attention to using indicators from credible, official sources based on methodologies with a minimum of subjective factors, and that are able to ensure consistency over time, while correcting the data for the indicators used – based on the annual release of source data – retrospectively in each year's Report.

On this basis, the report's structure forms a 6 x 5 x 5 matrix: five dimensions for each of the six impact areas, and five indicators for each dimension.

The report's *governmental dashboard* function is based on a system of indicators whose impact areas and indicators remain mathematically independent from one another, but nevertheless constitute a unified whole owing to the fit of their content and their structural and formal similarity. Therefore, already in the first stage of research, the SRC rejected the possibility of developing a composite indicator summarising the entire Good State and Governance indicator system. Although this would make the index quantifiable each year, it would be situated at the top of a highly intricate indicator system and therefore oversimplify what is a remarkably complex calculation. In addition, the numerous elements of the indicator system are substantively independent from each other, so changes within the indicator system complement one another. This, however, raises the question of how change can be technically presented, interpreted, and applied to the observed phenomenon, that is, to the Good State and Governance, and to government capabilities.

In order to avoid the above anomalies, the *dashboard* approach considered key to the Report is built on benchmark-based correlation, which also means that if a basis year is not available, then generating the basis becomes one of the research tasks. The value factors (positive or negative) assigned for the indicators express the direction of change in the qualification. The measurements, starting from a base value, receive a positive or negative valuation to allow for the evaluation of the changes as positive (improvement) or negative (deterioration). Value-based conclusions can only be drawn on the basis of quantitative variables if the effects against the quantity of the obtained value (low or high), or the result (an increase or decline in governmental capability), also become perceptible.

From all this it follows that the aggregation of governmental aims, results and effects can only be rendered measurable by employing a certain degree of methodological complexity.

The direction for further development

Observing the principle of persistence and permanence of data over time, we applied the same system of objectives to compiling the 2016 *Good State and Governance Report* (hereinafter: 2016 Report) as used to prepare the 2015 Report.² At the same time, we allowed some scope for individual indicators to be replaced to a limited degree in cases where this could be justified, insofar as a more appropriate indicator was available that better described government capability or changes to it over time, or if updating data would prove problematic for an indicator used previously. More significant changes to two impact areas (sustainability, democracy) were justified on the basis of changes to the measurement and evaluation concept.

The 2016 Report was enhanced by two important innovations compared to the 2015 Report. On the one hand, the Good State and Governance Opinion Survey (GOS) prepared in parallel to the Report represented an opportunity to expand on the previously used, primarily *hard* statistical indicators with *soft*, perceptual (emotional) indicators reflecting the opinions of the population. It must be noted that the topic areas included in the survey were not evenly distributed across the individual impact areas given their unique characteristics. The results of the opinion survey were primarily incorporated into the indicator systems of the Effective Public Administration and Public Well-being impact areas (three indicators in each). The collection of multivariable, nationally representative data also provided an excellent opportunity to disseminate their constituent, detailed indicators and related analysis in the form of an independent publication (GOS).

The second new feature of the 2016 Report was the addition of the international dimension of indicators. In the interest of including this, the diagram showing the domestic timeline has been supplemented by the *temperature gauge* of the international comparison diagram that includes data – sourced and most recently updated from international databases – from the EU28 mean and the Visegrád (V4) countries in all cases, as well as other nations considered to be of relevance and appropriate to the methodology by the individual impact area workgroups (62 international datasets in all). The data for the international indicators was largely provided by the Hungarian Central Statistics Office (HCSO) on the basis of Eurostat data.

It is important to note that it is only worth regarding the international data as a framework for evaluating domestic values as it is not possible to determine the actual state and performance of a country based on a particular single year's data (a good example of this is the change in the minimum wage), and a further hindrance is represented by the fact that it is not possible to provide international comparisons for all indicators used in the Report. There may be several reasons for this: international data are not available or accessible, and if they are, a divergent methodology may make them unsuitable for comparison. In some cases, the time series data differs from the data for international comparison, for the following possible reasons:

² The 2016 *Good State and Governance Report* (expanded version) is available for download from the website of the Institute of State Governance and Public Policy: http://archiv.akfi.uni-nke.hu/uploads/media_items/nke_3840_5_2016_jo_allam_jelentes_bovitett_valtozat_original.pdf

- Different unit of measurement: while the domestic dataset is available in petajoules, for instance, the international database contains TOE (tonne of oil equivalent) values.
- Different currency, where the distorting effect of exchange rates is greater for older data.
- In the interest of international comparison, the data are provided in relation to population or GDP, for instance.
- Issues associated with rounding of data from public databases that cannot be traced back may also cause minor deviations.
- The reporting dates for data may diverge as, for a given year, one source may use the annual mean, while another may use the value on a particular date.
- Deviations may also occur due to minor corrections applied by Eurostat.

Regardless of the above, the international comparisons are founded on official data and can be considered statistically reliable.

This publication contains the 2017 Good State and Governance Report (hereinafter referred to as the Report). The 2017 Report maintained the conceptual and contextual framework, system of objectives and structure of previous reports – although refined in places – and there has been no change in the number of dimensions and impact areas. At the same time, the 2017 Report responds in countless respects to the criticisms, comments and recommendations received following the 2016 Report and introduces several new and innovative solutions and developments.

The objectives and planning of the 2017 Good State and Governance Opinion Survey expands on and enriches the 2016 survey. It organises into a unified conceptual framework the understanding of perceptions of the population regarding state tasks and their distribution, looking at four central terms: public well-being, trust, satisfaction and the Good State. It explores in detail the assessment of the four systems of key importance to governmental capabilities (education, health care, public order, national defence, administration of justice, and stimulation and regulation of the economy), as well as extending to governmental commitments associated with sustainability and satisfaction in this regard. As a result, the 2017 Good State and Governance Opinion Survey covers a considerably wider spectrum of the government's areas of operation, and such that questions on public administration were included as part of another representative national survey, also of 2,500 people also made possible within the scope of the Public Service Development Establishing Good Governance project (PACSDOP-2.1.2-CCHOP-15-2016-00001). From the two surveys, eight indicators were included in the Report, with five in the *Effective Public Administration* impact area and three in the *Public Well-being* impact area.

In international comparison, the number of *temperature gauges* has increased (from 62 to 75) in comparison to last year, so it is now possible to compare half of the indicators in the Report against the V4 and other countries of particular relevance with respect to the given impact area. We continued to be consistent in applying the principle that *temperature gauges* should only appear for those indicators where databases containing standardised data (primarily from Eurostat) make comparison possible from a methodological perspective. The new feature of this year's publication is that an international map has been added for those areas of particular

importance to support the presentation of richer information on the given area. The most striking addition to the 2017 Report is the prominent display of the regional dimension and related analysis. It had already become apparent in the previous years of preparing the reports that there are significant regional differences that are yet to be identified for certain indicators. A good example of this is the case of economic development: The GDP per capita of Hungary reached 68% of the European Union average in 2015. However, this national figure conceals considerable disparities: while the development of the capital, Budapest is higher than the EU average, 16 counties are below the national average, and there are some where the value is less than a third of the EU average. Another example would be the total fertility ratio, which is significant with respect to the population decline and is demonstrably higher in the northeast of the country than in Central Hungary and Western Transdanubia.

For many of the indicators in the Report, regional differences within the country cannot be assessed, so we have displayed – as mentioned previously – a map providing an overview of Europe to aid international comparison where the relevant data is available.

When preparing the maps, we had to decide – depending on the availability of data – on which level of public administration to present regional disparities and what scale to use. The decision-making process was made more difficult by the challenge of displaying the maps in a consistent manner if possible and presenting the given indicator as effectively as possible – criteria that were frequently in conflict. The consideration of ensuring legibility became important when it was not possible to decide where to place rounded values on the basis of the intervals on the legend, in which case they were assigned to the lower category. The questions of methodology for creating the maps are introduced in detail in the measurability study. In the end, we added maps for almost half of the indicators with the intention of further enriching the information provided in the Report.

The *scorecard* and *dashboard* functions of the reports both contribute to the development of the database and measurement system of the content of and changes to effective public administration. An important element of this is the specialist and administrative contribution of the Measurement and Methodology Office, which operates within the framework of the SRC with a view to achieving the goals set by the so-called Good State and Governance indicators defined by the beneficiaries within the framework of priorities 1 and 2 of the Public Administration and Public Service Development Operative Programme (PACSDOP).

The results of the Report have been summarised since the first, 2015 edition in an easy-to-understand, coloured (red and green as of last year) table resembling a chessboard. The Good State and Governance Mosaic assesses each dimension of the six impact areas on a three-degree scale (growth, positive expectations, and in need of development).

The analysis performed by the specialists collaborating on the 2017 Report is therefore based on the smallest elements of the dimensions, which are considered to carry equal weight and define the structural breakdown of the Good State and Governance concept. Their separation into indicators is covered in the further sections of the report, which introduce and analyse the individual impact areas in detail. Taken as a whole, the mosaic illustrates short-

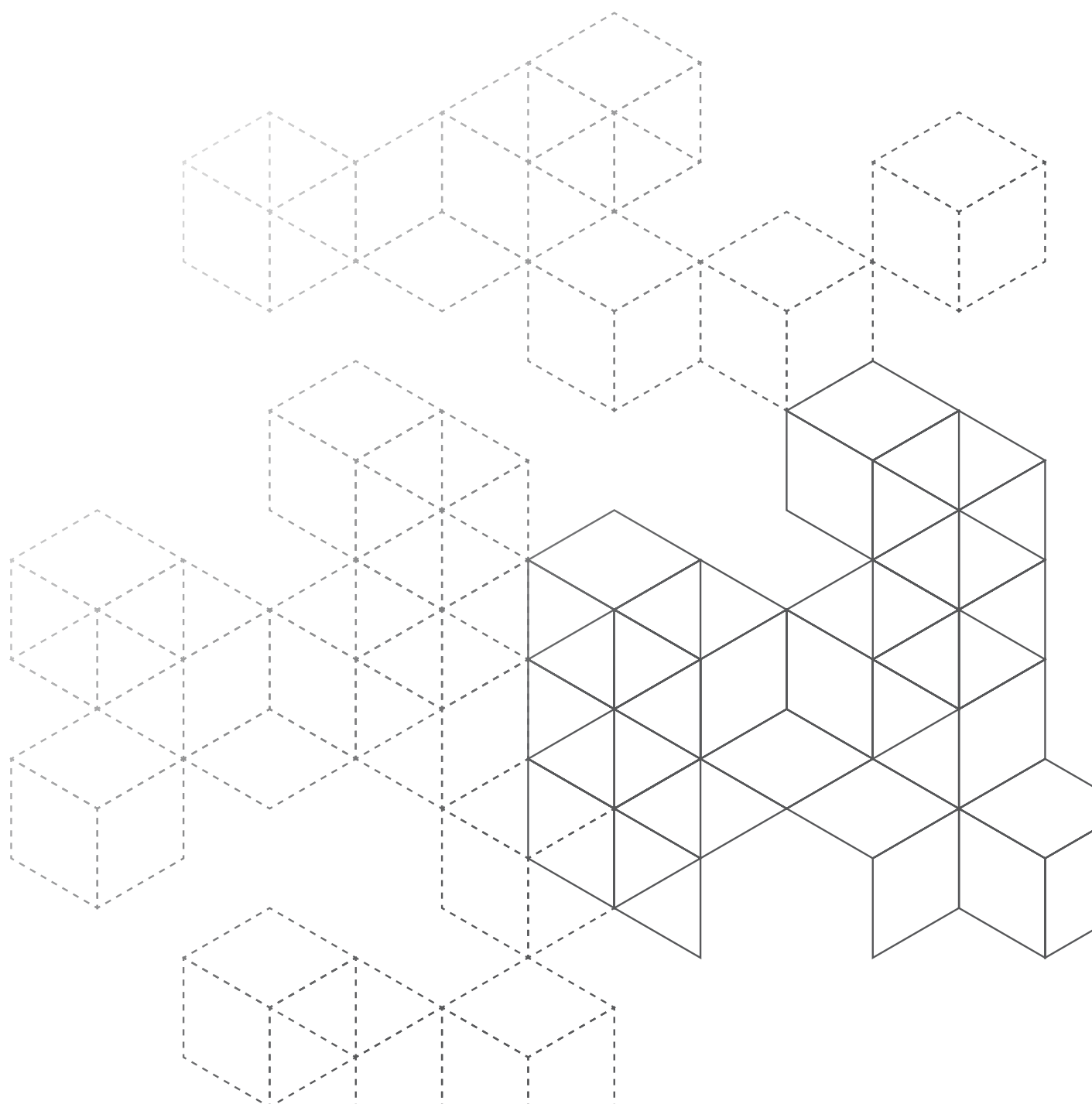
term changes to government capabilities presented in the form of dimensions.

During the course of the analysis, the short-term trends of three or four years for the five indicators in each dimension are rated on a three-point scale (deterioration, stagnation, improvement) by experts on the individual impact areas. Following this, the value for the dimension on the Good State and Governance Mosaic (growth, positive expectations, and in need of development) is set on the basis of consolidation subject to the weighting assigned based on the significance of each within the given dimension.

Last, but certainly not least, we would like to express our thanks to the management and staff of the HCSO for lending their expertise to the preparation of the 2015, 2016 and 2017 Reports. Given that a large proportion of the indicators used are founded on data provided by the HCSO, we indicated their source as the HCSO in every instance.

The chapters of the 2017 Report are constructed based on the following uniform structure:

- A brief summary of conclusions regarding the impact area (positioning of the impact area, criteria for selecting dimensions and indicators, and explanation of the governmental capabilities relating to the given impact area).
- Definition of the main indicators and secondary indicators, individual analysis and visual depiction.
- The *temperature gauge* positioned on the sides of the pages to allow international comparison of the indicators.
- Display on a map of the regional disparities in national and international data behind the values of the indicators.
- Conclusions drawn on the basis of a comprehensive analysis of the indicators with a key thought graphically highlighted in a box.



TRUST AND SECURITY IN THE GOVERNMENT

SUMMARY¹

A sense of security is one of the most fundamental requirements for both people and actors in the business and NGO sectors. Creating security and a perception of (public) safety is one of the most important tasks of good governance, and a key factor in the establishment of trust in the government.

The Good State and Governance Report measures the processes, results and effects of government competence and activities in five dimensions across the impact area of societal security and trust:

- external security
- public safety and disaster prevention
- legal security
- public trust in government and transparency
- security of livelihood

The *external security indicators* show the government's capability to provide protection against a potential external armed attack, and eliminate or mitigate the potential danger. In a constantly changing security environment, challenges, risk factors and threats now manifest themselves on multiple levels. Increasingly, those security policy challenges are coming to the fore that require a comprehensive and coordinated political, economic and military approach.

Defence expenditure as a percentage of GDP began to rise in 2016 following a period of stagnation, which is a suitable foundation to boost the country's military power and security potential.

The Global Firepower Index (GFP) for Hungary showed a slight decrease between 2013 and 2017, but despite this the country's military strength essentially remained stable in the recent period.

As a result of a defence review of security and military defence in Hungary, a vision emerged of a volunteer-based, expeditionary-style force in 2003. The establishment of a lighter and more mobile military capable of playing a more active global role required considerable structural and operational modifications. Tasks associated with recruiting, training and deploying personnel have also been adapted. The number of Hungarian army personnel approved by the National Assembly has been growing slightly since 2007.

Press reports of hacker attacks are appearing daily, so prevention of such attacks and the existence of responses developed for such cases are of high importance. One of the most internationally accepted indicators of a country's cybersecurity preparedness is the number of information security incidents reported by public administration organisations, and within this the breakdown of individual types of incidents. According to Act L of 2013, reporting such incidents is mandatory in Hungary. The majority of cybersecurity incidents in Hungary can be attributed to deficiencies in the administration of IT systems, and the rate of detection of sophisticated attacks is very low.

Hungary's membership of international organisations and its compliance with its international obligations contributes to increased international peace and security, further enhancing the country's reputation. In addition to mutual protection, Hungary's NATO

membership represents shared responsibility, collaboration and, on occasion, joint military operations. Contributions to shared defence activities and international military operations, participation in the maintenance and development of the capabilities of these requirements, and reinforcement of partnerships are among the fundamental tasks associated with these alliances. Hungary participates in various international missions in proportion to its military firepower.

Public safety covers the government capability to prevent and discover phenomena that are hazardous or harmful to public order and to mete out punishment to those responsible. This includes the *disaster prevention capability*, which assures protection against harmful natural and industrial events.

The HCSO has conducted statistically verified domestic surveys on the changing perceptions of public safety over the last four years. Analysis of trends can be based upon these outcomes regarding the population's perception of safety in public areas and in their living environment. According to the data gathered by the HCSO from 2013 to 2015, the population's perception of safety has improved each year. Among those polled, two-thirds on average were satisfied with the public safety of their environment on average. A quantifiable improvement in the government's crime prevention and law enforcement capability over the last five years is indicated by a numerical drop in a sample group of reported violent crimes. Law enforcement capacities have strengthened, state expenditures on public order show a positive trend and the number of law enforcement personnel has also increased, while public confidence in the police has also improved. Each of the five indicators shows positive tendencies, which shows the improving performance of the Hungarian state with regard to this dimension, not to ignore the fact that there is still ground to be made up in certain areas in international comparison.

Legal security is subject to the government's ability to engender trust in the legal system and to create a sense of security safeguarded by law. The most basic requirements of a legal system are confidence in legislation and jurisprudence, which we consider to be the key indicators of the dimension. Confidence in the legal system fundamentally impacts the decisions of citizens and legal entities. These decisions exist in a broad spectrum from contractual relationships to economic decisions and efforts to pursue legal remedies.

Subjective assessment of the legal system is influenced by the justice system's capacity, preparedness and independence, alongside numerous other objective factors such as the clarity of judicial decisions and media communications related to the functioning of the legal system. Trust in the legal system is further influenced by the income level of the individual country (the level of trust is higher in richer countries) and the extent of social inequality. The countries facing greater inequality generally have lower trust, but it is the countries of Central Europe that are an exception: The level of income inequality in the Visegrád countries is low in European comparison, but the same applies to trust in institutions.²

¹ The authors of this chapter are Prof. Norbert Kis, PhD (workgroup leader), Zoltán Jobbágy, PhD, Bence Mészáros, PhD, András Téglási, PhD, Zsuzsanna Hutkai, PhD.

² Zsolt Boda: *Bizalom, legitimitás és jogkövetés*. [Trust, Legitimacy and Legal Compliance.] 849. http://jog.tk.mta.hu/uploads/files/32_Boda_Zsolt.pdf

Since 2013, the HCSO has reported a steady increase in trust in the legal system and a steady decrease in lack of trust. The expansion of online accessibility to the legislative process and legal statutes, systematic deregulation and the introduction of a mandatory preliminary legislative impact assessment system (2011), all of which point to an improvement in the quality of legislation.

Financial resources for the judicial system have grown continuously since 2010. A moderate improvement can be seen in the time required to administer civil lawsuits. Judicial appeals data show slowly improving satisfaction on the part of petitioners with regard to the judiciary's decisions, but results fluctuate slightly each year. Also improved is the acceptance of decisions from courts of first instance in civil suits. Following several years that saw a downward trend in the time it takes for the litigation process to run its course, this period slightly increased in 2014 and 2015, before falling slightly in 2016. However, owing to the constitutional autonomy of the judicial system, these indicators only indirectly reflect government capabilities.

Public trust in government and transparency is a fundamental value of the rule of law and democracy.

Transparency indicates governmental capability for openness. Transparency is fundamentally an outcome, the effect of which is trust. The essence of transparency lies in the availability of governmental information of public interest and the openness of policy analysis and decision-making processes.

The means for strengthening transparency and trust is the government's ability to prevent corruption. Since 2010, growing public trust and political stability has been measurable in governance, with the important indicator for this being the ratio of parliamentary seats won by the governing party at the election as a proportion of all seats. In a democracy, government stability can only be regarded as a virtue if democratic values are observed to the fullest extent. Public trust in government and transparency of governance coexist in the strongest logical correlation.

The fluctuating growth in the number of public information requests made of the Hungarian National Authority for Data Protection and Freedom of Information (HNDF) that result in findings of illegality is a function of an increase in civil initiatives along with increasing implications of legality in proportion to this.

The primary factor in assessing the quality of governance is social sentiment in relation to government trust and corruption. Transparency is the indicator of government integrity, i.e. resistance to corruption.

The State Audit Office (SAO) operates a system to measure the risk of corruption in public institutions. Since 2012, the number of voluntarily participating budgetary institutions has risen year by year. This increase indicates that institutions in the governmental sphere are to an ever-greater degree accepting the objective measurement of transparency, which in turn suggests an increase in integrity and transparency. The Risk Reducing Controls Factors (RRCF) index employed in the SAO audit is shown in its data for the past four years (2013–2016) and it showed stability in the number of anti-corruption controls used by budgetary entities.

Evaluation of freedom of information, the accessibility of national databases of public interest is based on measurements taken on

the basis of the individual standards of the Open Data Barometer, which are increasingly accepted in the international arena. Since 2013, Hungary has maintained its relative position in the midrange of countries surveyed.

The *household livelihood security indicators* assess governmental capabilities to guarantee the minimal conditions of existence. When wishing to consider the constituents of security of livelihood, there are a multitude of factors to list that often have an effect on one another. Of the many elements of security of livelihood, the *Good State and Governance Report* assesses five dimensions: the unemployment rate, the development of the real value of the minimum wage, the population number per 100 rooms, expectations of future financial situation, and the population's sense of financial security.

One of the foundations for establishing security of livelihood is the state of the labour market in the given country: The development of the level of employment, the income received by workers for their activity, and the purchasing power of their income, i.e. the quantities of goods and services they are able to buy. On this basis, a key area of the evaluation of the security of livelihood is the analysis of the labour market, the most frequently used metric of which is the unemployment rate. Unemployment – the regular absence of income – is the greatest risk factor endangering an individual and their family's security of livelihood. The unemployment rate – as one of the dimensions of the security of livelihood – has been showing a downward trend since 2012, but significant disparities can be observed between counties.

As we have already stated, the development of the income of the population has a key role to play in maintaining income security. The minimum wage may be one government tool used to guarantee a secure livelihood, which legally ensures that those who work but earn little still receive a minimum level of income. Not every country has a minimum wage, and where it does exist, in many cases it is set as a weekly minimum wage. The real value of the minimum wage in Hungary has been positive since 2011, and increased significantly in 2017 thanks to a 15% hike in the nominal minimum wage coupled with low inflation.

Affordable and appropriate living conditions in a secure environment are a fundamental need and right, the provision of which reduces poverty and social exclusion. However, this continues to represent a huge challenge for many countries, among them European nations, to this day. Living conditions can be analysed according to many factors and in great complexity, but we have chosen to use the development of population per 100 rooms. Housing stock increased by 1% between the years of 2011 and 2017, while the population per 100 rooms was 114 in 1990, 83 in 2011 and 81 in 2017. In response to the question of expectations of future financial situation, the number of those confident of positive changes has grown since 2012, but almost 60% of the population did not expect an improvement in 2016. The population's sense of financial security has shown improvement since 2013, but the proportion of those households that would not be able to cover a larger unexpected expense remains high.

T.1.1. Defence expenditure as a percentage of GDP

The definition of security is taking on an increasingly broader meaning. In a constantly changing security environment, challenges, risk factors and threats are now present in a range of different dimensions – on an individual, community, state, regional and global level. These impact a wide range of individuals, governmental and non-governmental organisations and transnational stakeholders.

In the 21st century, there is a new emphasis placed on external security. Security policy challenges have increasingly come to the fore which must be handled through comprehensive, coordinated political, economic and – if necessary – military action. External security indicators demonstrate the government's ability to provide protection in the event of an external attack. This means that the dimension for this impact area constitutes one of the state's fundamental responsibilities: the safeguarding of territorial sovereignty and the ability to protect its citizens.

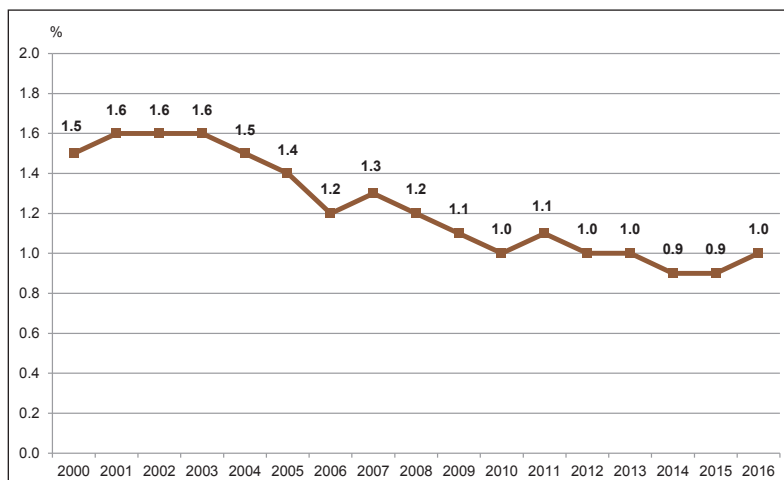
The Hungarian Defence Forces are primarily responsible for providing Hungary with external security. By defending the country from external military threats, it plays a defining role in the country's freedom, constitutional order and security. The outcomes and recognition it achieves in international engagements have a significant impact on how Hungary is perceived and its general influence, which subsequently leads to an increase in the country's capacity to realise the assertion of its own interests.

The basic task of the Hungarian Defence Forces is to use military means to safeguard, either independently or as part of a military

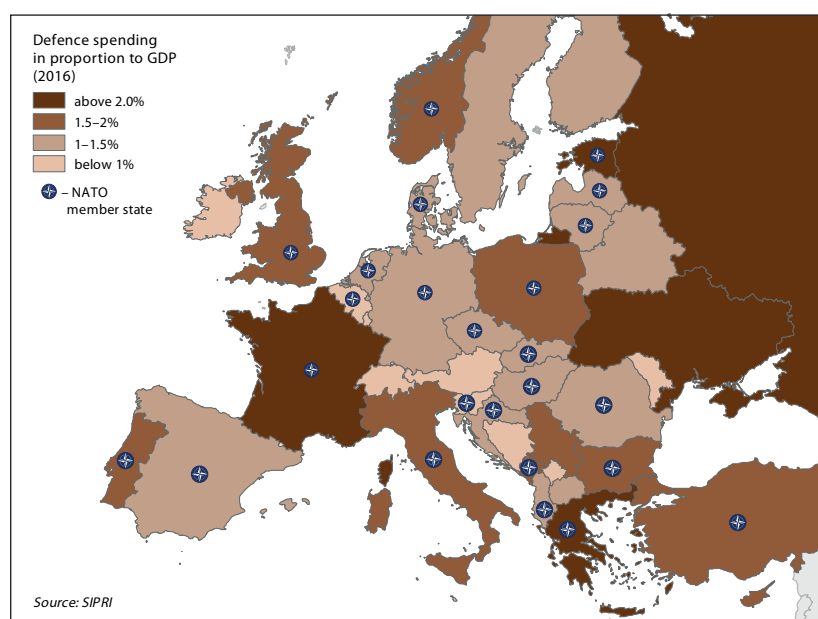
alliance, the country's independence, territory, airspace and material assets from external attack. To achieve this, it is necessary to evaluate direct or indirect threats to Hungary, form appropriate capacity for restraint and if necessary provide defence from military threats.

It is necessary to make sacrifices in the name of external security. In 2016, there was a repeated call for an increase to be made in defence expenditure for NATO member states. Currently, five member states actually meet the directive, which states that at least 2% of GDP should be allocated to defence spending. The cabinet for national security has accepted Hungary's military development plan as appropriate for meeting this trend. The government's objective is for Hungary's defence spending to increase from 1% to 2% of GDP by 2024 in order to comply with the NATO guidelines.

The Hungarian Defence Forces have the basic capabilities necessary for military protection for the armed defence of the country, while there would be targeted development in the event of a breakdown of the security situation. Hungary is gradually developing its armed forces in accordance with its plan and in line with the expectations of NATO.



Source: SIPRI

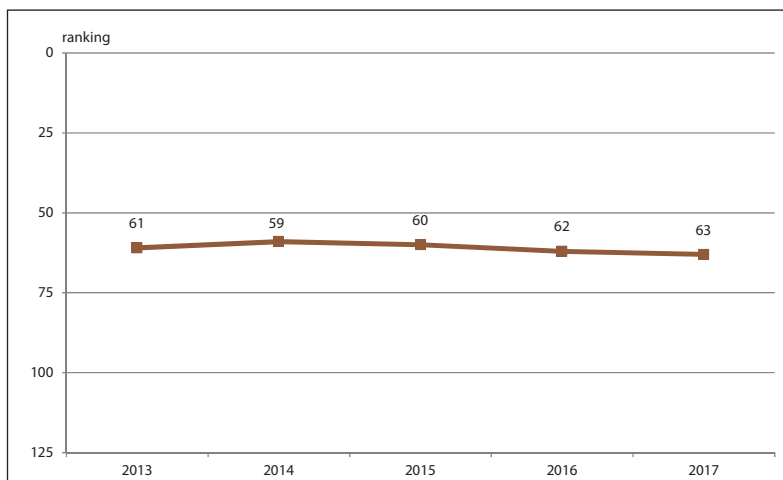


After previous reductions or stagnation in defence spending as a proportion of GDP, there was a small increase in 2016, providing a sound basis for strengthening the country's military force and security potential.

T.1.2. Ranking in the Global Firepower Index

A comprehensive approach to security encompasses military, political, economic, social and ecological security. The extraordinarily dynamic and large-scale changes occurring in the global security environment are, however, resulting in unpredictability. The importance of non-military security factors is increasing, but this will not result in a reduction in the importance of military factors. It is still possible that military force will play a leading role in future conflicts, so it must be maintained.

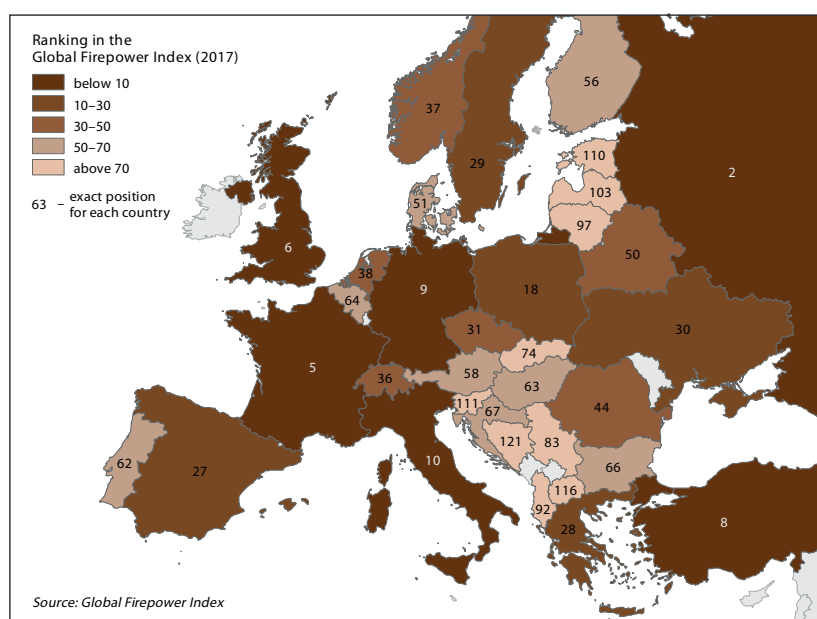
The Hungarian Defence Forces maintains land and air military forces, including combat forces, combat support and combat service support forces, and organisations which carry out other specialised activities. Different organisations and capabilities operate in a comprehensive military framework in order to perform operations independently or in cooperation with allied forces. For the Hungarian Defence Forces, developing its strength on a national level is essential in order to fulfil its commitments in terms of both the constitution and the country's NATO and European Union membership. The capabilities of the Hungarian Defence Forces are influenced by the challenges arising from the security environment, laws and commitments originating from Hungary's membership of various alliances and ratified international agreements, the characteristics of the expected application of force and the provision of standing material and human resources. The success of the activities of the Hungarian Defence Forces is defined by the relevant circumstances, including any mission to be carried out.



Source: GFP

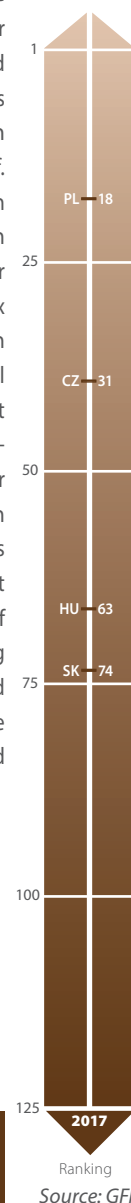
Article 3 of the NATO Treaty states that member states should not only maintain but improve their military capabilities. The increase in military spending as a percentage of GDP makes it possible for the Hungarian Defence Forces to become a new, well-organised military, effectively managing its resources, built on solid foundations and on a path to sustainability, gradually being upgraded with the help of the increased source of funds provided on its behalf. However, a country's strength with respect to security challenges can now no longer be measured purely on the basis of military strength or military spending. Complex international indicators exist for the measurement of these factors, such as the Global Firepower Index (GFP). The GFP ranks a total of 126 countries according to more than 50 factors. The index takes into account the country's geographical attributes, natural resources, and local industrial characteristics. It

considers not only the available stock of weapons as its basis, but also its variety, so smaller but technologically more advanced states can compete with larger but technologically less advanced nations. Among the variables that make up the index, the available number of personnel is also of key importance, meaning that populous countries are generally assigned a higher position in the ranking. Hungary rose two places in the ranking between 2013 and 2014, while it fell four places in 2017.



Source: Global Firepower Index

According to the GFP Index, although Hungary's position fell slightly between 2013 and 2017, its defensive military power has remained stable.



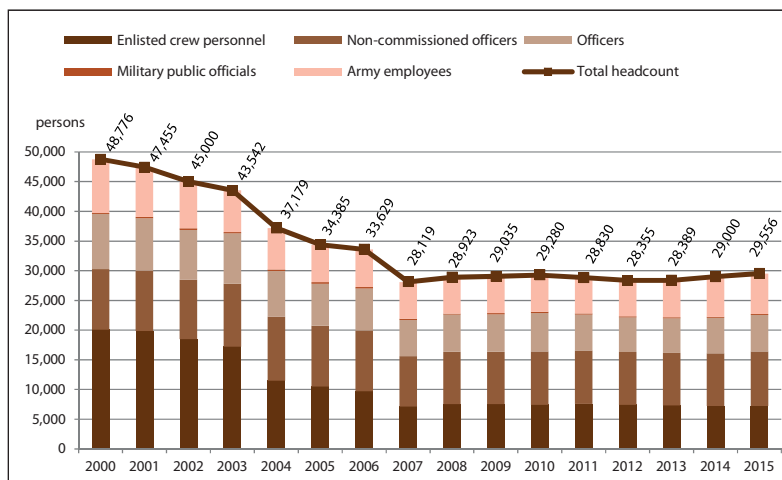
T.1.3. Total headcount of Hungary's military forces

The most important and valuable source of strength for the Hungarian Defence Forces is its personnel. The personal sacrifices of the soldiers who are prepared for duty and possess the appropriate basic physical and psychological capabilities have a decisive influence on the effectiveness of the military.

As a result of a defence review of security and military defence in Hungary, a vision emerged of a volunteer-based, expeditionary-style force in 2003. The creation of a lighter and more mobile military capable of participating in global engagements also involved significant changes in terms of task distribution, structure and operational characteristics. In order to deal with the new circumstances, changes have also been made to recruitment, training and deployment of personnel.

The Hungarian Defence Forces has changed its operational characteristics and founding principles in order to form a volunteer military service-based force capable of increasing global engagements that go beyond conventional territorial defence. The professionalization of the Hungarian Defence Forces is a complex process, where it is necessary to oversee the establishment of new types of capabilities, while at the same time ensuring that the military is able to adapt to developments within the Hungarian labour market.

Since the move to a volunteer military force, the Hungarian Defence Forces, as an employer, is now more sensitive to changes in the labour market, and has been slower than expected to react to these changes. In terms of military personnel, finding and retaining the necessary number of people and meeting the relevant indicators



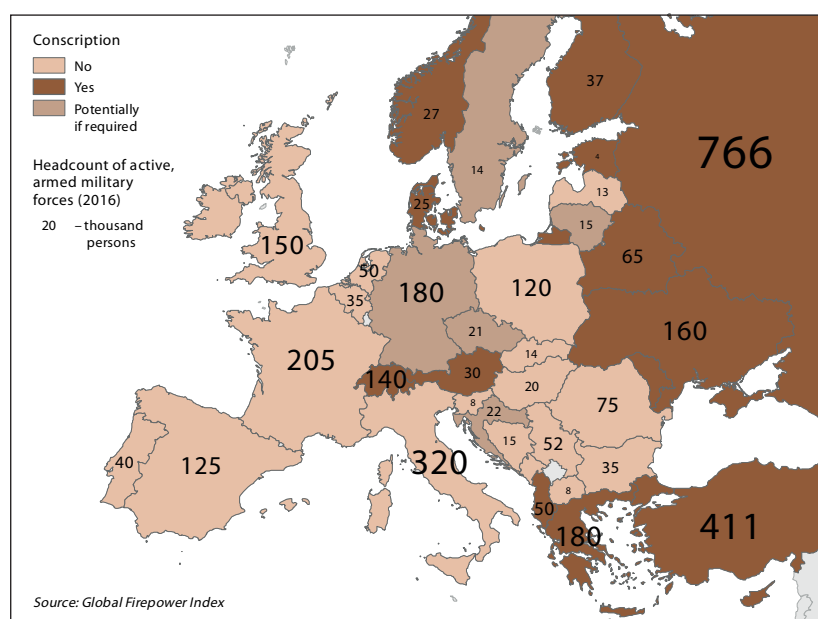
Source: HCSO

of quality is a serious challenge. In addition to the major overhaul to reflect changing objectives, eliminating the adverse effects of the labour market in relation to the armed forces, which had not previously been affected, has meant that the Hungarian Defence Forces is required to continually review and, if necessary, modify its headcount.

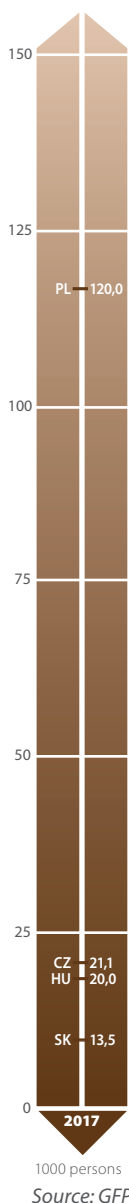
In order to determine the effective use of personnel in the Hungarian Defence Forces in terms of the performance of their duties, it is necessary to break the personnel down into groups, with the percentage of the overall number of personnel in each individual staff group recorded according to the accepted practice.

The detailed breakdown of the Hungarian Defence Forces approved by the Hungarian Parliament does not include the voluntary reserve, the Hungarian Defence Forces command staff and, in the context of the transformation of the health care system, the number of organisational units offering health care to the general population through the central health organisation of the Hungarian Defence Forces.

With a detailed breakdown of the figures, the number of the personnel in the Hungarian Defence Forces stood at 31,080 in 2016 (5,690 officers, 9,270 junior officers, 8,850 non-ranking personnel, 500 military officer cadets, 100 military junior cadets, and 6,670 government officials, public workers and recruitment personnel), of which around 25,000 were soldiers.



The number of personnel in the Hungarian Defence Forces has seen a slight increase since 2007, while the government's ability to ensure defence from external threats has remained unchanged.



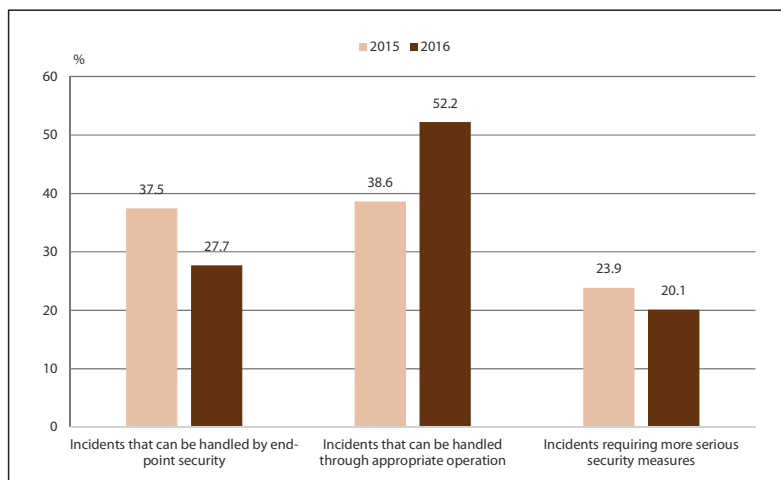
T.1.4. Proportion of cyber security incidents in Hungarian public administration

Web-based information systems play an extremely important role in the life of an individual nation. Their secure operation is fundamental for both the economy and society as a whole. The power of information systems and the size and frequency of attacks which threaten that operation are constantly increasing, with forecasts showing that this trend will only become stronger in the future.

One of the most widely accepted international indicators of a country's preparedness in terms of cyber security is the number of reported IT security incidents, and within this the percentage of individual security events. Reported events are categorised by type and show how capable Hungarian public institutions are of detecting more complex IT attacks, as well as drawing conclusions on what kind of technological background exist and the extent of human resources at the disposal of Hungarian cyber protection. The more a government spends in this area, the more it will be able to detect the often hidden attacks which are a threat to national security. Security incidents must be reported to the National Cyber Security Centre, which was created in 2015. Incident types are broken down into three groups based on the type of prevention used.

The first group contains "incidents that can be managed using the most basic protection techniques" (according to the National Cyber Security Centre data collection categories: malware, botnets and spam, and these are categorised as incidents which can be dealt with using end-point security.) In 2016, these constituted 27.7% of the total reported incidents, a fall of 9.8% compared to the previous year. This reduction is due to the expansion of government offices and the resulting centralised operation of workstations. Identifying and implementing effective protection techniques is relatively straightforward, so these methods are being used by an increasing number of institutions.

The second group comprises incidents related to the operating system, typically the institution's electronic services or server environment. This category is known as "incidents that can be handled



Source: HDRI

through appropriate operation" (according to the National Cyber Security Centre data collection categories: vulnerable services and website defacement.) These kinds of incidents are usually an indication of a lack of specialist knowledge and expertise. In 2016, 52.2% of the incidents belonged to this category, compared to 38.6% in the previous year. The comprehensive centralisation of information technology in Hungarian public administration and the appearance of various central services may help to resolve this issue.

The third group includes those attacks that are usually hard to detect and require significant infrastructure and investment to handle, as well as concerted development of the security awareness of users, which is why they are categorised as "incidents requiring more serious security measures" (according to the National Cyber Security Centre data collection categories: phishing, distributed denial of service attacks, unauthorised access and targeted attacks). According to the statistics, these attacks cause the most serious damage and often remain undetected. In 2016, 20.1% of the reported incidents fell into this category, a slight fall from the 23.9% reported in 2015.

Targeted attacks together make up 0.3% of the overall reported incidents, but it is likely that a large proportion of cyber-attacks that threaten national security remain undetected.

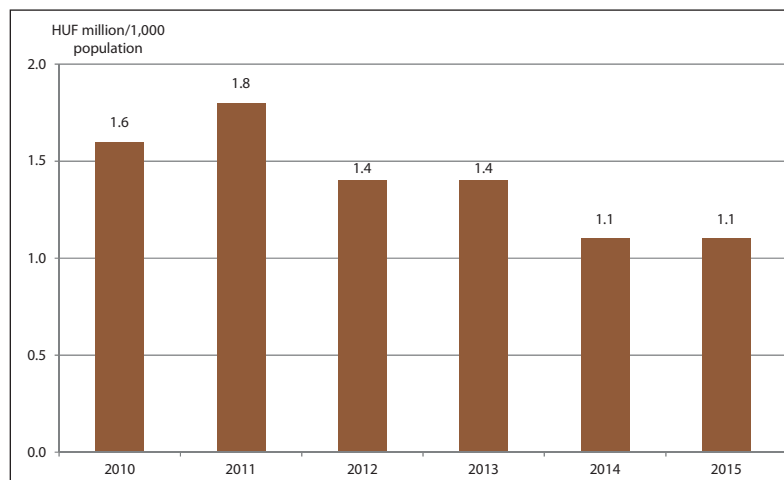
Most cybersecurity incidents in Hungary can be attributed to deficiencies in IT operations, while the detected rate of complex attacks is very low.

T.1.5. Annual foreign military assistance expenditure per 1,000 population

Hungary's membership of international organisations means that it is required to fulfil its obligations to its allies and other international commitments. The fulfilment of international commitments contributes to the reinforcement of peace and security, while simultaneously improving the country's international standing. Hungary's membership of NATO entails shared defence alongside shared responsibility, shared duties and occasional shared actions. Contributing to joint defence missions and international operations, participation in the maintenance and development of the required capabilities and the strengthening of partnerships are all core NATO tasks. The Hungarian Defence Forces participate in those international operations which contribute to the reinforcement of the security of both Hungary and the NATO Alliance as a whole. The volunteer-based expeditionary, lighter and more mobile Hungarian Defence Forces are suitable for cross-border deployment and capable of participating in global operations.

Hungary is committed to safeguarding international peace and security. Reinforcing international mechanisms which serve to prevent crises and handle conflicts is of fundamental importance to the security of the country's citizens. Hungary therefore plays an active role in the international security component of both global and regional organisations. The Hungarian military forces are suitable for cross-border deployment based on a public decision made as a result of an appropriate mandate under international law, through international organisations or as part of an *ad hoc* coalition in keeping with common values and interests.

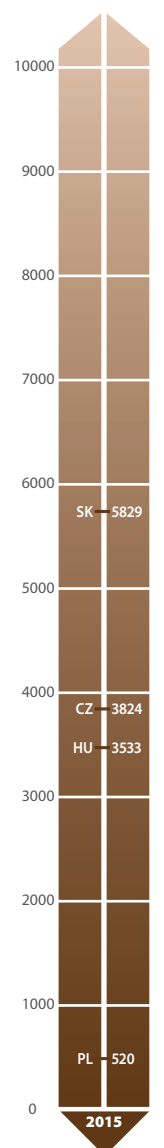
The Hungarian Defence Forces play an active part in both NATO and EU crisis management activities and the development of capabilities needed for these activities in both a national and collective context. Meaningful participation in international operations is



Source: HCSO

a multi-faceted task. Hungary – based on its level of ambition in the relevant area – has 1,000 personnel ready and stationed in international operations at any given time. Over the course of participation in international operations, the duties of the armed forces extend not only to the suppression of the enemy's armed resistance in the interest of restoring the necessary security conditions, but they also play a role when needed in reconstruction and the restoration of stability.

Annual expenditure on foreign military assistance indicates the extent of potential military power, while at the same time, the extent of the expenditure depends in a large part on changes in the international environment and the need for Hungary to provide assistance. Soldiers of the Hungarian Defence Forces primarily participate in joint peacekeeping and humanitarian activities from NATO, the EU, the UN and other international organisations. One advantage of serving in international military missions is that this allows Hungarian soldiers to gain experience in the field. Since 2011, the downward trend of annual foreign military assistance expenditure per 1,000 of the population has stabilised at HUF 1.1 million.



Source: Eurostat

Despite a slight decrease in its efforts, Hungary participates in international peacekeeping missions in proportion to its military firepower.

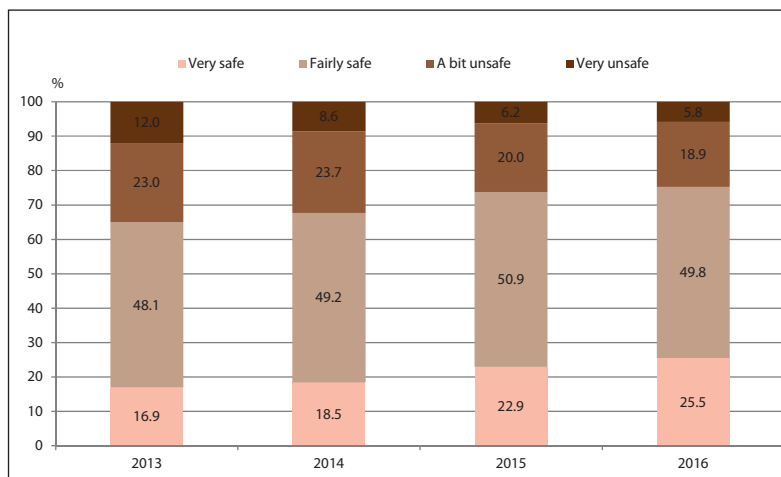
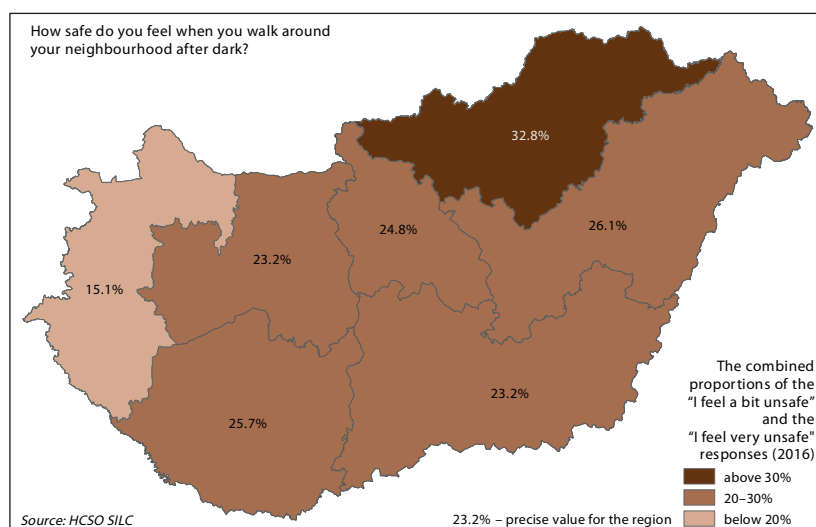
T.2.1. The population's perception of safety in public areas and in their home environment

Establishing and continuing to guarantee public safety is defined as one of the objectives of democratic states under the rule of law. According to the definition given in the Team Consult's 1991 report, public safety is the part of non-material infrastructure necessary for both individuals and their communities to realise their objectives in the interest of society. Public safety is also a product of cooperation, requiring the cooperation of the entire society, while at the same time various organisations of the state tend to play a defining role in creating and maintaining public safety, primarily through law enforcement authorities.

The subjective perception of security is important as a key indicator because citizens primarily judge the state of public safety through their own perception of public safety and their emotional state. According to Géza Finszter's definition, the material expression of public safety is something akin to the peace of mind of knowing that our loved-ones and property are safe, and that our everyday lives can be lived normally, with this security expected to be provided by the state.

Over the previous four years, the HCSO has conducted regular and statistically verifiable domestic surveys to track changing perceptions of public safety. Analysis of trends can be based upon these outcomes regarding "the population's perception of safety in public areas and in their home environment".

The HCSO's data is based on a measurement of public perception, the source of which is the *Household Budget and Living Conditions* survey (OSAP code 2154), in which approximately 13,000 households participated as a sample of the population as a whole. The basis for this indicator is the following question on the questionnaire: "How safe do you feel when you walk around your neighbourhood after dark?"



Source: HCSO

dark?" The four possible responses are 1. "I feel very safe." 2. "I feel fairly safe." 3. "I feel a bit unsafe." 4. "I feel very unsafe."

Nearly half of the population responded that they "feel quite safe" in public areas. According to the data obtained by the HCSO between 2013 and 2016, the population's perception of safety improved each year. While 35% responded in 2013 that they felt unsafe and 12% that they felt very unsafe, these percentages had fallen considerably by 2016: the percentage of people who felt unsafe was 26%, while the percentage of people who felt very unsafe was only 6%. In parallel to this, the percentage of people who felt very safe rose from 17% to 23%.

The feeling of safety in public spaces is the indicator which most accurately reflects the perception created of the country's security, as the general experience is that in their own home, citizens feel protected from crime and other infringements of their rights. The question regarding the residential environment is also justified by the fact that people spend most of their time here, while they also have the highest expectations in terms of safety in their own residential environment.



The population's perception of safety is improving: while approximately two-thirds of those asked perceived themselves to be safe in public areas in 2013, nearly three-quarters of those asked gave this response in 2016.

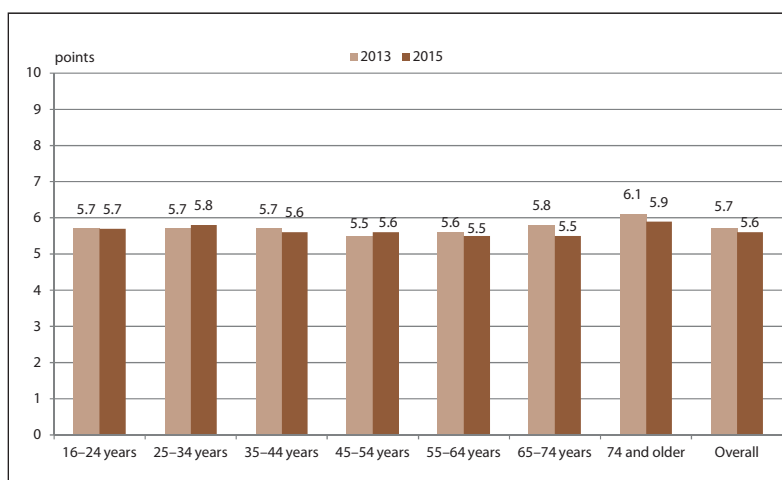
T.2.2. Public trust in the police force

In terms of government capability related to public safety, the performance of the police force is extremely important, primarily in terms of preventing, investigating and punishing those activities that threaten or disrupt public order (crimes or infringements of the law). In the service of public safety the police force mainly – with the exception of patrolling, various crime prevention programmes, securing events and other proactive activities – acts after the committed crimes occur: if there has been a violation of the law, the police force identifies and arrests the perpetrator, thus enabling the criminal justice to apply criminal actions. These measures also have a crime prevention aspect to them, as the perpetrator in custody is not able to commit further crimes or violations of the law (at the most in the prison or in the temporary holding cell at the police station), and even if they are not incarcerated, the fact that proceedings have been brought against them may also have a deterrent effect. Punishing the perpetrator also has the effect of deterring other potential criminals (general prevention), and in positive cases also the person who was the subject of the criminal sanction (special prevention). This is why the public perception of safety is largely formed on the basis of police performance and confidence in the police.

Since 2013, the changing perception of public safety has been measured by the HCSO in a statistically verified manner: a large representative sample is used to measure the development over time of the population's trust in the police force.

This indicator originates from the data collected in OSAP supplementary module 1968 of the annual survey on *Household budget and living conditions*. The size of the sample is approximately 13,000 individuals. The indicator is given by the average of the answers on a scale of 0–10, describing the distribution according to different groups of respondents to the question: "How much do you personally trust the police?"

The average level of 5.7 points measured in 2013 remained essentially unchanged in 2015, standing at 5.6 points, with a slight fall recorded among those aged 65–74.



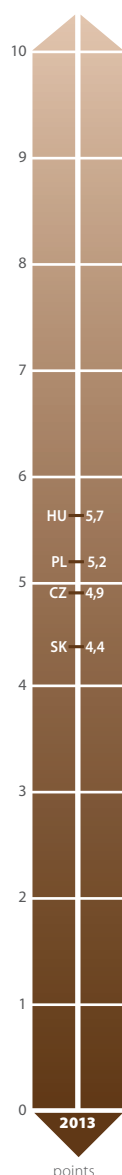
Source: HCSO

The trends seen in terms of trust were reinforced in the survey carried out by TÁRKI on institutional confidence, which revealed a significant improvement in public trust in the police force from 4.5 points in 2009 to 5.3 points in 2013. Of the public institutions examined by TÁRKI, the police received the highest rating in the trust index after the Hungarian Academy of Sciences (ahead of, for example, the National Assembly, the Hungarian National Bank and the State Audit Office).

On the basis of the 2017 data for the *Good State and Governance Opinion Survey* and based on the average score received, Hungarian citizens place more trust in the police force (6.85) than in state offices (6.25), local governmental offices (6.49) and the justice system in general (6.38). In international comparison, the judgement of the police force is the best in the surrounding region, with Hungary scoring 5.7 points – ahead of Poland (5.2), the Czech Republic (4.9) and Slovakia (4.4).

The population's trust in the police force is essential as, in addition to the fact that favourable indicators increase citizens' subjective perception of security, this trust also reduces the number of unreported crimes (there is an increased willingness to turn to the authority if an increase in the level of trust is perceived) and also impacts on the indicator for crime detection: if someone trusts the police, there is a greater chance of reporting a crime, appearing as a witness, providing a piece of evidence, etc.

Public trust in the police has improved significantly since 2009, and is one of the highest among the various public institutions.



Source: Eurostat

T.2.3. The number of reported intentional homicides, intentional assaults and robberies

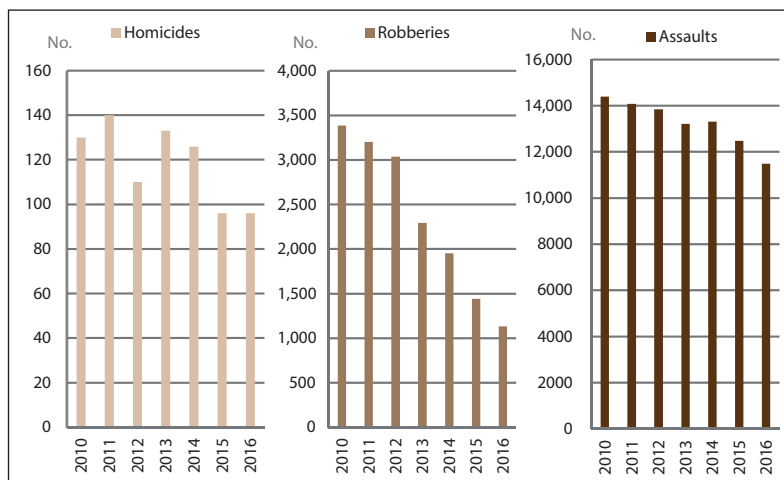
The subjective population indicators presented above provide an effective complement to objective indicators regarding the reported number of crimes, and in particular the three types of crimes categorised as violent crimes (intentional homicide, intentional assault and robbery). In addition, these crimes can be expected to be less likely to go unreported than crimes which have less severe consequences.

In terms of robberies, a constant and visible reduction has been observed since 2010: between 2010 and 2016 the number of robberies committed has fallen by more than half.

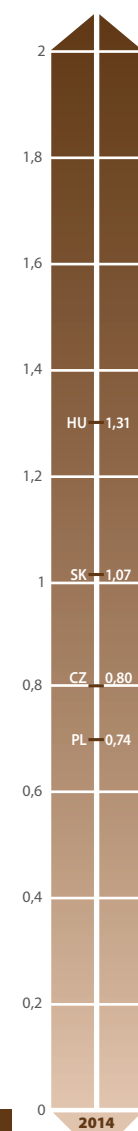
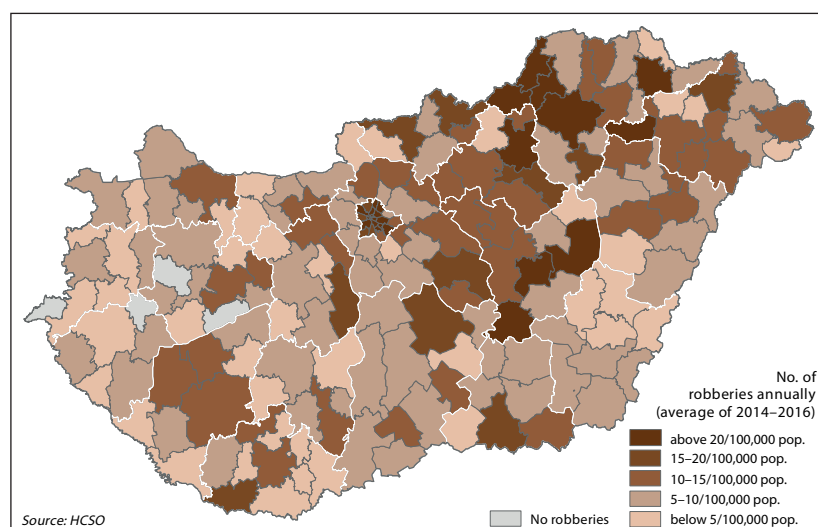
For intentional homicides, in the last three years we can observe a downward trend, and it is notable that 2016 saw the lowest number of completed intentional homicides in the last seven years: the number of registered crimes did not even reach 100 (96). In terms of intentional assault, a reduction was also recorded since 2010 – though with minor fluctuations (2010: 14,391, 2016: 11,494). There are notable deviations between individual counties, particularly in terms of robberies and assault.

As far as international comparisons are concerned, despite the favourable figures, the results in Hungary cannot be considered satisfactory. Looking at the V4 Group, the homicide rate only in Slovakia is higher than in Hungary.

The statistical data indicate an improvement in the crime situation, for which a key – though by no means exclusive – factor is the capability to prevent crime and the deterrent effect of law enforcement activity.



Source: SIPACS



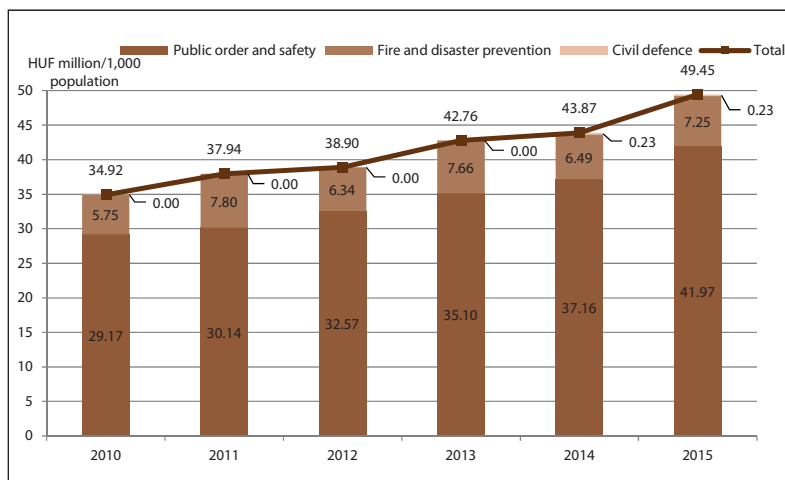
In the rates of the crimes which have the biggest effect on public perception of safety, in two of the three types of crime examined there has been a significant decrease in the last seven years.

100,000 population
Source: Eurostat

T.2.4. Annual government expenditures on public order, civil defence, and fire- and disaster protection per 1,000 population

In order to measure government functions, various international institutions have, under the guidance of the UN, implemented the COFOG categorisation standard, which presents, grouped into tasks, the amount an individual state spends and to what ends. Beginning in the year 2010, the HCSO has also published statistical data on government expenditure, broken down according to COFOG and based on national accounts. COFOG sub-section 2.2.0 comprises state support for the operation of the auxiliary police and stockpiled food and medicine for disaster situations, sub-section 3.1.0 does the same for the operation of the police and border security, and sub-section 3.2.0 assesses both professional and volunteer fire brigades. The indicator reflects total expenditures for all these areas distributed over the year per 1,000 population, based on the population figure as of 1 January (source: HCSO, COFOG).

One of the most important components of the state resources dedicated to public safety is the sum dedicated to upholding and developing the already established capacities from central budget resources. The maintenance of public security can be classified as a significant public expenditure, the funding of which is predictable and must be in line with the inflation. Annual government expenditures on public order, civil defence, fire and disaster protection per 1,000 population/HUF (in nominal terms, million HUF): 34.92 (2010) → 49.45 (2015). The amount spent on the area increased

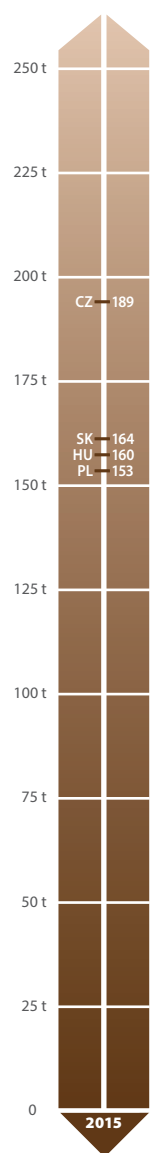


Source: HCSO

considerably between 2014 and 2015, with the annual amount increased from HUF 43.87 million/1,000 population to HUF 49.45 million/1,000 population.

On the basis of Eurostat data, it can be seen that, despite continual improvement over several years, of the Visegrád countries, the Czech Republic and Slovakia still spend a larger amount – in proportion to their populations – on public order, civil defence and fire and disaster protection than Hungary, with Hungary only ahead of Poland in this regard.

State expenditures on public order in proportion to the size of the population showed an upward trend between 2010 and 2015.



1000 population (€)

Source: Eurostat

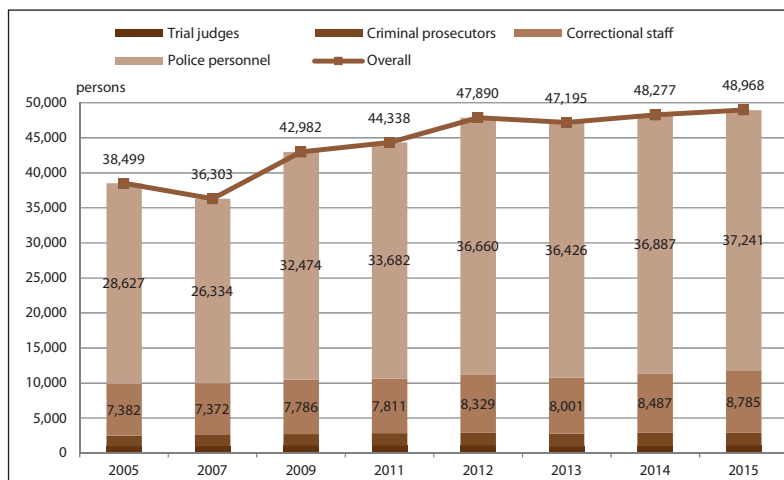
State expenditure on public order significantly increased in the five years following 2010.

T.2.5. Law enforcement personnel resources

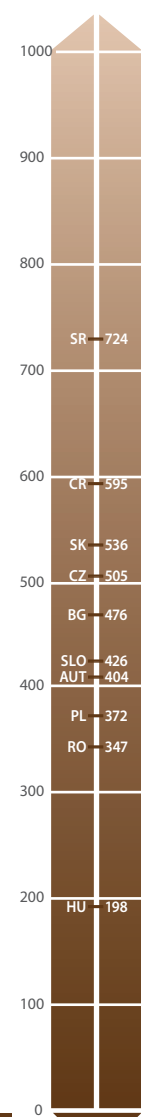
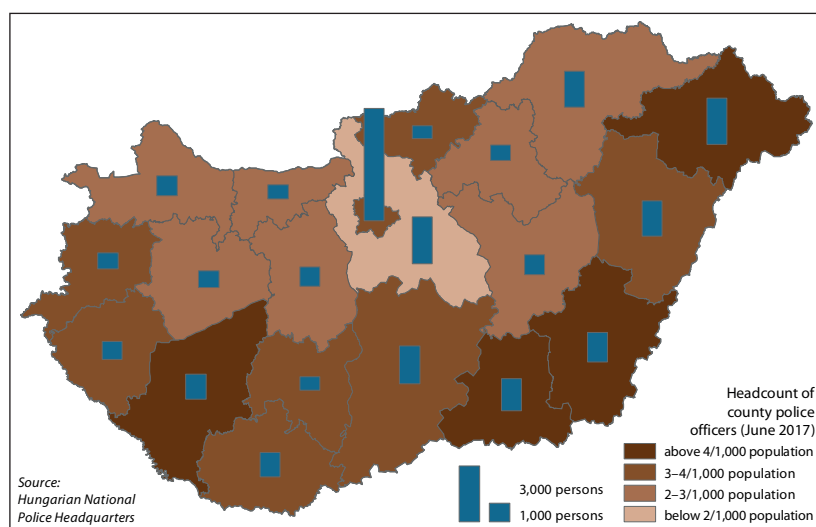
Effective law enforcement would be unimaginable without the appropriate numbers and quality of personnel. Efforts to improve levels of public order have been stepped up in parallel to an increase in human resources available: the number of police, prosecutors and prison staff has markedly increased in comparison to the figures from ten years ago.

While the number of personnel in law enforcement stood at 38,499 people in 2005, this figure stood at 48,968 in 2015, an increase of 24.2%. At the same time, it is important to highlight the fact that most of this expansion in personnel took place between 2007 and 2009. Since that time, growth has been much more moderate, though, in the meantime, there has been a significant increase in the effectiveness of law enforcement. The examined period has shown that the optimal allocation of law enforcement forces and resources, alongside organised and focussed work can yield better results with the same or a slightly increased number of personnel. One contribution to this increased effectiveness is unquestionably the career path model introduced in recent years, which has improved the financial rewards for those working in law enforcement.

Despite the increase in personnel relative to 2007, it is also worth noting that, in comparison with other countries in the region, the proportion of personnel working in Hungary in the armed services, justice system and prison system per 100,000 people is not high.



Source: HCSO



Persons/100,000 population
Source: Eurostat

There has been a significant increase in the number of law enforcement personnel over the past ten years, while the increase in the effectiveness of law enforcement has surpassed this rate.

T.3.1. The population's trust in the legal system

Legal security is subject to the government's ability to engender trust in the legal system and to create a sense of security safeguarded by law. The most fundamental aspect of legal security is trust in legislation and jurisdiction.

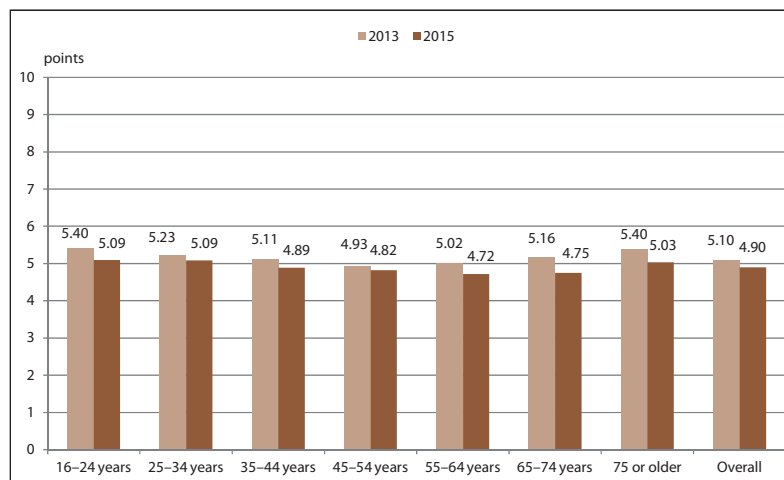
Widespread, regular and statistically verified domestic surveys of attitudes toward the justice system have been carried out by the HCSO since 2013. Data prior to 2013 is taken from assessments made by TÁRKI. According to the TÁRKI survey, trust in the Hungarian legal system increased between 2009 and 2013 (from 4.0 to 4.78). The survey carried out by the HCSO uses another methodology: This indicator originates from data collected in OSAP supplementary module No. 1968 of the annual survey on *Household budget and living conditions*. The size of the sample is approximately 13,000 individuals. The indicator is given by the average of the answers on a scale of 0–10, describing the distribution according to different groups of respondents to the question: "How much do you personally trust the legal system?"

In 2013, the HCSO trust index indicated that trust was only just above average, standing at 5.1.

The data from 2015, however, reveal that the confidence index had fallen below the average value (by just one tenth). The average responses of the population demonstrate a certain amount of deviation according to age: in 2016, people aged 16–34 gave the highest rating in the trust index, while the lowest rating came from those aged 55–74. People aged 75 and above at the same time saw a repeat of a minimal increase on average in terms of trust in the legal system. It is important to note that the difference between the lowest and highest averages was little more than 0.4.

Due to the fact that the HCSO carries out the assessment only once every two years, there is no new data available since last year's report.

At the same time, recording from a nationwide and representative sample of the population has become a permanent feature of the *Good State and Governance Report*. This has been used to respond to further questions from the T.3.1. indicator and expand and deepen the context of this indicator.



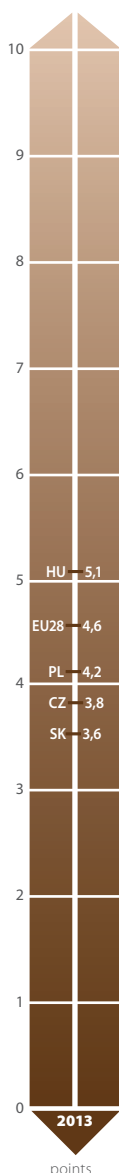
Source: HCSO

One of these questions is to rate on a scale of 1–10 how much the respondent trusts the administration of justice and how satisfied they are overall with how the administration of justice operates. More than 70% of respondents gave a score of five or above, while little more than 15% rate the operation of the administration of justice as four or below. At the same time, it is notable – and somewhat regrettable – that nearly 83% of the respondents believe that in terms of the decisions of the courts, the connections people have made a big difference, and barely more than 2% fully rejected this. With regards to the judgement of the courts, satisfaction was measured on a scale of 1–4 (from very unsatisfied to very satisfied), and more than half of the respondents reported being satisfied, 30% as unsatisfied, while 33% were not able to respond to the question.

Nearly two thirds of the respondents felt that it was not worth turning to the courts in order to resolve disputes, demonstrating a certain lack of trust in the courts.

On this basis, it can be stated that those surveyed tended not to trust the legal system, including the courts, although the majority are fundamentally in agreement with their operation and practices.

In terms of international comparisons, confidence in the Hungarian legal system is the highest among the Visegrád countries, and it is also above the EU average.



The surveys conducted by the HCSO since 2013 have shown a slight decrease in confidence in the legal system.

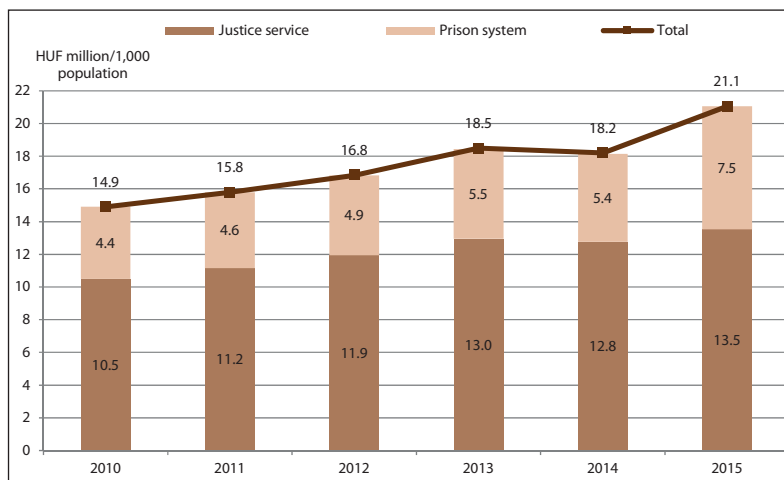
Source: Eurostat

T.3.2. Annual government expenditures on the justice system and corrections per 1,000 population (in nominal terms, million HUF)

Trust in the legal system also includes the application of justice and law in public administration. The justice system is an autonomous branch of power, with government intervention subject to common law constraints, which is why the capabilities of the government are only in exceptional cases and indirectly indicated by the impact indicators of the legal justice system. At the same time, the capacity and quality of the justice system are determined by the financial resources available.

In 2013, the EU launched a measurement system (Justice Scoreboard) for this area, which builds on the EU data from the European Commission for the Efficiency of Justice (CEPEJ). Based on this scoreboard, the Hungarian justice system has been one of the leading systems in Europe for years.

To measure government functions, various international institutions have adopted, under UN guidance, the so-called COFOG classification standard. This system lists the functions typically provided by the state and government, and by classifying government expenditures according to this structure, allows for the quantification of both the extent of the government sector from a financial perspective and the functions provided. It can therefore be grouped by function in order to show what sums the state devotes to which goals. As of reporting year 2010, the HCSO has also published statistical data on government expenditures based on national accounts and according to the COFOG breakdown. COFOG sub-section 3.3.0 contains expenses for civil and criminal courts, ombudsmen and public defence lawyers, and sub-section 3.4.0 contains expenses for the operation of minimum security, medium

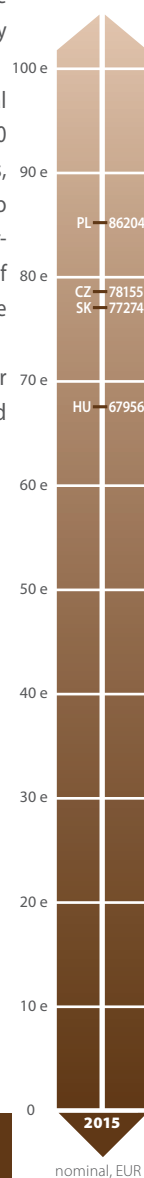


Source: HCSO

regime and maximum regime prisons, and other institutions holding detainees. The indicator reflects total expenditures for all of these distributed over the subject year per 1,000 population as shown by the population figure as of 1 January.

The justice system's financial resource indicators, that is annual government expenditure on justice and law enforcement per 1,000 population from 2010–2015, showed an increase at current prices, which also represents an increase in real terms. This situation is also true if we separately examine legal cases and crime and incarceration in terms of budgetary expenditure. Since the preparation of last year's report, however, we do not have any newer data available from 2016.

When compared internationally, we see that the figure for Hungarian expenditure is the lowest among the four Visegrád countries.



nominal, EUR

Source: Eurostat

The indicators for the financial resources in the justice system show an improvement in governmental capability, but Hungary remains the weakest of the Visegrád countries.

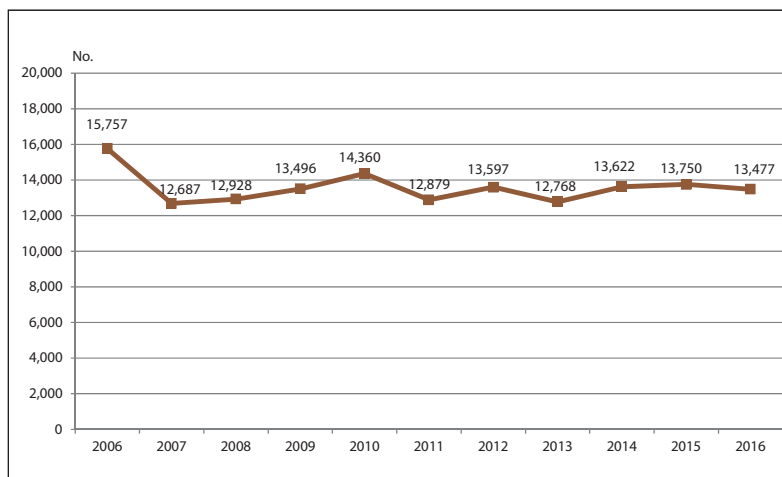
T.3.3. The number of litigated cases involving public administration taken to courts of first instance in the subject year

One of the most important pillars of the constitutionality of public administration is the possibility for judgments to be made on administrative decisions before the courts coupled with effective judicial control over the operation of public administration.

This indicator shows the number of public administrative resolutions taken to court for legal remedy and attempts to present change in the acceptance of administrative resolutions over time. Data is taken from the Hungarian National Office for the Judiciary (prior to 2012: National Council of Justice).

One of the most frequently used tools for determining the quality of initial administrative resolutions is to examine the number of appeals.

In relation to this, it is important to note that this method does not provide an average level of quality, but the number of cases that can be challenged from a legal perspective, and where the plaintiffs believe initiating the legal process to be worthwhile. For this reason, examining the number of appeals is only of limited value for determining the quality of decisions, since the increase in the number of reviews may not only be due to a drop in the quality of decisions, but other factors as well, such as the costs associated with the appeal (time and financial costs), and how they all relate



Source: NOJ

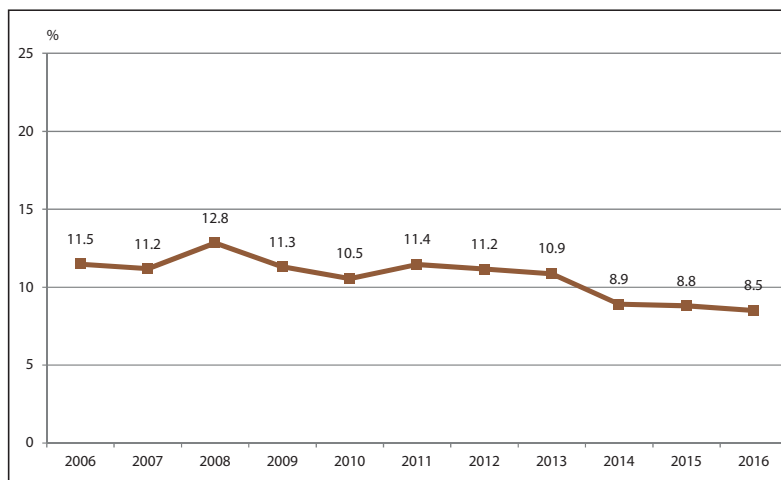
to the likelihood of overturning the decision. The number of litigated cases involving public administration submitted to courts of first-instance has varied between 12,687 and 14,360 over the past 10 years. The change in the number of appeals has not shown any trends, with the dataset instead revealing two exceptional years (2006 and 2010). Accordingly, the fact that the number of appeals is below 14,000 from 2011 onwards suggests satisfaction with respect to public administration decisions. This is supported by the decrease in the figure – though minimal – from 2015 to 2016.

Judicial appeals data show slowly improving satisfaction on the part of petitioners with regard to the judiciary's decisions, though results fluctuate slightly year by year.

T.3.4. Percentage of civil litigation cases in which the decision of the courts of first instance is appealed

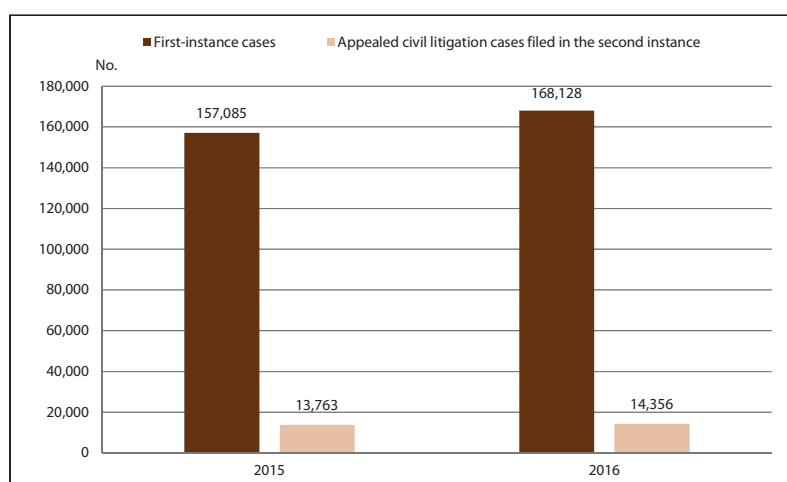
The share of litigated civil court cases submitted to a second-instance court for appeal as a proportion of all first-instance litigated cases in the given year shows the degree to which first-instance decisions are accepted in litigated civil cases. Just as in the case of the previous indicator, it is also very important to note that the number of appeals is influenced by subjective factors. Accordingly, the explanation for the fall in the indicator may be explained not only by improvement in the quality of first-instance decisions, but also by the fact that the costs of taking cases further may be too high when compared to the potential positive outcome of the second-instance decision, and that statistically speaking the decisions of the first-level courts are only very rarely modified by the second-level courts.

The data shows that the rate of appeals has varied between 8.5% and 12.8% between 2006 and 2016, and that since 2008 – with the exception of 2011 – there has been a slight but continual downward trend, which has continued in 2014, 2015 and 2016. In the last three years, the appeal rate – compared to the data of the last ten years – was comfortably the lowest. Compared to 2015,



Source: NOJ

the number of appealed civil litigation cases grew in 2016 (from 13,763 to 14,356), but due to the larger increase in first-instance civil litigation cases (from 157,085 to 168,128), the appeal rate still fell. This means that there is an increasing acceptance of first-instance decisions compared to previous years, but also that, in comparison to the higher rates of earlier years, the data from 2016 projects a further increase in the acceptance of first-instance decisions.



Source: NOJ

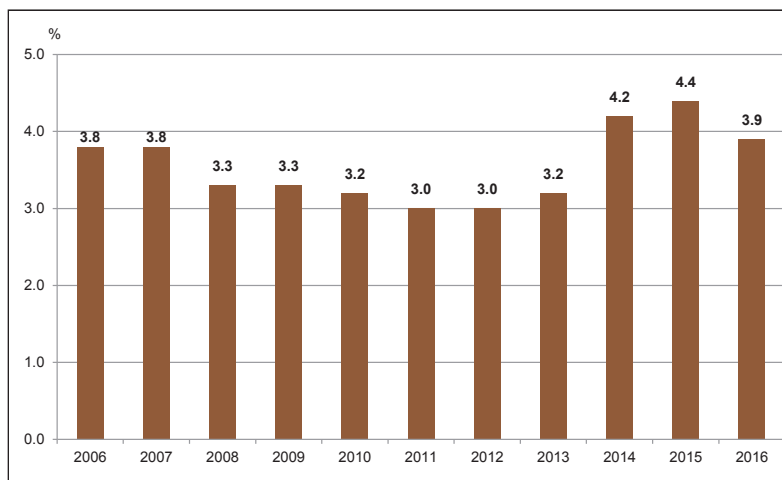
The level of acceptance of judicial decisions passed in civil cases has shown an upward trend on the part of the parties concerned since 2008.

T.3.5. Percentage of prolonged first-instance civil litigation court procedures completed more than two years after being submitted

This indicator refers to the proportion of prolonged first-instance civil litigation court procedures in the given year in relation to the total number of first-instance cases at district and regional civil court level. Reasonable time, reducing the required time for procedures to be completed, and the time required for public administration, is also one of the fundamental indicators of the efficiency of legal administration in the CEPEJ assessment system. Those civil litigation procedures completed within two years can be considered to be of a reasonable length.

Long-running legal cases have an influence – even if only indirectly – on confidence in justice and the legal system. If the citizen who is looking to protect their rights has to struggle for more than two years in court to get justice, this can have a negative influence on whether they will bring a dispute to court.

The percentage of first-instance civil litigation procedures delayed by more than two years fluctuated between 3.0% and 3.3% between 2008 and 2013, which can be considered a significant improvement over the preceding years, with an increase in the speed of litigation procedures also demonstrated. This led to a drastic increase in 2014 and 2015, and though the figure for this indicator fell in 2016, it is still the third highest in the last ten years (after 2014 and 2015). It can therefore be stated that civil litigation procedures prolonged for unreasonably long periods occur only once in every 25 to 30 cases. Of the 144,998 cases initiated in the courts in 2016, only 4,930 were

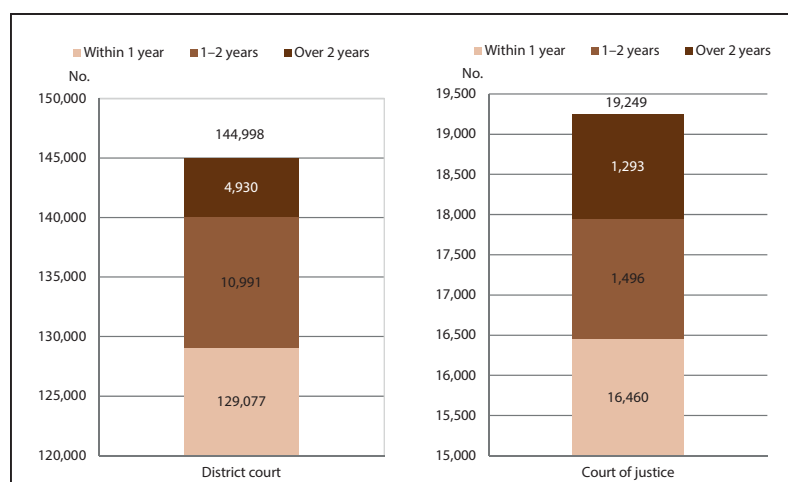


Source: NOJ

completed in a period longer than two years, while the figure was only 1,293, from a total of 19,249, for tribunals.

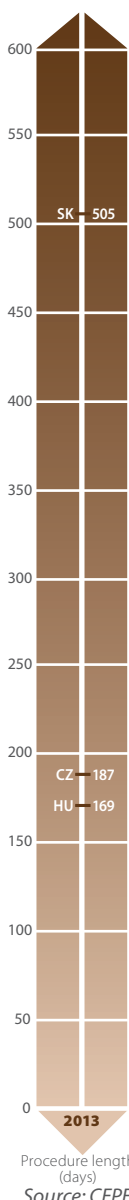
It is also important to note that excessively prolonged cases cannot be completely eliminated as their duration can be influenced by factors independent of the courts. Nevertheless, since 2012, there has been an improvement in the number and proportion of completed cases over two years, which has simultaneously reduced the number and proportion of cases which have continued for over two years.

While international data is not readily available, if we take Czech and Slovak litigation procedure times for comparison, we can state that average litigation procedure times in Hungary are relatively short.



Source: NOJ

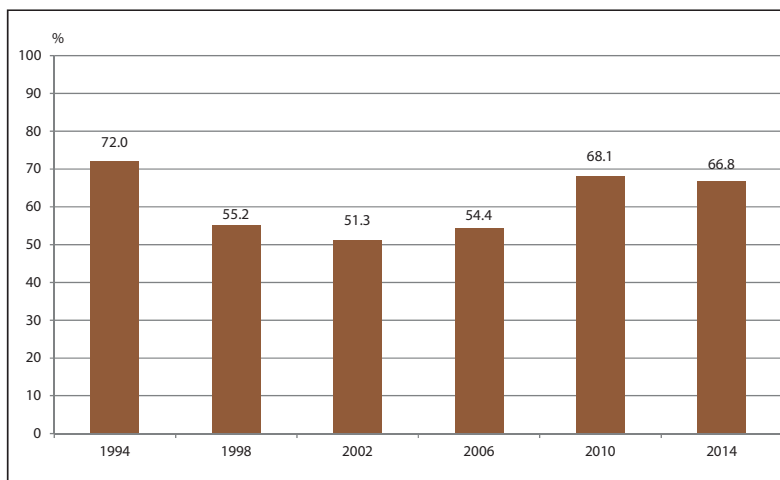
In terms of the time taken for the resolution of cases, there has been an improvement in both the number and proportion of cases lasting longer than two years, indicating a reduction in the proportion of cases still in progress with a length exceeding two years.



T.4.1. Confidence in the government expressed by the population at parliamentary elections (%)

Public trust in the government means political stability in terms of governance and also is an important factor in gauging the quality and effectiveness of the government. The administration's political ability to take action and stability, as well as the government's political stability as a whole, is a strong factor in determining security and trust in the party political system.

In a democracy, a government's stability can only be deemed to be of value if the core values of democracy are fully applied. An important indicator of public confidence towards the governing party (parties) is the proportion of parliamentary seats as a function of the total number of seats, which also fundamentally determines the government capability. In the given election year, the proportion of parliamentary seats won by the governing party or by the party coalition or party alliance is presented as a proportion of all seats (%) in the parliamentary elections for the given year. The source for the data is the National Election Office. While the percentage of total government seats won by the governing party (or parties) remained below 55% in 2002 and 2006, this figure was over 66% following the parliamentary elections in 2010 and 2014. During the current government cycle, the by-elections which took place up to 2016 have resulted in a minor reduction in the percentage of seats



Source: NEO

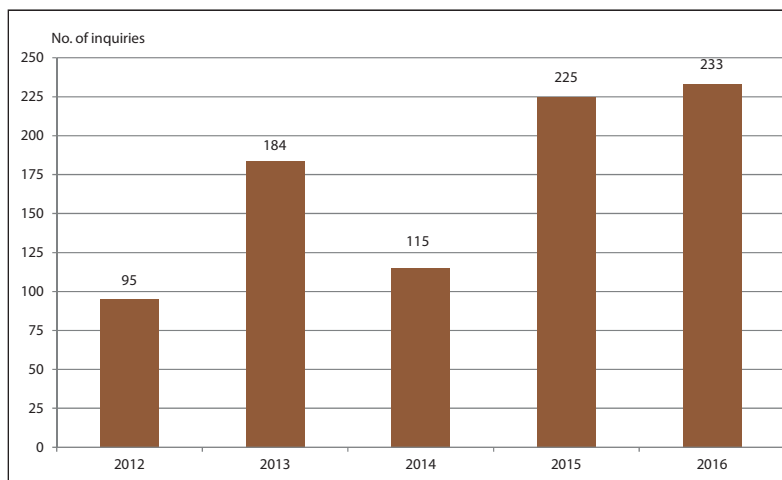
won in 2014 (66.3%), somewhat limiting the room for manoeuvre of the governing parties when introducing laws that require a two-thirds majority. In terms of the mandate won, trust in the Hungarian Government's parliamentary political capability and stability can be considered as high relative to most of the governments in Europe. The OECD's *Government at a Glance* (GoG) report published in 2015 once again showed a significant increase in the confidence in governmental institutions index: while this value was only 20% in 2009, it had grown to 33% by 2013.

Compared to the period prior to 2010, the government's political stability has grown significantly, and with this the government's ability to act has improved.

T.4.2. The number of public information inquiries ending in a finding of illegality by the Hungarian National Authority for Data Protection and Freedom of Information (HNDP)

Government transparency is a core value of the rule of law and of democracy. Transparency is essentially an outcome, and one that results in a higher level of trust. The essence of transparency is the release information of public-interest by the government, especially of information regarding decision-making and the decisions themselves. The National Authority for Data Protection and Freedom of Information (HNDP) was created on 1 January 2012. One of the HNDP's main tasks is the monitoring and promotion of the enforcement of the law regarding the openness of information of public interest or in the public interest. In addition to its earlier data protection tasks, the HNDP has also the authority to impose fines in the context of the 2011 CXII Privacy Act regarding the right to informational self-determination and freedom of information.

This indicator based on HNDP data, refers to the number of public information inquiries ending in a finding of illegality. The number of investigations shows that civil initiatives concerned with openness of data have become more frequent, as well as the proportion of investigations which have ended with the authority finding a breach



Source: HNDP

of the right to information of public interest. This data covers the full spectrum of organisations and individuals performing public functions and economic activity involving public assets. An increase in the number of investigations indicates that the HNDP is receiving more requests each year, leading to a proportionate increase in the number of procedures deemed to be unlawful.

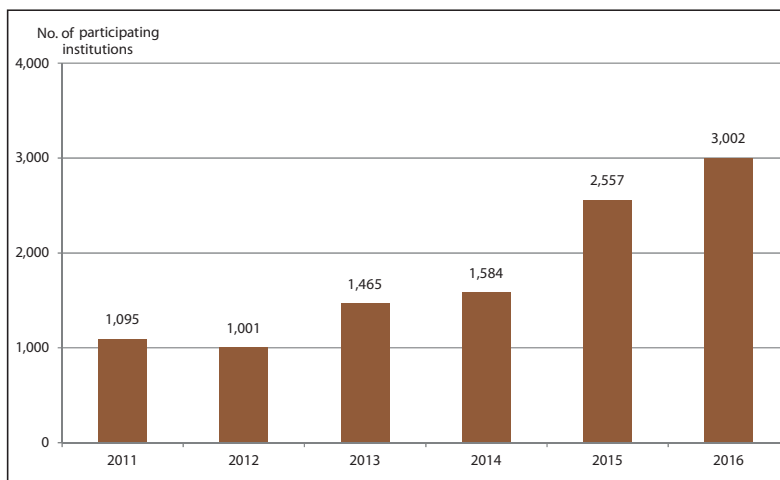
The increase in governmental transparency has led to an increase in the number of data privacy cases investigated, subsequently resulting in an increase in the frequency of illegalities.

T.4.3. Data on the number of institutions who (voluntarily) participate in the State Audit Office of Hungary's (SAO's) corruption risk measurement system

The primary factor in determining the quality of governance is the social sentiment regarding trust in the government and government corruption. Transparency is the indicator of the government's integrity or, in other words, its resistance to corruption. The Hungarian State Audit Office (SAO) runs the integrity project to measure corruption risks.

The Hungarian State Audit Office is the parliament's primary financial and economic controlling body, and is the main institution guaranteeing the Hungarian democratic assembly. Its primary task is to support legal, appropriate, effective and efficient use of public money and public assets, as well as to help build a well-managed state and encourage good governance. The SAO is a member of INTOSAI, the International Organisation of Supreme Audit Institutions, which comprises the auditors of countries that are members of the United Nations and specialist UN organisations.

The objective of the SAO's measurements is to assess the extent to which public sector institutions are exposed to corruption risks and the extent to which they use integrity controls to mitigate corruption. Budgetary organisations take part in the assessment on a volunteer basis. Since 2012, there has been a gradual year-on-year



Source: SAO

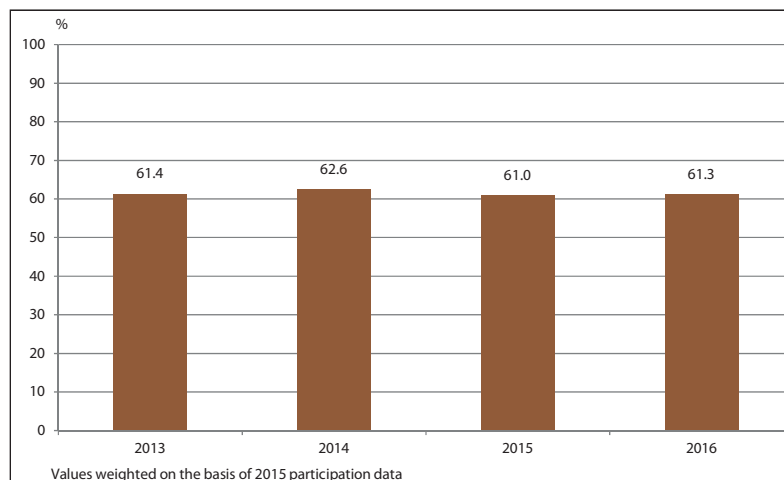
increase in the number of budgetary institutions volunteering to take part, and there was a large-scale increase in the number of participants in 2015: more than 2,500 budgetary organisations of varying size and profile joined the assessment. In 2016, the number of institutions taking part rose to more than 3,000. The trend shows that an increasingly large number of financial institutions are undergoing an objective assessment of their transparency, and that this points to a reinforcement of integrity and transparency in the public sector.

An increasingly large number of budgetary institutions are undergoing an objective assessment of their transparency, indicating an improvement in terms of integrity and transparency.

T.4.4. The SAO Controls Mitigating Risks Factors (CMRF) index

The State Audit Office (SAO) oversees the integrity project realised from EU funds entitled *Mapping Corruption Risks: Strengthening Integrity Based Administrative Culture*. Controls Mitigating Risks Factors (CMRF) is a composite indicator that assesses the legal/institutional characteristics of the environment, operational accountability and stability of budgetary bodies. The data is drawn from SAO records.

The CMFR index depends on a daily cooperation of the individual institutions – inherently improving the mitigation of risks – and presents a variety of components. It assesses the legal/institutional characteristics of the environment, the operational accountability and stability of budgetary bodies, as well as any influencing factors in the operation of the institutions – essentially concerning the decisions of the current management – such as defining strategic goals, organising organisational structure and culture, managing personnel and budget resources and public procurement. For example, if an institution implements a project from EU funding, then, as far as the related tenders for public procurement are concerned, the conclusion of contracts of engagement and those factors that go beyond the institution's original status and responsibilities lead to an integrity risk. The higher the value of



Source: SAO

the indicator, the greater the presence of factors that increase the risk of corruption in that institution. Since 2013, the figure assessing the factors measuring the corruption risk of public institutions has fallen between 61 and 62: it has not deteriorated, neither has it improved.

There has been no new assessment in the EU since the anti-corruption report published in 2014. In the international Corruptions Perceptions Index (CPI), produced by Transparency International, Hungary ranks 57th of 176 countries (2016).

There is neither an upward nor downward trend with respect to the factors mitigating corruption risks for public institutions.

T.4.5. Openness of data

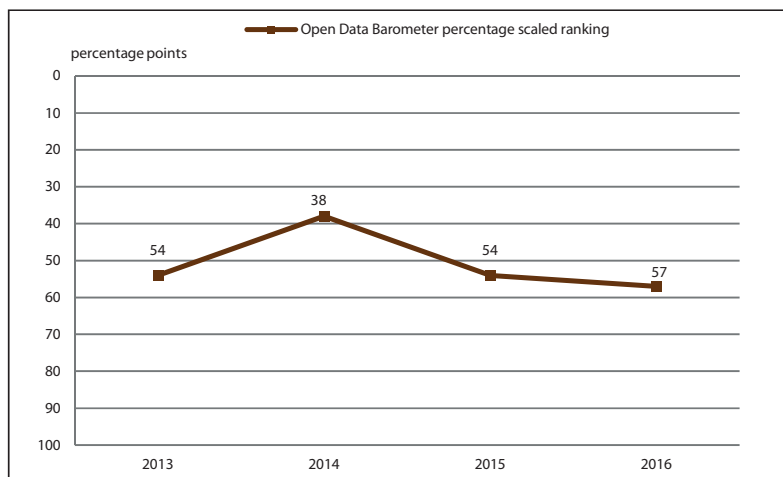
Openness of data is measured according to an evaluation of the accessibility of national databases of public interest, made on the basis of uniform international standards. The measurement presents cumulative data based on the method and assessments of the Open Data Barometer (ODB), which ranks Hungary in relation to other countries (source: Open Data Barometer/WWW Foundation). The ODB is published in cooperation with the World Wide Web Foundation and Open Data for Development (OD4D). These organisations are working in tandem with the world's leading data scientists and their experience in the corporate sector.

The assessment is made by evaluating 15 national databases through the use of ten standard questions.

These databases include mapping and land ownership data, government spend data, company registration data, legislation data, international trade data, public transport data, health sector performance data, primary and secondary education data, crime statistics data, national environment statistics data, national election results data and public contracting data.

The main standard questions are as follows: Does the data exist? Is it available online from the government in any form? Is the data openly licensed? Is the dataset available free of charge? Is the dataset up to date? Is the dataset updated regularly? Was the dataset easy to find?

The main data from the assessment is partly based on a self-assessment by the government through a questionnaire, while an additional method involves scoring by invited experts based on research manual methodology. The secondary data is based on surveys by the World Economic Forum, the UN and the World Bank.



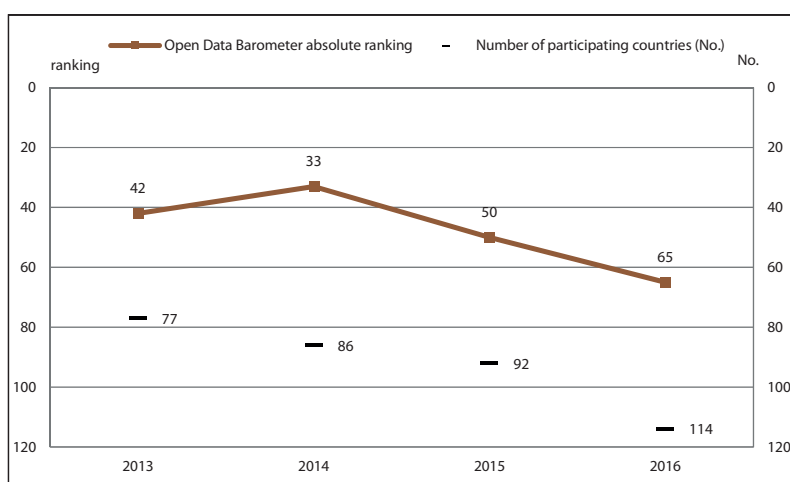
Source: Open Data Barometer

The results are published in three different parts: readiness comprises 35% of the total score; implementation another 35%, while political, economic and societal effects (impact) contribute 30%. From the overall results, the algorithm generates a score in points and ranking position. Since the assessments completed in 2013, the number of states assessed has risen from 77 to 114. This means that there is a significant relativisation of the changes to the positions of the individual countries.

For this reason, Hungary's percentage ranking is displayed, which shows what percentage of the countries in the given year are in front of Hungary in the ranking.

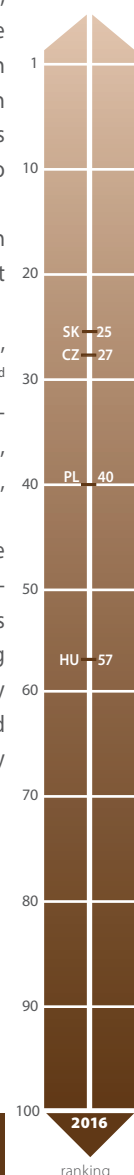
In 2013, Hungary occupied 42nd place out of 77 assessed countries, a ranking of 54% in percentage terms. In 2014, it occupied the 33rd spot (of 86 countries), which translates to a ranking of 38%, a significant improvement. In 2015 it stood in 50th place (of 92 countries), falling back to 54%. In 2016, it was in 65th place (of 114 countries), resulting in a score of 57%.

From the developments of the last four years, we can say that in relative terms (in terms of the percentage point of the total countries), Hungary is among the middle-ranking countries. According to the assessment, the weakest point in Hungary is the accessibility of public interest contracts and budget spending. Its strengths are the accessibility of data concerning health, education and crime.



Source: Open Data Barometer

Hungary has held its relative position as a middle-ranking country among the countries assessed by the Open Data Barometer. The accessibility of government spending data and public contracts must be improved in order to move up the ranking.



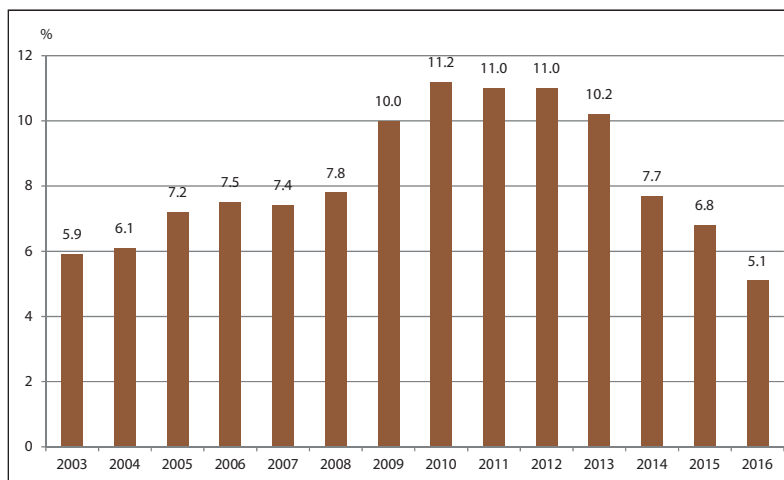
Source: Open Data Barometer

T.5.1. Unemployment rate

One of the starting points for the creation of a secure standard of living is the state of the labour market in the given country: the level of unemployment, the pay that employees receive for their work and the purchasing power of their earnings – how many goods and services they are able to purchase with their pay. The composition of the labour market is therefore one of the most important areas for assessing security of livelihood. The unemployment rate, which calculates the percentage of unemployed people relative to the total number of economically active people in the population as a whole, is one of the most commonly used indicators for this purpose. Based on HCSO methodology, a person is considered to be unemployed if they did not work in the given

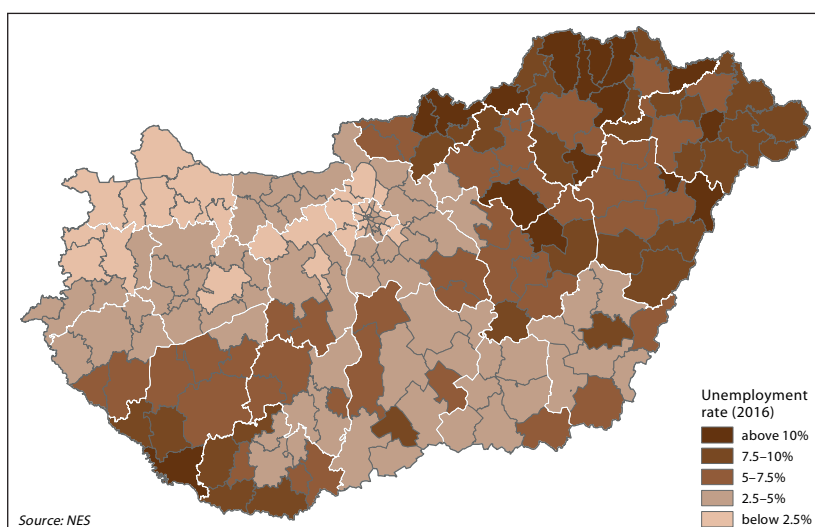
week, have no job they have only left on a temporary basis, have actively sought work in the four weeks prior to being questioned, are able to work within two weeks, or have found work which they will start within 90 days. The economically active segment of the population is the sum of the employed and unemployed. The number of those in employment includes individuals working in the public sector. The unemployment rate, which refers to people aged 15–74, has shown a downward trend since 2001, while it has remained below 10% since 2014. According to data published by the HCSO in May 2017, in the period from February to April 2017 there were on average 56,000 fewer unemployed people than in the same period of the previous year, indicating a reduction in the unemployment rate of 1.3% to 4.6%.

It is worth analysing the unemployment rate in a number of different ways. One dimension is the gender-specific composition of the indicator. According to the 2017 HCSO data, the rate was

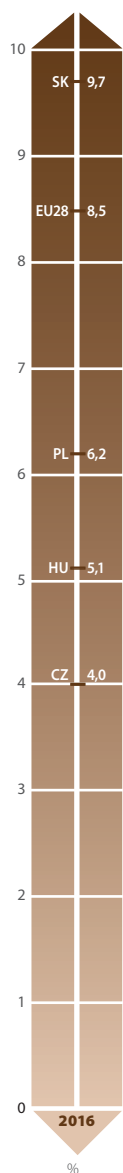


Source: HCSO

higher for men than for women, while the reduction in the rate was also greater. The second dimension shows the breakdown by age, with three different groups analysed. The youth unemployment rate for people aged 15–24 fell by 4.8% to 14.2%, the highest rate of unemployment by age in Hungary. For people aged 25–54, the largest age group of working age, the rate fell by 1.4% to 5.5%. There was also a moderate reduction in the unemployment rate for those aged 55–64, falling 1.2% to 5.6%. The average length of time for a person to be unemployed stands at 19.2 months, while 50% of unemployed people are long-term unemployed, meaning that they have been searching for a job for at least a year. The third dimension is regional analysis. At the county level, there are significant differences in the unemployment rate. In the first quarter of 2017, the lowest unemployment rate was in Győr-Moson-Sopron (0.8%) and Veszprém counties (1.2%), while the largest was in Nógrád (11.8%), and Szabolcs-Szatmár-Bereg counties (9.3%).



The unemployment rate – as one dimension of security of livelihood – has shown a downward trend since 2012, though there are significant differences on a regional level.

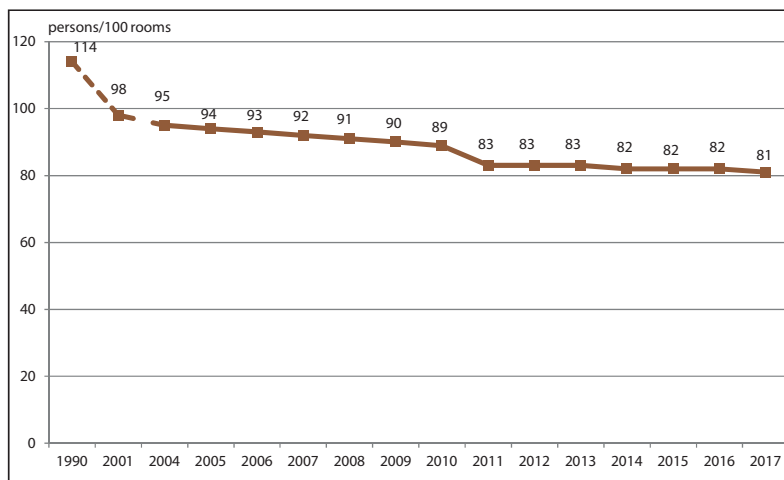


Source: Eurostat

T.5.2. Security of housing

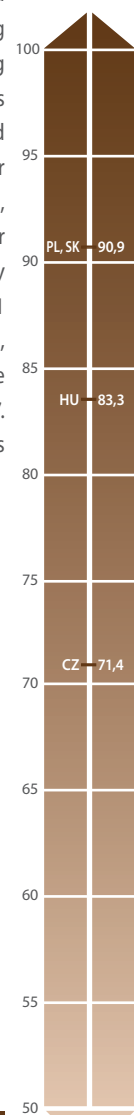
Finding affordable and suitable housing is a basic need and right of a secure environment. In all likelihood, meeting this need completely would lead to a reduction in poverty and social exclusion, yet this remains an enormous challenge for many nations even to this day, including many countries in Europe. In 1991, the United Nations Committee on Economic, Social and Cultural Rights defined the concept of adequate housing, providing a starting point for each country's individual housing policy.

According to this definition, the first element of suitable housing is legal security, meaning protection against forced eviction. The second element is access to basic services and infrastructure, including access to drinking water, energy and sanitation, and the presence of heating and lighting. The third element is affordability, according to which expenditure on housing should be on a level that means it does not impinge on the individual's ability to fulfil or attain other basic needs. The fourth element examines qualitative and quantitative elements of housing such as size. The fifth element states that housing should be usable by disadvantaged or marginalised groups, such as the elderly, children, disabled people, the terminally ill, and victims of natural disasters. The sixth element is location, which means that the location should enable access to employment options, health services, schooling and other social services. The seventh and final element is cultural adequacy, which states that the method used to build housing and the materials used for its construction should take into account and respect the expression of cultural identity and differences. As this approach shows, housing can be analysed comprehensively in a variety of ways. In this report, we measure the number of residents per 100 rooms.



Source: HCSO

According to the HCSO methodology, a room is classified as a space with direct natural light and ventilation, with doors and windows and at least four square metres of space for use as sleeping quarters or as a living room. The number of rooms in housing is based on the total number of rooms per dwelling, regardless of the floor space in each room. A dwelling is a technically and architecturally interconnected unit of a building specifically for residential purposes, with a separate entrance from the public area, garden or common space within the building – and the number of dwellings includes both occupied and unoccupied holiday homes. The number of dwellings increased by 1% between 2011 and 2017. In 2017, 52% of the dwellings had three or more rooms, 38% had two rooms and 10% had one room. The number of people per hundred rooms was 114 in 1990, 83 in 2011 and 81 in 2017. One of the reasons for the decline after the fall of Communism is the decline in population.

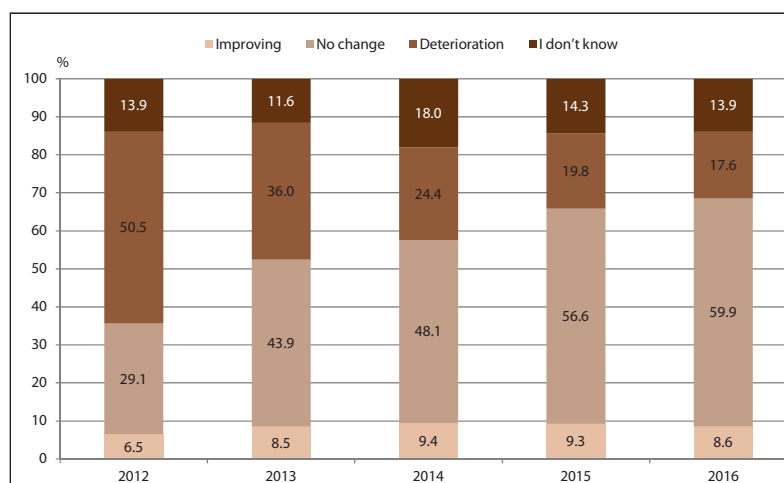


persons/100 rooms
Source: HCSO

The number of rooms as a percentage of the population has been relatively stable since 2011, with a slight downward trend.

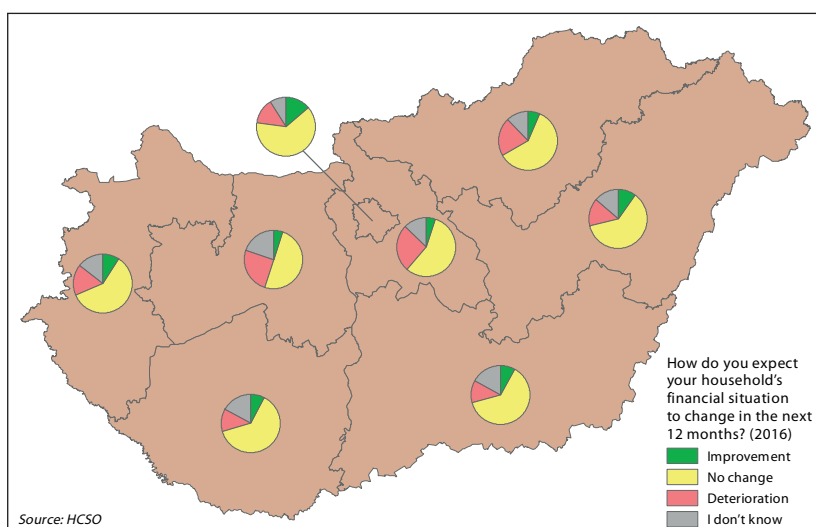
T.5.3. Expectations regarding the population's financial situation

Since 2012, the HCSO has used annual questionnaires to measure people's expectations regarding their financial situation, with approximately 13,000 households taking part. The basis for this indicator is the question "How do you expect your household's financial situation to change in the next 12 months?" with the following possible answers: improvement, no change, deterioration, or I don't know. The expectation of household income is closely linked to the current household income situation. In terms of financial expectations for the future, we can see an upward trend: while 50.5% of respondents in 2012 thought their financial situation would worsen, this figure stood at just 17.6% in 2016. This does not signify an unconditional improvement, as most respondents (59.9%) in 2016 thought that their and their family's financial situation would not improve in the following 12 months, and just 8.6% thought that the situation would improve. From a regional perspective, people in Pest County were the most pessimistic in 2016, with 26% expecting their financial situation to worsen, with the Central Transdanubia Region close behind on 25.4%. People in Budapest were the most optimistic, with 13.8% of respondents expecting improvement in the future. They were followed by the Northern Great Plain, where 9.9% of the respondents trust that their situation will improve. In terms of age groups, the assessment showed that the under-20 age group had the highest proportion of people who were optimistic about the future, with 33.9% expecting



Source: HCSO

an improvement, while the over-60 age group had the highest proportion of people who think that the situation will get worse (20.1% of respondents). In terms of the level of education, 12.9% of people who have a higher education qualification felt that their future situation would improve, while people with a high school diploma were more pessimistic, with 24% expecting it to get worse. In terms of groups selected according to household members, families with two adults and two or more children had a higher than average positive viewpoint in 2016 in relation to the country as a whole, with 14% of the respondents expecting an improvement. Meanwhile, this figure was even higher, at 16.4%, for families with three or more children.

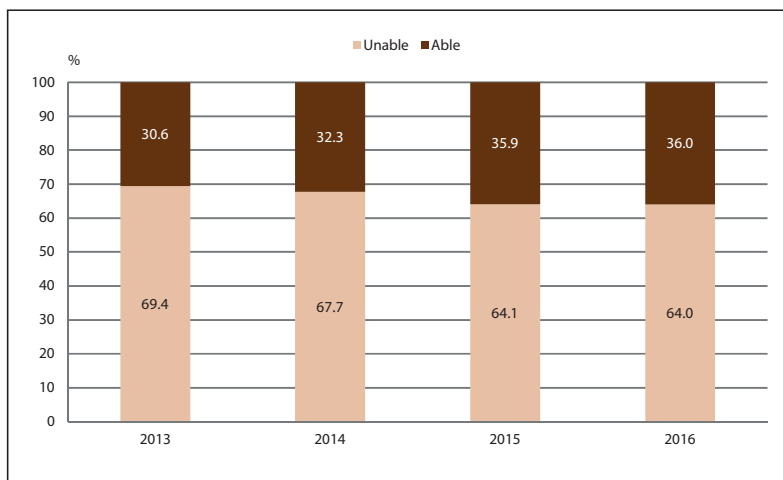


Source: HCSO

Future expectations of changes in financial situation has shown an upturn since 2012, though nearly 60% of the population did not expect their situation to improve in 2016.

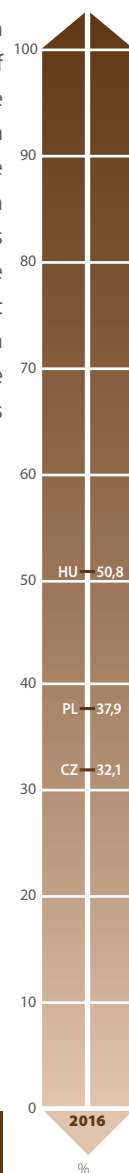
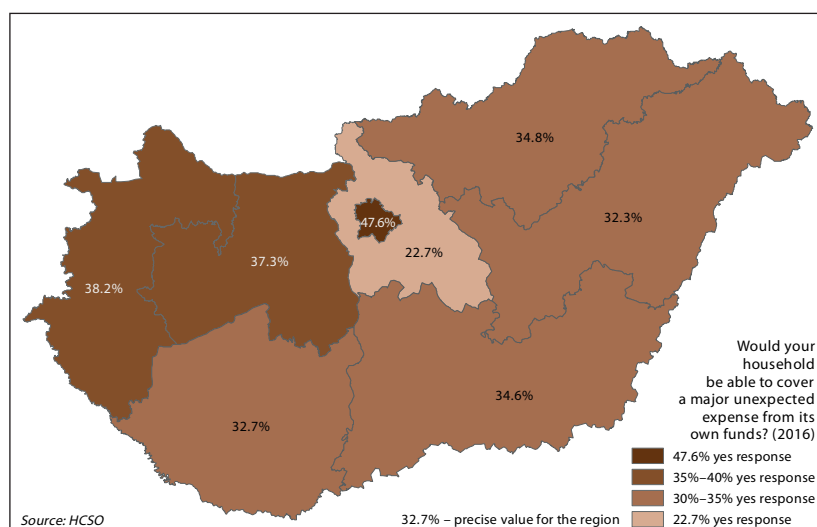
T.5.4. The population's sense of financial security

The population's sense of financial security has been measured annually by the HCSO since 2012, with approximately 13,000 households from the general population taking part. Respondents were asked the question "Would your household be able to cover a major unexpected expense from its own funds?" with a possible answer of either 'yes' or 'no'. This means that, according to the HCSO's methodology, the public's financial security is based on the ability to cover an unexpected, higher amount of expenditure, with this ability evaluated positively or negatively by respondents. The lack of private funds to resolve potential problems that may arise in the future can create uncertainty and lead to a sense of vulnerability. A positive vision of the future, on the other hand, reinforces our general sense of security, with the individual trusting they will be able to come up with the funds they need even if there is a change in their current circumstances. In the 2016 questionnaire, the amount of expenditure was set at HUF 70,000. While 69.4% of respondents in 2013 said they lived in a household where they would not be able to cover a large expense, this figure was 64% in 2016. An analysis of the regional dimension provides an interesting picture: Of the different regions of Hungary, the highest proportion of people who answered 'yes' was in Budapest, where 47.6% of respondents answered positively about their future in 2016, while the highest proportion of people who responded 'no' was in Pest County, where 77.3% of respondents thought they would not be able to cover the sum in question. In terms of age group, the under-20s had the highest proportion of people who answered negatively to the question,



Source: HCSO

at 97.3%, while people aged 30–39 and people aged 60 and above were much more positive, with only 61% and 62% respectively answering 'no'. There was an even greater difference between respondents with different levels of education. In 2016, 17.3% of people with a basic qualification said that they would be capable of covering the expense, while the figure for respondents with a higher education qualification stood at 58.8%. If we analyse the question in terms of types of households, then the data from recent years shows that households with young children feel less secure in terms of the future than the average. Parents who are raising their child or children alone are the least likely to think that they would be able to cover an unexpected, large expense. From households without children, people living alone are less positive and people living with an adult partner are more positive in terms of their financial security than the country as a whole.

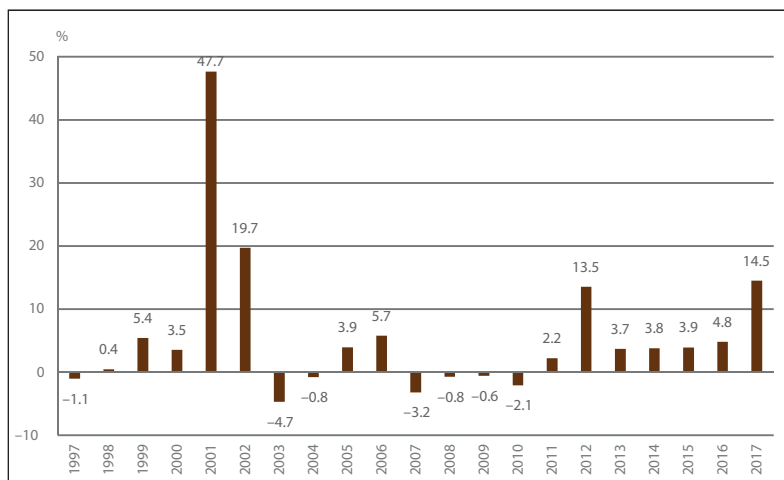


There has been an improvement in the population's sense of financial security since 2013, but there is a high proportion of households that believe they would not be able to cover a major, unexpected expense.

T.5.5 Change in the real value of the minimum wage

One defining element of security of livelihood is the development of people's earnings over time, which plays an important role in maintaining security of income. The minimum wage is one of the government's most important tools for guaranteeing a secure livelihood, as it legally ensures that workers receive a minimum level of income. Not all countries have a minimum wage, and where it does exist, it is set as a minimum weekly wage in many cases. Change in the real value of the minimum wage data – which is the nominal minimum wage increase in relation to the previous year, reduced by taking into account the rate of inflation in the year in question – shows the degree to which the rise in the value of the minimum wage relative to the previous year was greater

or lower than the general consumer price index. A positive value means that the real value of the minimum wage increased, i.e. it grew more than the change in the consumer price index, while a negative value means that the real value of the minimum wage declined, since the increase remained lower than the increase in inflation in the same year. The value of the minimum wage is determined annually by government regulation, while the annual consumer price index is calculated and published by the HCSO. The consumer price index measures the average price change of products and services purchased by the population for their own use over time, with certain purchases, such as property or payments made in kind, not included. Price changes are measured based on a consumer basket made up of representative products and services, with price changes assessed from month to month. These include relatively high volume products and services, such as pork, home-style bread, a particular brand of cigarettes, LCD-LED televisions, propane-butane household gas, unleaded petrol and train tickets. Consumer price statistics are based on the observation of nearly 1,000 commodities and services, which are integrated into 140 price categories. The range of products is reviewed by the HCSO every



Source: HCSO

year. In order for the price indices to correctly indicate the impact of price changes on household expenditure, it is necessary to know their weight in terms of consumption. These weights represent the ratio of product and service groups to the population's purchased consumption, as the consumption structure of a family, for example, is different to that of a retired couple. This means that it is possible, for example, to calculate a consumer price index specifically for retired people.

In light of the above, the year 2001 shows a very high figure. This is due to the fact that the minimum wage increased by 57% in 2001 compared to 2000, from HUF 25,500 to HUF 40,000, while the consumer price index stood at 9.2%. In terms of negative values, the highest value was observed in 2003, as the minimum wage did not increase that year whereas the rate of inflation was 4.7%. From 2011, the real wage has increased slightly, while the significant increase in the minimum wage in 2012 was largely due to compensation through tax credits, though that year follows the general trend even with this factor taken into account. In 2017, a significant increase is again observed, as a result of the 15% increase in the minimum wage compared to the previous year in combination with low inflation.

Since 2011, the real value of the minimum wage has moved in a positive direction, in 2017 a significant increment can be seen due to the minimum wage increase and the low inflation.

PUBLIC WELL-BEING IMPACT AREA

SUMMARY¹

The improvement of public well-being is a top social and economic objective, so it belongs in the category of target-type impact areas, and is closely linked to the impact areas associated with security and trust, as well as democracy. Asset-type impact areas are financial stability and economic competitiveness, environmental and social sustainability, and effective administration.

When evaluating public well-being, one of our starting points was assessment of the quality of life, which has an increasingly broad meaning, the other was the analysis of virtue ethics factors. We continued to reject the expediency of using a single indicator, instead we selected and employed indicators on the public well-being *dashboard* that can be linked to the pillars of material well-being, quality of life, virtue ethics and sustainability. It was not through GDP or indicators originating from GDP that we analysed the structure of material well-being; instead, we defined it through indicators relating to the dimensions of disposable household income, poverty, social exclusion, employment and education. The prime aim of our analysis is to show how the position of the household, or within that, the individual exerts a many-folded influence on people's well-being, and how they collectively do the same for the state of society.

We have described changes to the quality of life with indicators relating to health care and the social safety net, as well as to dimensions of the individual in society (mental well-being). In doing so, we have examined the possibility and expediency of both the *top-down* and the *bottom-up* structure. Although, in the former case, quality of life can be viewed on the basis of the opportunities available (income, services, etc.), practical perspectives and international experience led us to prioritise the second approach of defining indicators on the basis of the individual's subjective opinions (preferences). Among other tools, opinion surveys of citizens help inform us of the level of dissatisfaction with the health care system and public education.

With respect to virtue ethics, our starting point is that objective well-being, perceived as happiness, is subject to the *happiness paradox*: happiness (human fulfilment) only grows for some time with the expansion of economic means, but begins to drop off after a certain point. The factor virtue ethics-based well-being grows in direct proportion to is the intensity of human relationships. *Social capital* is the other significant function of well-being. Well-being therefore depends on human relationships: in virtue ethics, the person is nothing more than an individual who is completed, realises themselves and is able to share of themselves and be selfless through their relationships. People enter into a relationship in their own interests and not for the value the other person will derive from it. Win-win situations can result from this, allowing community well-being and benefit for all, the common good, to be realised in its wider meaning.

By including the sustainability pillar, we show the need for the level of public well-being currently achieved for the short term to also be sustainable for a longer period, or at least in the medium term. The examination of this, however, falls primarily under the scope of studying the impact areas of economic competitiveness and financial stability, as well as sustainability. While the dimensions selected for the purposes of research and practical application broadly span the areas of public well-being, a few important dimensions have thus far been omitted from the study. These include composition of the family and household, the situation of youth and the elderly, the quality dimension of work, culture and sport, and use of time (work-life balance). In analysing the indicators describing the dimensions of public well-being, we paid special attention to the change in governmental capabilities in relation to public well-being; meaning, on the one hand, the general direction and character of economic and social policy, and on the other, its role in influencing public policy measures taken during the given time period. The results of this are reflected in the key findings and conclusions shown in presenting the achievements signified by the individual indicators.

The main characteristics of income status

According to the indicator measuring total corrected disposable income for the household sector, the palpable improvement in the financial situation of households is exerting an increasingly positive influence on the development of objective factors related to the quality of life. The average net income of employees' indicator showed a significant (7.8%) increase in 2016. Despite growth in the disposable income of households and improvement in employment, the savings rate of households fell to 9.6% in 2015. Household debt fell to 77% of GDP in 2016. In this respect, Hungary occupied sixth place among European Union member states. Following the outstandingly fast growth (2.6%) in the income situation of the middle class in 2015, growth slowed to 1.1% in 2016, which indicates the stabilisation of the income situation of the middle class.

The main characteristics of poverty and social exclusion

The risk of poverty or social exclusion affected 26.3% of the population in 2016, compared with 28.2% in 2015, meaning that the number of those living under the threat of poverty fell by 183,571. The risk of income poverty stagnated in the period of 2013 to 2015, but 14.5% of the population lived beneath the income poverty threshold in 2016, resulting in a fall in the indicator by 0.4 percentage points in comparison to the previous year. The proportion of those living in relative income poverty in Hungary was lower than the value estimated for the European Union

¹ The authors of this chapter are Prof. Gusztáv Báger, PhD (leader of the workgroup), Sarolta Laura Baritz, PhD, Rita Judit Kelemen, PhD, Norbert Tamás Kiss, and Ildikó Szabó, PhD.

overall (17.3%). The risk of severe material deprivation – following the continuous fall of the previous two years – affected 16.2% of the population in 2016, which was 3.2 percentage points less than in 2015. The percentage of people living in households with very low work intensity fell continuously over the past three years, with 8.2% of the population living in such households in 2016. The income poverty rate in relation to children fell from the 25% level of 2014 to 22.7% in 2015 and 19.9% in 2016. The 2015 figure was higher than the value calculated for the European Union as a whole.

The main characteristics of the health care and social safety net

The increase in the number of years spent in good health means that, in terms of health care, Hungary is close to the average of EU member countries, only falling behind by 1 or 2 years. The extent of health inequality within the country is correlated to economic development: The number of years spent in good health by women and men overall in the Central Hungary region exceeds the EU average. By contrast, women and men are expected to live 8.4 years and 6.6 years less in good health, respectively in the Northern Great Plain region. The *Social benefits as a percentage of GDP* indicator continuously fell in the period following the financial crisis, and stood at 19.7% in 2014, in comparison to the EU average of 27.6%. This decline primarily affected health care, disability and unemployment benefits. The *Health care spending as a percentage of GDP* indicator was 7% in 2015, while the state's health care spending was 4.7%. Average total spending was more than 1 percentage point below the EU average, while the proportion of private expenditures (33.0%) significantly exceeded the OECD average of 27.1%. The 2016 value of 1.48 for the *Total fertility rate*, which began to rise in 2011, can be considered to represent significant growth, but still lags behind the EU average. The fertility rate was lowest in the highly developed Central Hungary region in 2015 (1.29), while it was highest in Northern Hungary (1.64). In order to stabilise the population size, it would be necessary to achieve a value of 2.1. The change in pension replacement rates observed over the long term and the rise in 2014 were in line with the increases in performance and competitiveness in the national economy. The value of 65% for 2015 exceeds all values measured since 2005. This tendency continued in 2016 with the value for the indicator reaching 67%, as a result of which pensioners are receiving almost 70% of the income they were earning in previous years. The value for Hungary in 2015 exceeded the EU28 average of 57% and is the highest value of all the surveyed countries.

The main characteristics of employment and education

According to the *economically active population aged 15–64* indicator, the number of employed and unemployed people on

the labour market during the period 1998–2006 grew, with small variations annually, with the highest figure (4,222,000 people) recorded in 2006.

As a result of the financial crisis, the size of the active population shrank to 4,135,000 in 2009, before growing to 4,300,000 by 2014 and increasing to a record level of 4,543,000 by 2016. In 2016, the employment rate for the population aged 15–64 was 66.5%. The domestic employment rate for the population aged 20–24 is slightly more favourable than the EU28 average (71.8%) at 71.5%. Of the Visegrád countries, only the Czech Republic has a higher figure (76.7%) than Hungary. The proportion of children underachieving in the PISA study in Hungary has declined since the 2009 survey and is lower than the international average. This represents a greater problem than the worsening average value as the proportion of Hungarian students underachieving in 2015 was significantly greater in all three areas of competence (18.5%) than the OECD average (13%). The ratio of early school leavers – following an improvement in 2014 – rose to 14.4% in 2016, while their average ratio reduced to 10.7% across the EU. In this respect, the regional disparities within the country are considerable. The percentage of youth with higher education degrees has significantly grown over the last decade, but it fell from 34.3% to 33.0% in 2016. Further development is required to improve competitiveness. The net migration indicator, which measures the difference between immigration and emigration, has been positive since 2013: Net migration in Hungary was 12,368 in 2014 and 15,119 in 2015, which shows growth of a factor of 2.9, or rather 1.2 in comparison to the previous year.

The main characteristics of the individual in society

According to the *life satisfaction* indicator, the average value of the answers provided in a survey by the adult population, on a 0–10 scale, was 6.4 in 2014, while this same data point fell slightly to 6.1 in 2015 and 2016. The level of satisfaction falls with the increase in age, and grows with increased academic qualifications. The country's points score is lower than the EU average and also the average of the other Visegrád countries. According to the *meaningfulness of individual activity* indicator, the overall population considers the value of its work to be greater than their general level of satisfaction with life. The frequency of volunteer social work is reflected by the fact that 20% of the Hungarian population reported in 2017 that they participated in such work at least once annually. Satisfaction with the quality of the health care system – particularly with regard to the state's performance – is not sufficient. Satisfaction with public education is in the mid-range. Satisfaction with the state's performance of its tasks and the education system for development of disadvantaged children received a below average rating.

P.1.1. Household sector total adjusted disposable income

The indicator shows, on a timeline, the household sector's (private households) total adjusted disposable income based on national HCSO data. By the balance of the primary incomes of private households, which is the income-side operating result, we mean employee incomes and incomes originating from assets minus asset-related payments, as well as revenues received in cash redistributions of incomes. In-kind social benefits are not included.

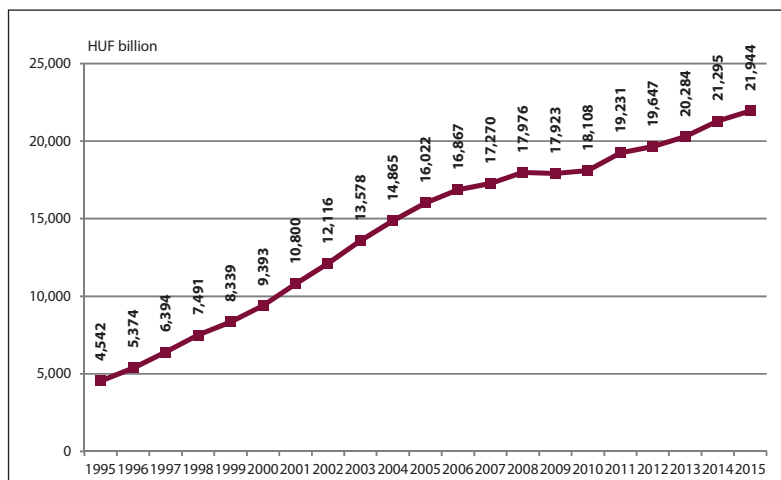
Household total adjusted disposable income will be 33% greater than the virtual income calculated from household production. This is not income received in monetary form, but imputed income that reflects the value in terms of work of those services they provide to themselves. If the households had wished to purchase these services, this is how much they would have had to spend, or rather the amount of surplus income they would have needed to achieve and maintain the same level of consumption without household production.

We calculated the expanded consumption of households by subtracting the ongoing use of production capacity and purchase of durable property from household consumption recorded in the national accounts, and added the full output of household production.

In summary, taking into account household production significantly modifies the contribution of households to the national accounts, multiplying the output of households and markedly increasing both recorded income and consumption by as much as a third. The volume of household production in relation to the entire national economy is a matter for debate.

It is helpful when evaluating the extent of household production in proportion to the national economy to compare against the GDP of 27.052 trillion recorded in the national accounts for 2010. The gross added value of the share of household production not accounted for in the national accounts calculated on the basis of the special equivalent net wage is HUF 6.119 trillion, which means that Hungary would have produced a 23% higher GDP than if we were to also take full account of household production.

However, with regard to the fact that time spent working has the greatest weighting in the gross added value of household production, it is no surprise that the valuation of working hours produces considerably different results depending on methodology.



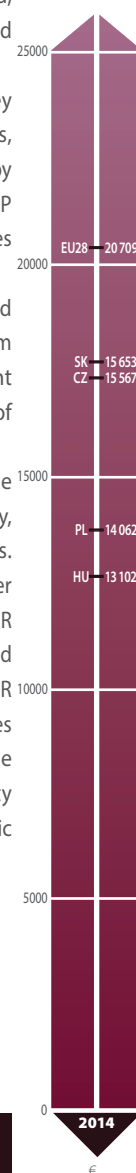
Source: HCSO

The higher the hourly rate, the greater the virtual contribution of household production. Depending on the valuation method used, taking account of household production can increase the estimated value of GDP by between 22% and 47%.

Although the data are not comparable in their minutiae, they are suitable for comparing orders of magnitude. On this basis, the working hours not included in national accounts increased by close to 9% in 10 years, and gross added value in proportion to GDP also grew by 8% to 9%, calculated using special equivalent wages in line with this.

Overall, we can conclude that, although the unpaid work carried out in households remains invisible in government statistics from the perspective of national accounts, it represents a significant economic activity both on the level of households and that of the economy as a whole.

One indicator that is very close to this is adjusted disposable household income per capita based on purchasing power parity, which is shown on the 2014 dataset for the EU member states. According to the data, adjusted disposable household income per capita based on purchasing power parity in Hungary in 2014 was EUR 13,102, in comparison to the EU28 of EUR 20,709. Hungary only ranked higher than Romania (EUR 9,152), Latvia (EUR 11,802), Croatia (EUR 12,339) and Estonia (EUR 13,074). All of the other Visegrád countries produced better data than Hungary, with adjusted disposable household income per capita based on purchasing power parity reaching EUR 14,062 in Poland, EUR 15,567 in the Czech Republic and EUR 15,563 in Slovakia.



The value of the indicator grew in Hungary, but remains below the EU28 average and is also the lowest of all the Visegrád countries.

Source: Eurostat

P.1.2. Average monthly net earnings of employees

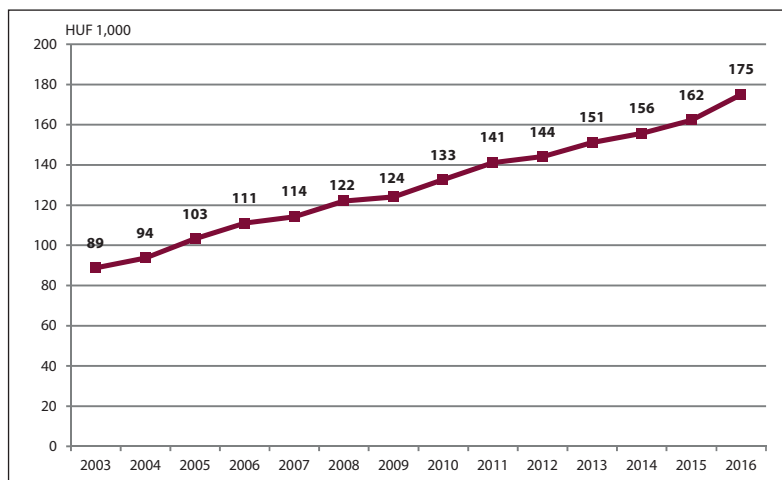
This indicator shows changes over time in the average earnings of employees working in the national economy.

The *average monthly net earnings of employees* indicator provides information on how the population's economic engine, the actively earning population, is employed and under what earning conditions. Those in employment are workers in a legal relationship with their employers to perform work, and who are required to work in exchange for a salary on the basis of their work contracts and agreements to work, averaging at least 60 working hours per month.

Those who are considered to be employed includes, among other categories, people contracted to work remotely, students employed during or outside of the school term, foreign citizens who work for a wage at an enterprise registered in Hungary, independently of whether the work is performed in the employer's domestic or international office or site, as well as those who are sent abroad to perform their work.

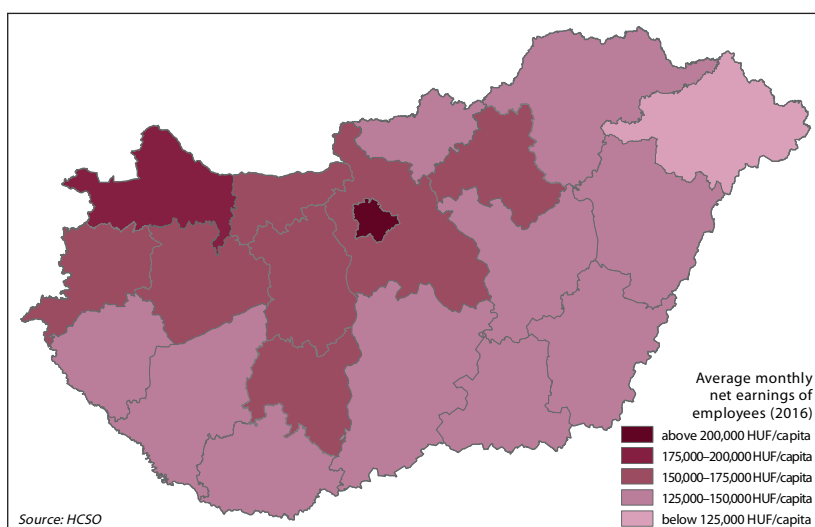
The value of the indicator has shown steady growth since 2008, and the rate of increase has been stable in recent years. This is supported by the 2016 data (HUF 175,000) showing 7.8% growth over the average net income in 2015 (HUF 162,200).

In 2016, the personal income tax rate decreased by 1% (to 15%), with employer contributions remaining unchanged, so growth in net average income exceeded that of gross income. The 2016 net income index without public employees was 108.1% with an average income of HUF 185,000, while these figures were 107.9% and HUF 175,000 respectively when public employees were included. Net average income in the private sector was HUF 184,200 and HUF 157,900 in the budgetary sector (or HUF 186,700 if public employees are excluded).



Source: HCSO

With regard to this indicator, it is particularly important to also examine the distribution of income on a county level. The monthly average net income was highest in Budapest (HUF 226,000) in 2016, followed by Győr-Moson-Sopron (HUF 182,500) and Komárom-Esztergom (HUF 172,900) counties. Szabolcs-Szatmár-Bereg county (HUF 118,400) had the lowest figure, followed by Békés county (HUF 128,400). These differences clearly illustrate the disparity across the country as the counties with the highest net average income are all in the western region of the country. From 2016, single-child families were able to reduce their monthly income tax base by HUF 66,600 compared to the previous HUF 62,500, while two-child families reduced their income tax base by HUF 83,300 per child and the reduction for those families with at least three children grew from HUF 206,200 to HUF 220,000. The family income tax credit resulted in an average addition monthly income for families of HUF 7,200 per employee in the organisations surveyed.



Source: HCSO

According to the indicator, the disparity between counties in the west and east of the country continued to remain unchanged in 2016.

P.1.3. Household savings rate

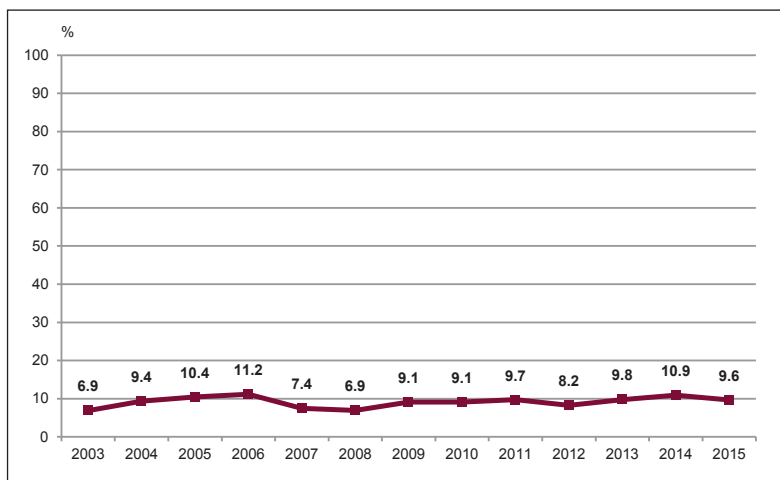
This indicator shows the ratio of annual household savings for a given year as a share of disposable income. Disposable income – with an additional correction for net changes in wealth from private pension funds – is the amount of the income that households can use for consumption and accumulation. Savings are the sums remaining from disposable income after financing final consumption expenditures and which can be used for accumulation, partly in the form of capital accumulation (fixed assets and accumulated inventories), and partly for acquiring financial assets (e.g. securities, bank deposits and loans).

Financial situation is a broader concept than income. In addition to regular income, when examining a household's financial situation, we must also consider a household's accumulation of wealth, of which the most revealing index is the cash savings rate, which expresses the value of household realised monetary savings as a percentage of disposable income.

During the period preceding the international financial crisis, the long-term behaviour of domestic households was characterised by giving preference to consumption and investment into homes over financial savings. After the international financial crisis, there have been significant changes in the willingness to save of households. The consumption ratio of households (the percentage of HUF 100 spent on consumption) has slumped close to 85%, which is a significant decrease compared to the period before the crisis. Since the crisis, the savings rate relative to disposable incomes has risen over 9%, with the exception of 2012 (8.2%).

The increase in the willingness to save has been due to several government measures, especially to the restructuring of the personal income tax system, which has reduced the tax burden on work incomes and increases the level of domestic savings by ensuring higher net income. On the other hand, demographic trends (gradual ageing of the population) may also motivate households to consider advance savings as an option.

The household savings rate between 2003 and 2012 showed a 4 percentage point variation.



Source: HCSO

Following the trough of 2012, the indicator has increased steadily. In 2014, annual household savings as a percentage of disposable income surpassed 10%, before it fell back to 9.6% in 2015.

The 2015 domestic data (9.6%) approximates but does not reach the EU28 average (10.3%). Sweden has the best data (18.6%) in 2015 for this indicator, followed by Germany (17%), with Slovenia (14.8%) and Croatia (14.2%) ahead of France (14.1%). The savings rate of households is the lowest in Bulgaria (−6.3%), Cyprus (−5.7%), Latvia (−2.1%) and Lithuania (−1.8%). Of the V4 countries, Hungary is only preceded by the savings rate of Czech households (11.8%), while this figure was 8.8% in Slovakia and 1.8% in Poland in 2015.

In this context, as well as for the period following the crisis, it can be established that (in line with economic theory) low interest rates encouraged households to decrease rather than increase their savings. Although there is no close correlation between yield and savings, declining interest rates played an important role in the decision on savings. In addition, several other factors, such as the rise in the unemployment rate, rising instalment payments, consumer confidence and risk aversion all had considerable influence on household savings. These circumstances resulted in a significant change in the proportion of securities and bank deposits held by the households for the benefit of the former.



The value of the indicator decreased in 2015, which is in line with the change that occurred in most of the V4 countries.

Source: Eurostat

P1.4. Household debt

This indicator shows the loan portfolio of the household sector (households, non-profit institutions assisting households and non-financial organisations) as a percentage of GDP.

The growth in household debt that started in 1995 continued at a slow, steady pace until 2002, accelerated during the period 2003–2008, and then reached an extremely high level of 117.5% of GDP in 2009. Thanks to economic policy measures on multiple fronts, it started to decline in 2010, with the process accelerating in 2012, with household debt declining to a level of 85% of GDP by 2015, before falling to 77% of GDP in 2016.

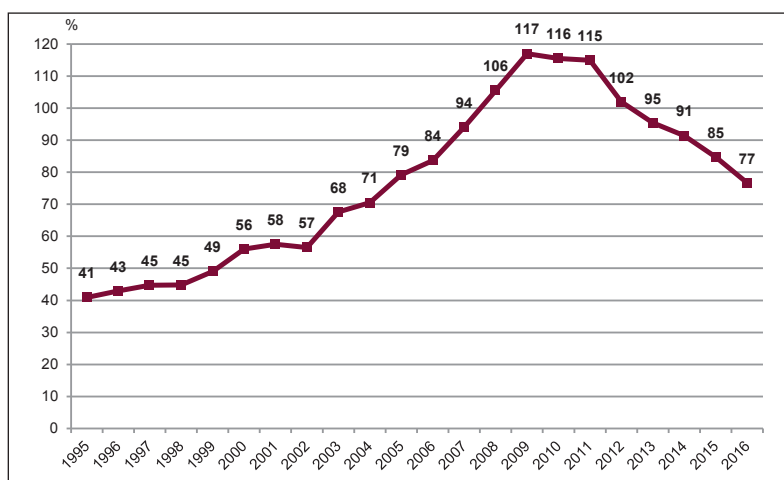
This favourable change contributed to a decrease in the propensity to save of households, and appreciably helped kick-start the transition to consumption and growth through the rise in household propensity to consume.

For a significant proportion of indebted households, however, a pressing need to adapt to new circumstances could be observed in 2014, which reinforced the sense of caution dominant in these households.

Compared across the EU, the household debt indicator in Hungary was the sixth lowest.

The rate of indebtedness expressed as a percentage of GDP was the lowest in Lithuania in 2014 and 2015 (52.5% and 55.0%), while the figure was highest in Luxembourg (342.2%; 335.8%) and Cyprus (348.3%; 353.7%).

For the indicator measuring the indebtedness of the household sector, the V4 countries could be regarded as a single group in 2015



Source: HCSO

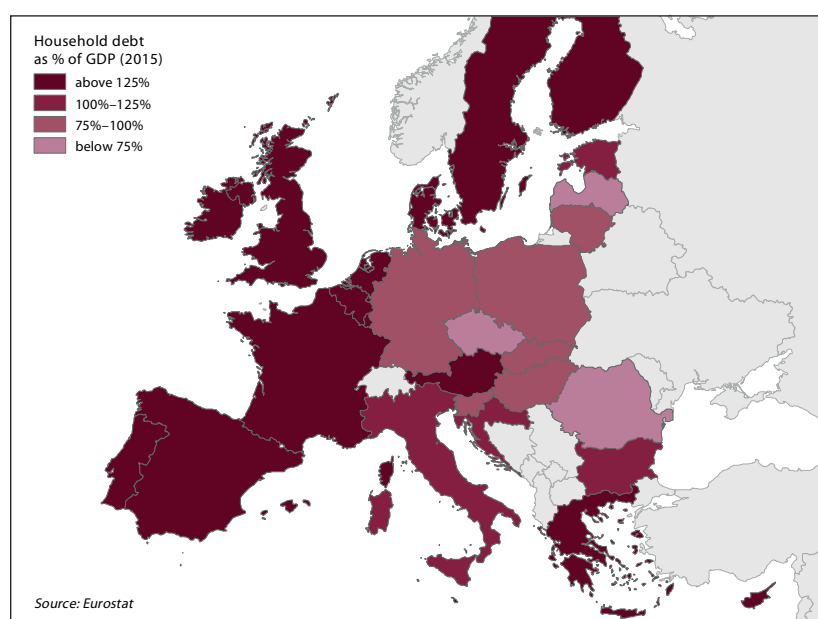
as the value of this indicator was 68.6% in the Czech Republic, 78.7% in Poland, 81.4% in Slovakia and 84.7% in Hungary, putting these countries among the six countries with the best figures alongside Latvia (55%) and Romania (59.3%).

The indebtedness of households in all the Central Eastern European countries is low. The highest rate of indebtedness among these countries was recorded for Croatia with a value of 115%.

The over-indebtedness of households represented an increasing risk before the crisis. In the past few years – due especially to the declining demand for foreign currency denominated loans and partly to more stringent credit conditions – households have become net debtors in credit repayment.

In addition, the opportunity for early payment at a favourable exchange rate was also able to significantly reduce the amount of foreign currency denominated loans taken out by households.

As a result of government measures and declining demand, total household loans relative to GDP, which is an indicator of indebtedness, has decreased significantly. Simultaneously with this, the repayment burden has declined to close to 10% of the disposable income, which can no longer be regarded as high in international comparison. At the same time, there continues to be significant discrepancies in the distribution of the repayment burden in proportion to income in the various income groups. If we take the two lowest income categories, the number of families at risk that exceeds this 30% level can be estimated at 80,000 to 100,000.



The value of this indicator has been steadily declining since 2009 in Hungary. It was sixth best of the EU member states in 2015.

P.1.5. The annual gross average income of those in the third and fourth income quintiles as a percentage of national average income

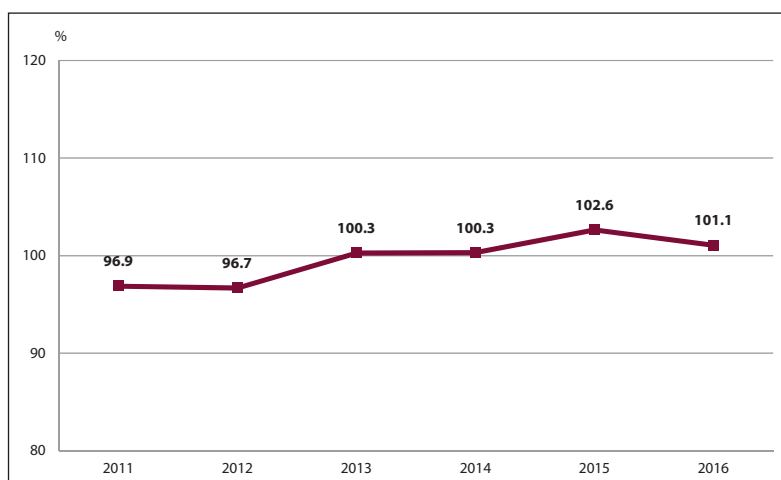
This indicator focuses on the middle range of income inequality.

In order to understand the income inequality present in society, it is useful to examine the average income quintiles by income per person and the composition of income.

Widely adopted in international practice, the S80/S20 indicator for income inequality determines the average income of the top quintile in relation to the average income of the bottom quintile. Taking this idea further, in order to understand the income situation of the middle class, it is useful to calculate the combined average income of the third and fourth quintiles as a percentage of the national average. The third and fourth quintiles taken together correspond to the segment of society that is financially better off than the median, but does not belong among the wealthiest 20%. This indicator is further supported by the argument that being a member of the middle class means, in general, that the person is somewhere in the median of income distribution. Thus, this indicator can demonstrate the changes that typically characterise the incomes of the middle class. At the same time, it should be noted that there is no guarantee for those who belong to the two income quintiles selected by the indicator will belong to the middle class in a sociological sense too, i.e. that they meet certain criteria for living conditions.

From the percentage number, we can conclude how the financial situation has changed for those who are better off than the average but who are not wealthy, as compared to the average of the country's entire population. The initial base data represent the gross national average income, against which we examine the proportion of those falling into the third and the fourth income quintiles.

From 2012 to 2015, the value of the indicator was increasing. The increase in the income ratio of the middle class came to an important milestone in 2012 as the percentage value passed 100%, so the financial improvement of the middle class's income situation reached and then surpassed the national average for the entire population at an exceptional degree. The 2016 ratio (101.1) is the second highest value in the period under investigation – though it is lower than the value in 2015 (102.6), which shows the magnitude of the average incomes in the two quintiles examined as compared to



Source: HCSO

the national average value. Based on absolute numbers, the gross average income was HUF 1,493,958 in 2015, while HUF 1,534,899 in 2016 in the groups under examination as compared to the gross national average income, which amounted to HUF 1,455,651 in 2015 and HUF 1,518,851 in 2016.

Based on all this, it can be established that the gross average income of the middle class continues to grow by more than the average income. This means that the financial position of the middle class continues to stabilise. This is extremely important as it is in the primary interest of any country to have a broad and stable middle class both in terms of economic and social stability. The indicator clearly shows that the income of the middle class has been constantly growing in society since 2012, enabling the (hopefully) strengthening and broadening middle class to play the key role that is indispensable for an efficient economy and which can provide a predictable basis for the operation of society.

Accordingly, this indicator is important because the middle class has a strong impact on the general growth potential of the economy. At the same time, economic growth cannot automatically stabilise the middle class; only the dynamism of the middle class can achieve good results in economic processes. In this context, it should be noted that the domestic SME sector appears as an indispensable channel between the two. On this basis, we can conclude that the strengthening and economic growth of the middle class must be balanced with the development of the SME sector.

P.2.1. At risk of poverty or social exclusion by age

Social exclusion is a complex phenomenon, which in many cases goes hand in hand with powerlessness, a feeling of vulnerability, existential questions, and a general sense of malaise.

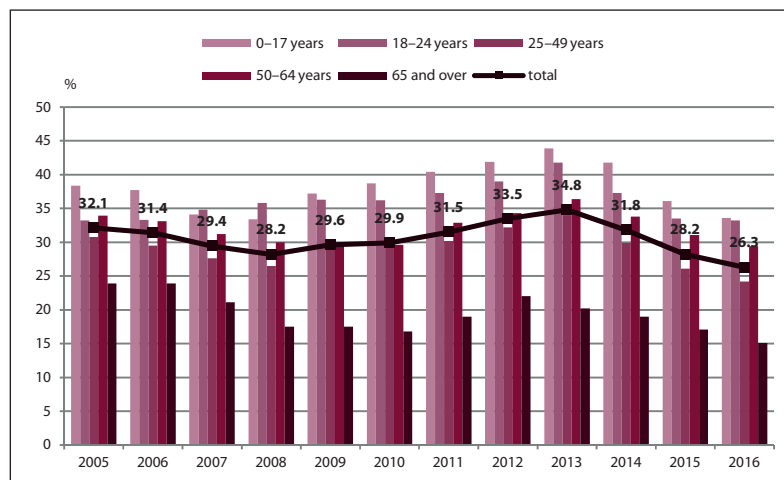
Calculated on the basis of Eurostat's methodology, the AROPE (At Risk of Poverty or Exclusion) rate measures the risk of material deprivation or social exclusion. It is the headline indicator among the EU 2020 target figures and takes poverty into account in the broadest possible terms.

The indicator comprises three risk factors: according to the definition of AROPE, people are living in the risk of poverty if they are at risk of poverty after social transfer (income poverty), severely materially deprived, or are living in households with very low work intensity. The AROPE indicator therefore makes it possible to examine the risk of poverty and social exclusion not only with respect to income, but also from the perspective of those who are excluded from the market of goods and services, as well as from the labour market.

The result of the survey conducted in 2016 shows that 26.3% of the Hungarian population is threatened by the risk of poverty or social exclusion. The value of this indicator has been steadily declining over the past four years. The proportion of people living in the risk of poverty dropped by 1.9 percentage points to 183,570 within a year compared to the previous year. By examining the values for each age group it can be stated that the proportion of those affected steadily declines with age. The value of the indicator for children and young adults is around 30%, while it is 15.1% for people above 65.

The size of households fundamentally determines the quality of life, income, and access to goods and services of social importance. The risk of poverty or social exclusion especially affects single-parent families; more than two-thirds are living at the risk of poverty or social exclusion. In addition, the risk is higher than the national average for those living in single-member households, where the value of the indicator is 30%.

By way of summary of the assessments conducted in accordance with various dimensions, it can be established that the risk of poverty or social exclusion is highest for children under 18, single-parent households, people with low levels of education attainment, the Roma population, as well as the unemployed.

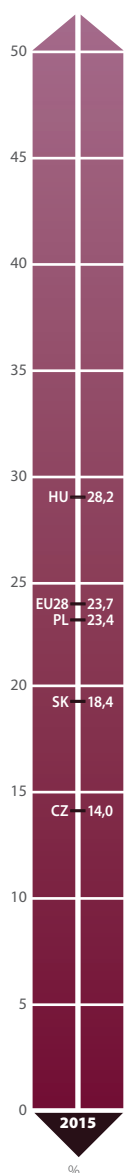


Source: HCSO

The individual's educational level in itself is not an important background indicator, but it is the predictable consequences of it that may have a direct impact on nearly every aspect of the quality of life. Education level strongly determines the opportunity of individuals to find a job on the labour market and, as a result, their income conditions and social position, as well. While the risk of poverty or social exclusion is only 10% among those with higher-level qualifications, this value is 43.1% for those who do not have secondary education. The decline in the proportion of those exposed to the risk of poverty or social exclusion was the strongest, falling 4.6 percentage points among people with elementary education as compared to the previous year.

In accordance with the strategic objectives set by the European Union for 2020, the number of people living at the risk of poverty or social exclusion should be reduced by 20 million. The value of the indicator has declined slightly but steadily; in 2015, 23.7% of people living in the European Union were exposed to the risk of poverty in some way. This was a 0.8 percentage point decrease year-on-year, so the number of people living at the risk of poverty or social exclusion dropped by nearly 3.5 million in Europe.

According to the most recent results that can be used for international comparison, the lowest value for the number of people living at the risk of poverty or social exclusion relative to the population of the given country in 2015 was recorded in the Czech Republic (14%), Sweden (16.9%) and the Netherlands (16.8%), while the highest value was recorded in Bulgaria (41.3%), Romania (37.3%) and Greece (35.7%).



The number of people at risk of poverty or social exclusion has been steadily declining in the last four years in Hungary.

Source: Eurostat

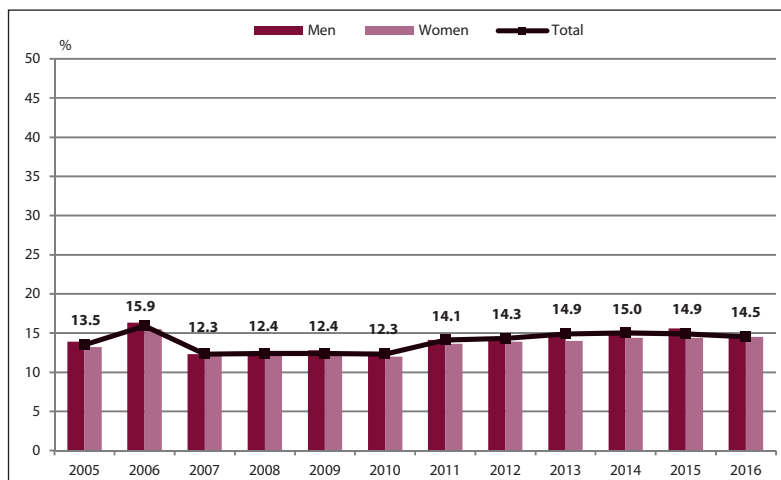
P.2.2. Risk of income poverty

Relative income poverty is an indicator that approaches poverty in terms of income and the income situation of households and correlates to a value in forints. The poverty level according to the population's median income reflects those individuals whose available income is considerably less than the average value that they need for their daily survival and can therefore be considered from a financial perspective to be on the periphery of society: those referred to as financially poor. According to the official definition, the poverty rate is the percentage of people living in households with less than 60% of the median equivalent income as a percentage of the entire population.

The indicator describing income poverty is therefore a relative metric that should be interpreted in the given social environment and is dependent on the given society and the distribution of incomes in the given country. Its relative nature derives from its comparison of the poverty of a given individual to the income of other members of society. Relative income poverty is the sub-indicator of the AROPE indicator, which measures the risk of poverty or social exclusion. The number of people living in relative income poverty has slightly but steadily declined in the past three years in Hungary. In 2016, 14.5% of the population lived beneath the income poverty line, resulting in a fall in the indicator by 0.4 percentage points in comparison to the previous year. There is no significant discrepancy between men and women in Hungary.

The composition of households has a considerable influence on the risk of income poverty. The value calculated for single-parent families is significantly higher at 37.5%. The value of the indicator is also high for households with three or more children: every fourth large family lives on an income beneath the poverty line.

One of the groups at especially high risk is the unemployed. Close to half (48.5%) live in relative income poverty. The proportion of income poverty calculated for the unemployed dropped more significantly as compared to the previous year with a decrease of 5.9 percentage points in this group of people exposed to the risk. The proportion of those living in relative income poverty is 9.6% for employees, while it is even lower for pensioners: 7.1% have an income beneath the income poverty line.



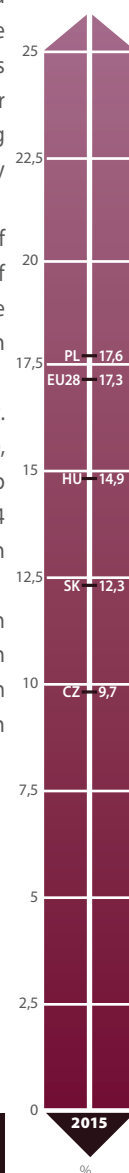
Source: HCSO

Taking the European Union as a whole, the proportion of people living in relative income poverty is 17.3%, which has not changed significantly in recent years. It is typical for Europe that relative income poverty is the most powerful factor of the three dimensions of poverty or social exclusion. Hungary is different: the highest number of those who are at the risk of poverty or social exclusion according to the AROPE indicator are the people who are severely materially deprived rather than those exposed to income poverty.

When comparing and analysing the ratios characterising each of the countries it is important to note that, due to the relative nature of the indicator and the normative nature of calculation, it is not suitable for comparing the absolute income positions of people living in each of the countries analysed.

The value of the indicator falls below 10% only in the Czech Republic. In international comparison, the Netherlands (11.6%), Denmark (12.2%), Slovakia (12.3%), Finland (12.4%) and France (13.6%) are at the top of the list categorised by country. Hungary's figure is lower by 2.4 percentage points than the value calculated for the entire European Union.

The ratio of income poverty is higher than 20% among the European member states of Greece (21.4%), Estonia (21.6%), Bulgaria (22%), Spain (22.1%), Lithuania (22.2%) and Latvia (22.5%). Romania is at the bottom of the list, where every fourth person (25.4%) has an income beneath the poverty line.



Source: Eurostat

The proportion of those living in relative income poverty in Hungary (14.9%) is lower than the value calculated for the total mean of the European Union (17.3%).

P.2.3. Risk of severe material deprivation

The term deprivation, the primary meaning of which is 'to be deprived', refers to the absence of such material conditions that are generally accepted as fundamental goods and services, so their absence results in involuntary hardship.

For the purposes of international comparison, the indicator is not a sum expressed financially, but instead examines the presence or absence of nine material goods or services that international methodology has shown to be good indicators of the risk of material deprivation. Thus, during data collection, citizens voluntarily provide data on whether or not they are exposed to any of the nine deprivation items. Severe material deprivation exists if the individual lives in a household where he or she must do without at least four of the listed nine items for economic reasons.

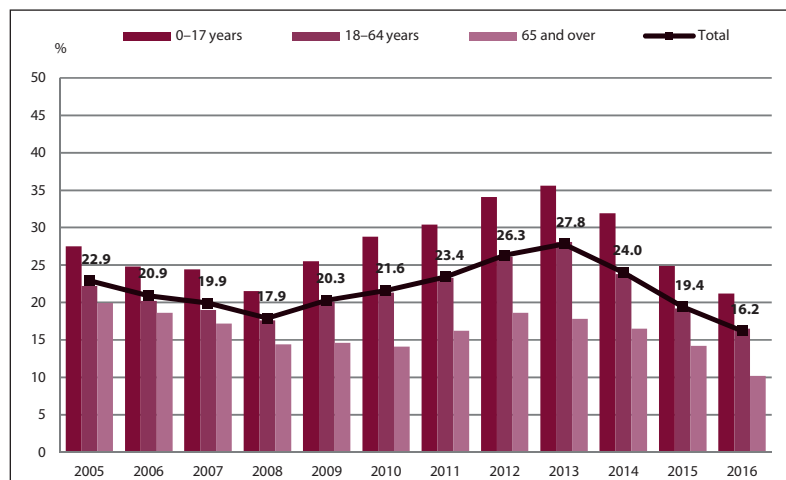
In Hungary, the number of people living in severe material deprivation has steadily declined in the past three years. In 2016, this poverty indicator affected 16.2% of the population, which is 3.2 percentage points less than in 2015.

The proportion of those affected declined for every deprivation item last year. The lack of funds to cover unexpected expenses continues to be an especially high risk, which was valid for 70.7% of the population last year. This proportion dropped by 20 percentage points in 2016, which means that every second person responded they would be unable to cover an unexpected expenditure. The ratio of those who cannot afford a one-week annual holiday was also quite high at 50.6%. The lowest numbers were reported for telephones, colour televisions and washing machines in Hungary among the questions focusing on financial deprivation: the proportion of those who cannot afford a telephone for financial reasons was only

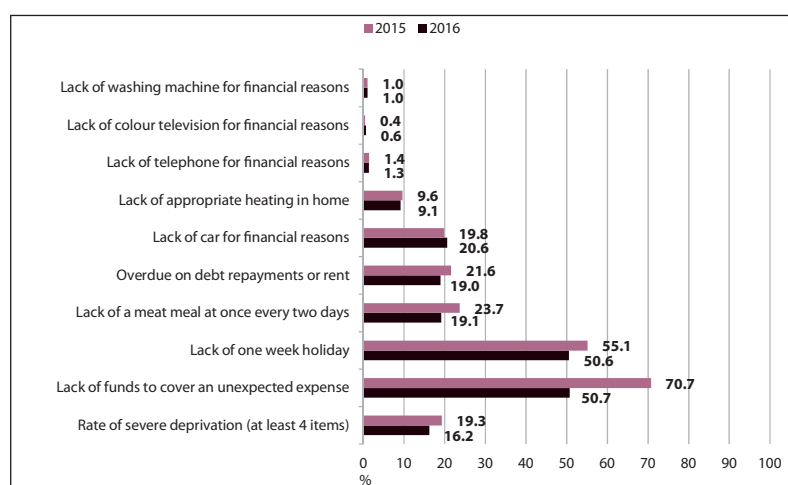
1.3%, while it was only 1% for the washing machine and below 1% (0.6%) for the colour television.

Due to its absolute nature, this indicator is the most suitable among the poverty indicators for capturing and comparing the discrepancies in the standard of living among the different member states. Nevertheless, it is important to take into account for analysis and interpretation that the answer to the question from which the results of the indicator are derived is based on self-reporting. The results of the indicator are clearly influenced by the fact that, due to an attitude based on various cultural habits, people typically like to either exaggerate or complain in particular social contexts and countries.

The proportion calculated for the entire European Union was 7.8% in 2015. There were significant disparities among the member states. The proportion of people living in severe financial deprivation was the highest in Bulgaria (34.2%), and was also above 20% in Romania (23.8%) and Greece (22.2%). The proportion of people in need was the lowest in Sweden (0.7%), where the value of the indicator falls below 1%. The ratio of people living in severe material deprivation was below 3% in Luxembourg (2%), Finland (2.2%) and the Netherlands (2.7%).



Source: HCSO



Source: HCSO

In Hungary, the number of people living in severe material deprivation dropped by 3.2 percentage points to 16.2% last year.



Source: Eurostat

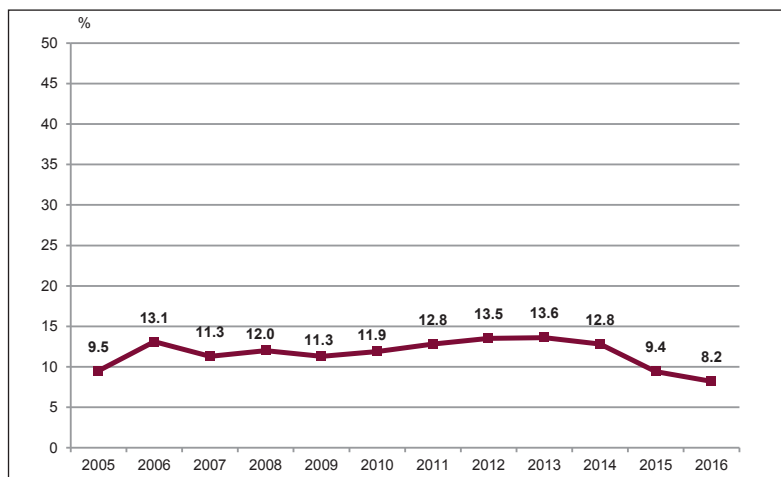
P.2.4. The percentage of people living in households with very low work intensity compared to the overall population

The third dimension of poverty or social exclusion focuses on exclusion from the labour market. This indicator shows the proportion of people relative to the total population who are living in households where the members of working age do not work at all or work only occasionally. This indicator is important because absence from work or exclusion from the labour market has financial and social consequences both for the individual and for those living in the individual's environment, and these issues are extremely difficult to reverse. The examined phenomenon is therefore important not from the perspective of its financial consequences, but also because household members going without work serves as a negative role model for the younger members of the household, which can result in poverty and exclusion being inherited across generations. Thus, work intensity addresses the question as to how much of their potential working hours the working age members of a household spend on work. Those are at the highest risk of poverty and social exclusion, where the working age adults in the given household spend less than 20% of a potential working time on work.

The value of this indicator has been steadily declining over the past three years in Hungary. In 2016, 8.2% of the population lived in households with very low work intensity.

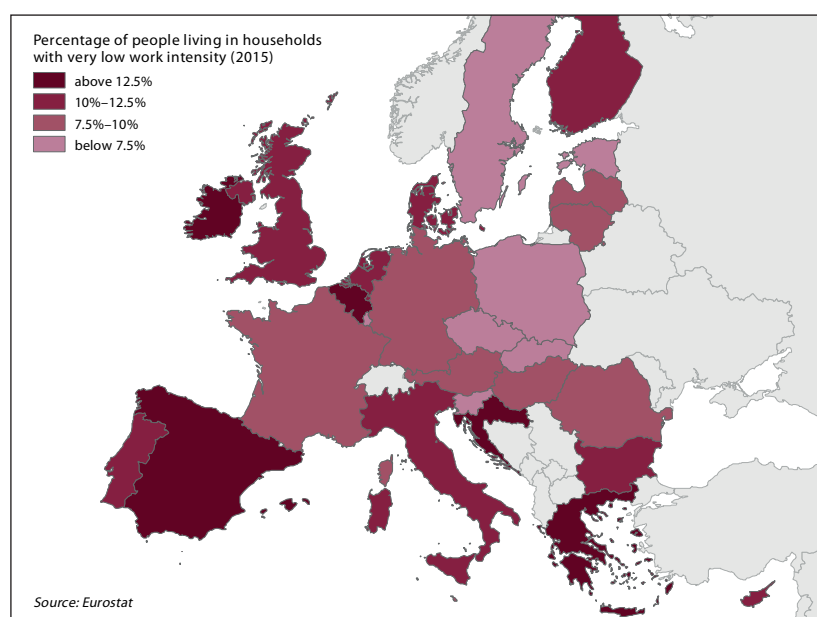
This represents a 1.2 percentage point decline as compared to the data collected in the previous year.

Since the value of this indicator is usually given for different age groups in international studies, the values for the 0–59 age group are useful for comparing individual member states. In Hungary,



Source: HCSO

the value of the indicator for the 0–59 age group was 9.4% in 2015, which puts us in the mid-range in international comparison as it is lower than the value characterising the entire European Union (10.6%). Work intensity poverty is the lowest in Luxembourg (5.7%) and Sweden (5.8%), while it is above 15% in Spain (15.4%), Greece (16.8%) and Ireland (19.2%). These results demonstrate that, while the proportion of those living in households with extremely low work intensity is steadily declining in Hungary, the value of this indicator in Europe is typically rising to a greater or lesser extent. The number of households with low work intensity, however, increased to the largest extent in those member states where the value of the indicator was already high. The number of people living in households with extremely low work intensity increased from 11.4% to 14.9% in Belgium and from 17% to 19.2% in Ireland over the course of a year.



The percentage of people living in households with very low work intensity is continuously falling in Hungary.

Source: Eurostat

P.2.5. Risk of income poverty among children

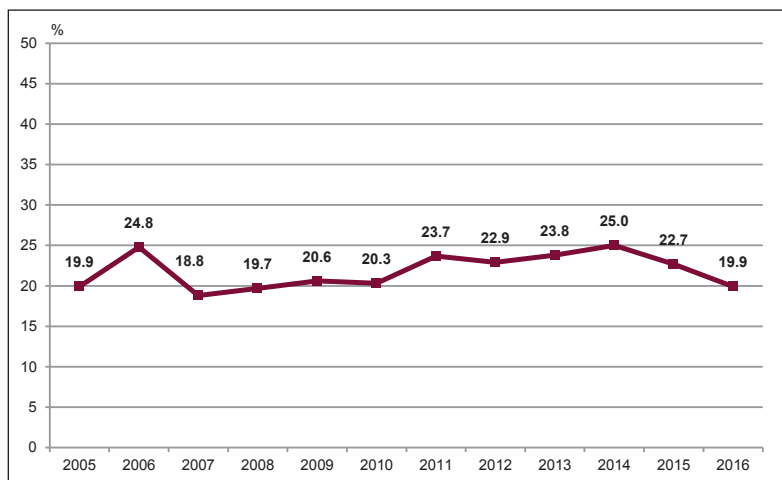
The income situation of the adult members of a household is the basis for calculating income poverty among children. The ratio of relative poverty is calculated on the basis of income per capita. It follows that in cases of households consisting of multiple persons caring for children but without an income, the income per person is very low, and therefore there is a greater chance of them falling below the poverty threshold determined to be 60% of the national median income per capita.

In 2016, 19.9% of children lived in households where income per capita was below the poverty line.

The value of this indicator has been steadily declining in the past three years. The 22.7% value of the previous year dropped by 2.8 percentage points in 2016.

The role adopted by the state as a social safety net significantly contributed to the decrease in income poverty. Family allowances can make a significant contribution to decreasing the poverty of children. If these allowances did not assist families, 43.6% of children under 18 would be living in households with an income beneath the poverty line as opposed to the current rate of 19.9%.

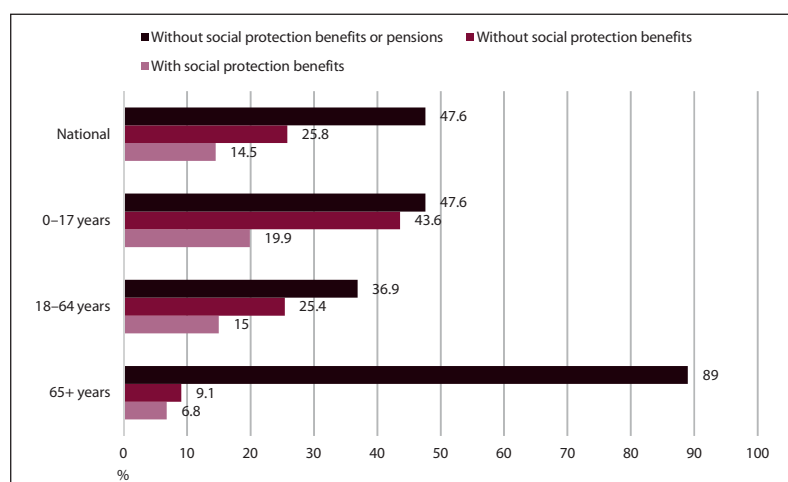
The figure clearly shows that social benefits and pensions contribute to raising the standard of living of those with lower incomes. Accordingly, the state was successful in performing its tasks of redistributing incomes, i.e. it redistributed efficiently and appropriately the revenues paid into the central budget, inter alia, in the form of



Source: HCSO

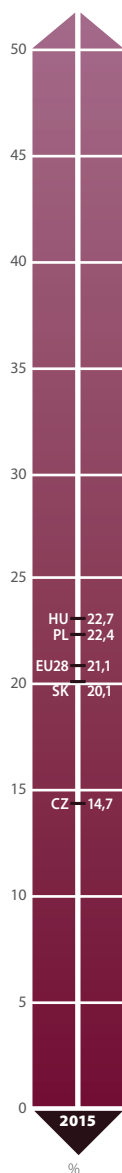
taxes and contributions. This was able to exert a significant impact on the reduction of the poverty of children (in the 0–17 age group).

For international comparison, we can use 2015 figures. The value calculated for the entire European Union is 21.1%. The majority of member states are characterised by a value around 20%, which means that every fifth child across Europe is living in a household where income per capita does not reach 60% of the median. The indicator value for the poverty of children is the lowest in Finland (10%), Denmark (10.4%) and Sweden (12.9%); it is higher than 25% in Bulgaria (25.4%), Greece (26.6%), Italy (26.8%), Lithuania (28.9%) and Spain (29.6%). The relative poverty indicator for children is especially high in Romania, where the proportion of children living in poverty is 38.1%.



Source: HCSO

The proportion of children living in relative income poverty dropped below 20% in 2016.



Source: Eurostat

P.3.1. Healthy life years

The number of years spent in good health takes into account the quality of life in addition to life expectancy and is therefore one of the fundamental measures of well-being. This indicator expresses the number of years that an average baby born in a given year can expect to live in good health, with the likelihood of age-specific causes of mortality factored into the calculation. It is calculated based on the HCSO's demographic data for the entire population and the results of a sample survey on health status.

The European Union also intends to improve the value of this indicator: the adoption of the European Innovation Partnership on Active and Healthy Aging in 2012 is designed to increase the number of years spent in good health by two years by 2020.

The value of the index is derived from the results of complex socio-economic processes: beyond the functioning of the health care system (the total resources designated to it and the efficient use of these resources), income situation and education, the social services system, the quality of the environment, as well as significant individual lifestyle factors (e.g. nutrition, physical activity, smoking) all have a major impact. It is also typical that government interventions only have an impact in the long term. The index is therefore only a partial reflection of the effect of these interventions and is more dependent on long-term social processes.

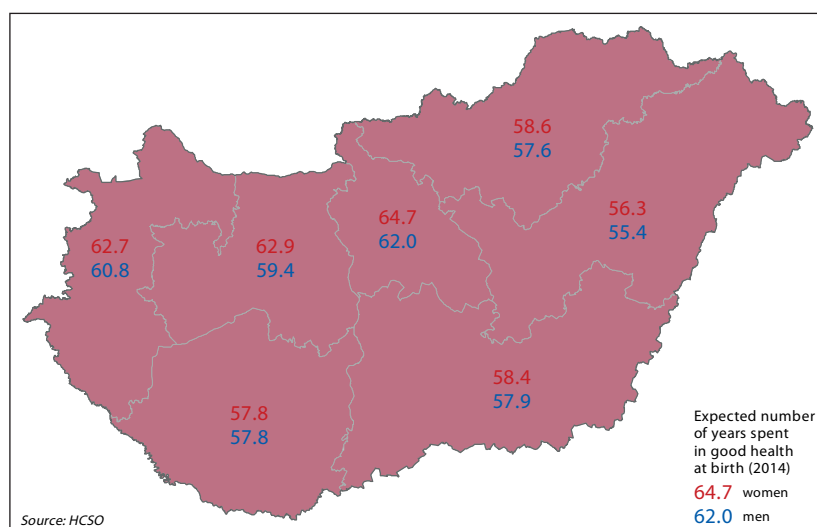
Since 2005 in Hungary, there has been a significant increase in the number of years spent in good health for both women and men: for women, the indicator increased from 54.3 years to 60.9 years, while for men it increased from 52.2 years to 59.2 years. Since 2012, this growth has slowed for women and stopped for men. Between



Source: HCSO

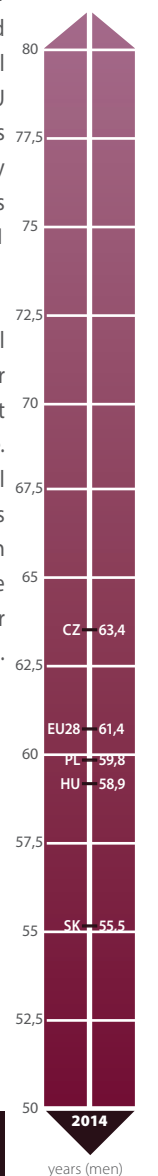
2013 and 2014, the value increased by 0.6 per cent for women and was unchanged for men. The EU average in 2014 was 61.8 years for women and 61.4 years for men (only the value for women changed year-on-year, rising by 0.3 per cent. Following a period of gradual closing of the gap, the Hungarian value now falls behind the EU average by just one or two years. In this context, the situation is more favourable than when calculating only with life expectancy at birth (disregarding quality of life): In 2014, the value of 78.9 years for women fell behind the EU average by 4.4 years, while that of 72.1 years for men was 6 years behind.

Health inequality is relatively high within the country. The regional figures show a correlation to economic development: The number of years spent in good health by women and men overall in the most developed region of Central Hungary region exceeds the EU average. By contrast, the disparity is relatively small in Western and Central Transdanubia, while the value in the rest of the country is 6–7 years fewer for women and 4 years fewer for men than in Central Hungary, and men expect to live in good health for 8.4 years and 6.6 years fewer respectively in the Northern Great Plain region.



Source: HCSO

In terms of the number of years spent in good health, Hungary lags 1–2 years behind the EU average, but regional disparities are considerable.



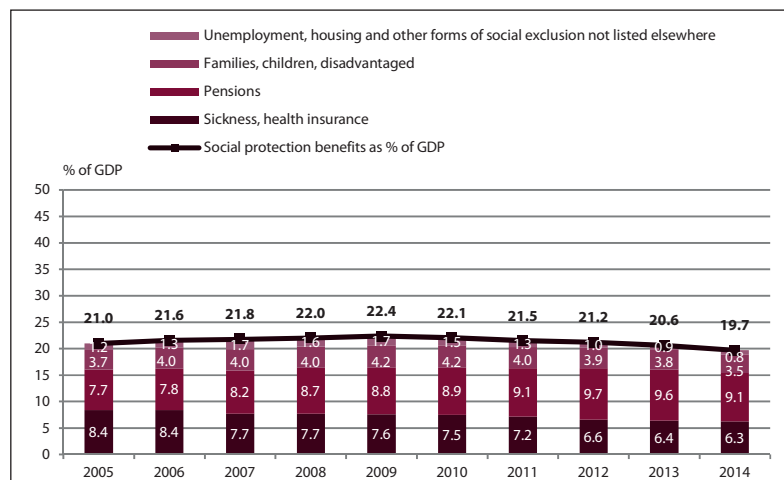
Source: Eurostat

P.3.2. Social benefits as a percentage of GDP

In developed countries, the state has an important role to provide proper protection for the members of society facing various adverse life situations. Social benefits include all transfers that are either provided or significantly influenced by the central budget (such as social benefits). According to the definition of the HCSO: "Social benefits include financial or in-kind transfers provided for households or individuals by the institutions of social protection that mitigate the burdens of risks and needs that the households or individuals need to face." Social benefits are recorded in total as well as in a breakdown by function in statistical data. The following functions (risks) are generally distinguished: sickness/healthcare, disability, old age, loss of a family member, family/children, unemployment, housing, and forms of social exclusion not listed elsewhere.

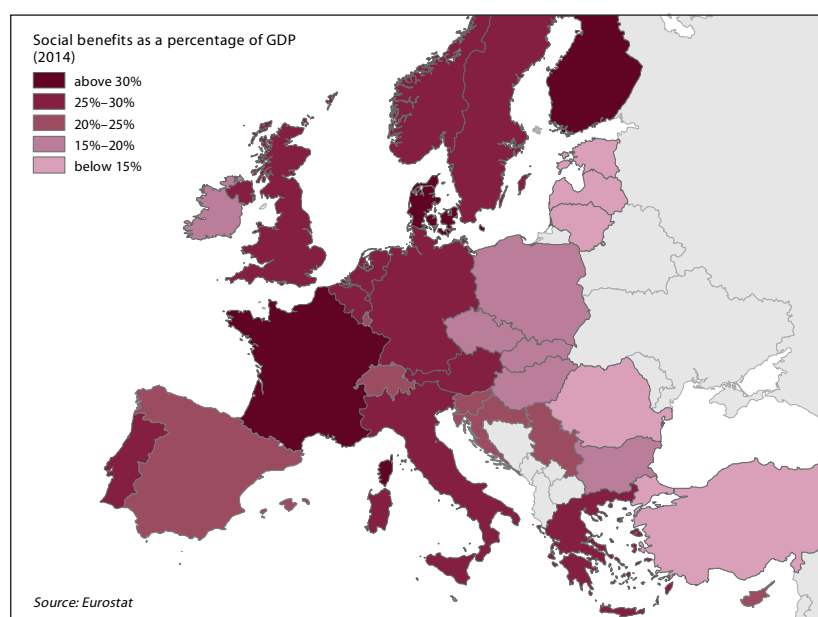
Developed countries typically spend the majority of social benefits on health insurance and funding of health care services and pensions. There are disparities, however, among the individual countries in terms of the total amount of social benefits relative to GDP and the focus on each of these functions within the total. After the 2008 global financial crisis, the developed countries typically increased the amount of social benefits; since then there has been a decrease in some of these countries, but the values in general are still higher than in the period before the crisis.

In 2007, the European Union spent 24.2% of its GDP on social benefits on average, while this value grew to 27.5% by 2009 and has largely remained at this level ever since; in 2014 it was 27.6%. A similar



Source: HCSO

process took place in the V4 countries: The value of benefits grew from 15% to 18% in Slovakia, from 17% to 19.1% in the Czech Republic and from 18% to 20% in Poland (since the peak value, there has been a 0.7–1.1 percentage point decline in both the Czech Republic and Poland). After the crisis, the value of the indicator increased in Hungary, too, although the extent of the increase was much lower than in the EU countries in general (though the initial value was originally higher than in the reference group of the V4 countries). The change in our country, however, is unique in the sense that the amount of social benefits has not dropped by now to the levels seen before the crisis in any other member states of the European Union. This decline primarily affected health care, disability and unemployment benefits.



The amount of social benefits has dropped below the level in the period before the global economic crisis, which is unique in the European Union.



Source: Eurostat

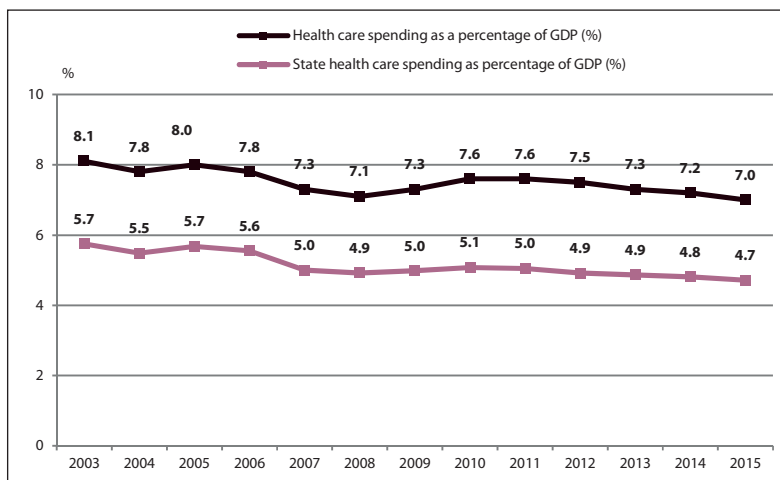
P.3.3. Health care spending as a percentage of GDP

Although the operation of the health care system is only one of the factors (in addition to lifestyle, environmental factors, income position and other social factors) that affects health conditions, the role governments play in health care can be best characterised by the amount they spend. A key role is assigned within this to public (state) expenditure, which directly characterises the role played by the state in financial protection in connection with health care spending – at least in the majority of the developed countries, where state or social insurance systems are in place. This is because the health care spending of individuals do not directly depend on income but rather on health conditions, which can be influenced by age, a chronic disease or other individual characteristics. This is what makes it necessary for the state to intervene in the redistribution of financial resources. The additional indexes in connection with financial protection represent a separate dimension in the indicator system entitled Performance Assessment of the Hungarian Health Care System.

The indicator studied was developed according to international methodology for health care spending and measures the final consumption of health care goods and services (excluding investments) as a share of GDP. Health care financing sources consist of government and local government health care expenses, as well as the Health Insurance Fund.

Between 2005–2013, health care spending fell from 8% of GDP in Hungary to 7%. This is more than one percentage point lower than the EU average (which was 8.4% in 2014) and two percentage points below the OECD average (which was 9.0% in 2015, and 8.8% without the USA). At the same time, this value does not seem to be low as compared to the Central Eastern European countries: Health care spending relative to GDP was 7.5% in the Czech Republic, 7.0% in Slovakia and 6.3% in Poland.

Within health care spending, the percentage of state spending fell dramatically: the value of 4.7% of GDP simultaneously means that 33.0% of the total health care spending was financed by the private sector in 2015. This largely represents the own contribution paid by the people (such as payments for medication) and the purchased private services (such as visits to private doctors and dentists, and drugs without reimbursement). The percentage



Source: OECD

of private spending significantly surpassed the OECD average of approximately 27.1%, indicating that the financial protections offered by the state and social security are less effective than in other countries. This ratio is 15.4% in the Czech Republic, 19.4% in Slovakia and 28.4% in Poland among the countries used as direct references. In international comparison whichever reference group we use, an increase in public spending is necessary.

According to HCSO data, the nominal value of domestic health care spending per person grew from HUF 178,900 to HUF 234,500 per annum between 2005 and 2014. The accumulated value of the health care price index recorded a 42.9% increase for the same period (source: National Healthcare Service Centre). The real value of health care spending declined significantly in the years of the global economic crisis; thereafter it was moving between HUF 154,000 and HUF 159,000 expressed at the 2005 price level. Health care spending increased by 5.4% in 2014 year-on-year, although it still fell behind the level seen before the crisis (at 2005 prices: HUF 164,000).

The annual rate of health care spending per person calculated at PPP is, according to the OECD's studies, correlated for both life expectancy and the number of years in good health: higher levels of spending result in increased life expectancy and the ability to live more quality years. In terms of both life expectancy and the number of years spent in good health, Hungary lies below the regressive curve, indicating that it is not only the amount spent on health care that can be improved, but also the effective use of these resources.

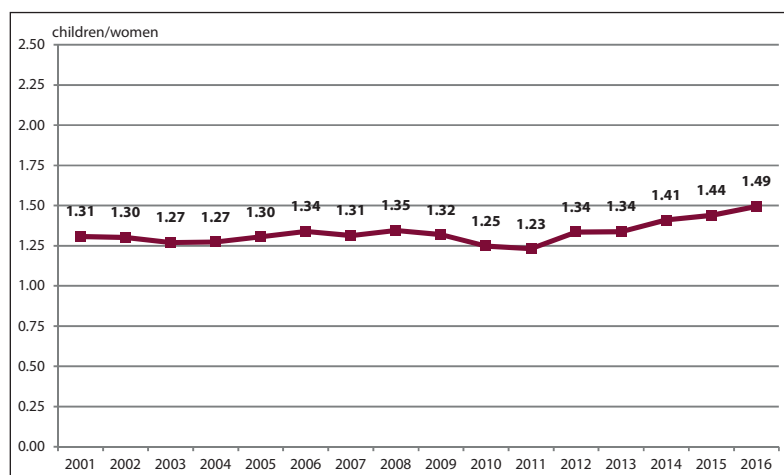
Hungary spends less on health care as a percentage of GDP than the developed countries, but measured against its economic development it spends an appropriate amount. The percentage of state resources is, however, low.

P.3.4. Total fertility rate

The population of a country is influenced by several factors: in addition to life expectancy and migration, one of these is the number of births. In an international comparison, the overall fertility rate is generally used to express how stable a given population is expected to remain in the long term.

The value of the indicator expresses the following: The mean number of children that would be born alive to a woman during her lifetime if she were to survive and pass through her childbearing years conforming to the fertility rates by age of a given year. This rate represents therefore the completed fertility of a hypothetical generation that is calculated by adding up the age-specific fertility rates of women in a reference year (assuming that the number of women in each age group is the same). A 2.1 rate is generally considered as a reproduction level (i.e. when a population can reproduce itself) – assuming no change in mortality and migration.

In recent decades, this rate has declined dramatically in the developed countries: it was well over 2.1 in the 1970s, went slightly below it in the 1990s and has changed only slightly ever since. The European Union average was 1.58 in 2015, and there are only a few member states where this rate is close to the reproduction level (France: 1.96, Ireland: 1.92). There are complex social and economic processes behind this declining trend: women have higher education levels and are more active on the labour market as the time of giving birth to the first child is shifted to a later age (the average age of mothers at the birth of their first child grew from 23 to 28 between 1990 and 2010). In parallel to this, the difference between desired and actually born children is constantly growing: according to a HCSO survey, the ideal number of children was 1.96 according to public opinion, while the Youth 2010 survey addressing the key target

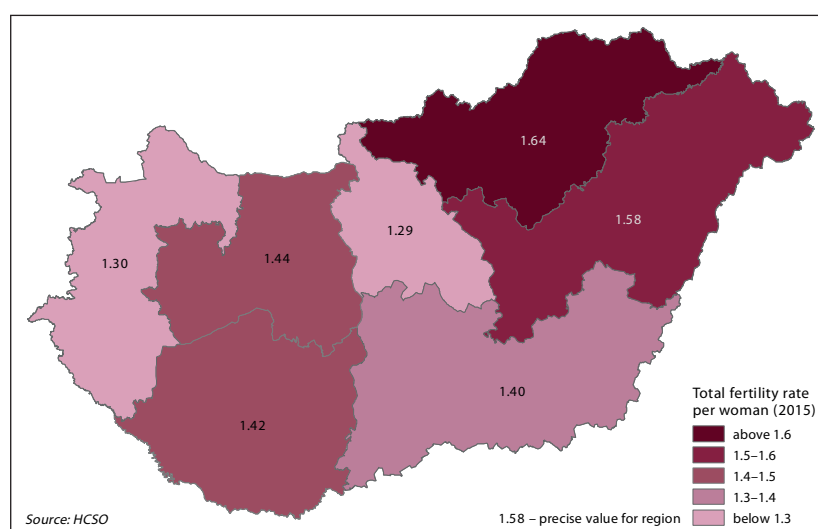


Source: HCSO

group (15–29 age group) showed that young people are planning to have 1.7 children on average. Government intervention can have particular influence on ensuring that the otherwise desired number of children is reached as much as possible: in addition to financial transfers, labour market measures (such as improving the conditions for part-time work) and the development of infrastructure assisting families (such as places available in nurseries) can have this kind of impact. These regulatory changes can be seen in the domestic environment as well (such as the introduction of additional maternity benefits/child care benefits or the increase in the number of places available in nurseries from 25 thousand to 40 thousand between 2007 and 2015). The most important criterion in connection with interventions, however, is predictability of future circumstances as giving birth to children obviously has long-term consequences.

In Hungary this rate continued to decline from a low level of 1.3 after the global financial crisis and then started to increase in 2011. The current 1.49 level represents a significant increase (although

it still falls behind the EU average and does not even reach the 1.87 level of 1990, the time of the political transition). There are regional differences in this indicator as well: the rate is the lowest in the most developed central Hungarian region (in 2015 it was 1.29), while it is highest in Northern Hungary (1.64).

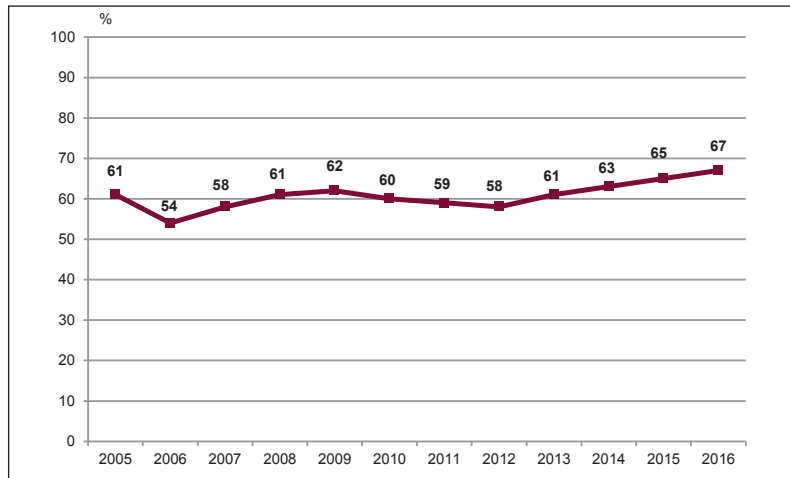


The fertility rate has been showing an improving trend since 2011, but in itself it is still not enough to stabilise the population.

P.3.5. Pension replacement rate

This indicator shows the average levels of pensions for persons aged 64–74 in relation to the average earned income of persons aged 50–59 based on data originating from the HCSO's survey of a representative sample of population and shown as a timeline starting from 2005. On this basis, the values of this indicator show that, on average, entering into retirement between 2005 and 2016 improved an individual's income situation. Average pensions – with the exception of the outlier year of 2006 – came to 58%–65% of the average income of wage-earners aged 50–59 and nearing retirement age. Following the recession year of 2012, the pension replacement rate was under 61% in 2013: In other words, this was the extent to which the state could assist the population of pension age to retain the standard of living it had achieved previously. The value of 65% for 2015 exceeds all of the values measured since 2005. This tendency continued in 2016 with the value for the indicator growing further and reaching 67%. Hungarian pensioners are therefore receiving almost 70% of the income they were earning in previous years. The gap that can be seen between the two sexes in the active years remains the same after retirement: the replacement rate of Hungarian men was 71%, while that of women was 66% in 2016. This is true not only for Hungary but for the entire EU.

The exceptional increase in the replacement rate can be explained by the fact that pensions have been increased well above the rate of inflation in the past three years. Although the law provides for raising the pensions only by the expected rate of inflation – in order to preserve their purchasing power – inflation has been regularly

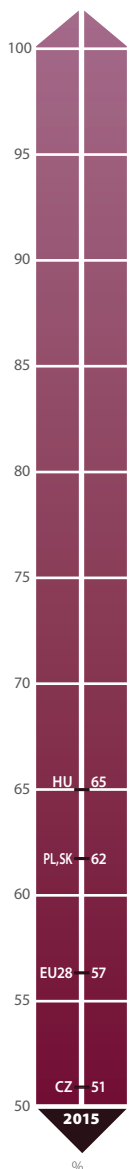
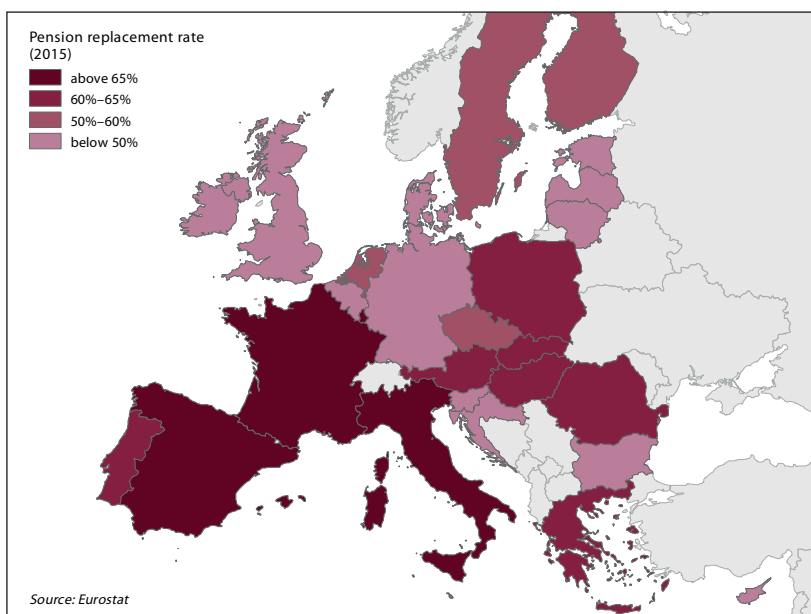


Source: HCSO

overestimated, i.e. prices rose less than expected. The same thing happened last year: the inflation rate was 0.4% in 2016, while pensions were raised by 1.6%, further increasing the real value of pensions. The inflation rate is expected to be around 2.5% in 2017. This means that pensioners will this year not only be able to pocket the increase over the rate of inflation, but the government will pay them the difference and also pay a pension supplement. The rate of inflation may fall between 2% and 4%, so the government will have to raise pensions at least by this rate in order to preserve their purchasing power.

It is important to note, however, that this indicator does not account for the total amount of benefits spent on the pension-age population, and it is also worth adding – in addition to the state's contribution – that demographic factors and geographical location (town or village) pertaining to this age group also have a major effect on trends with regard to the standard of living.

The value for Hungary in 2015 exceeded the EU28 average of 57%. The Hungarian value is the fifth best of the EU member states; higher values were recorded only in Luxembourg (80%), France (69%), Spain (66%) and Italy (66%). The value of the indicator in Hungary is also better than in the V4 countries: 62% in Poland, 62% in Slovakia and 51% in the Czech Republic.



Source: Eurostat

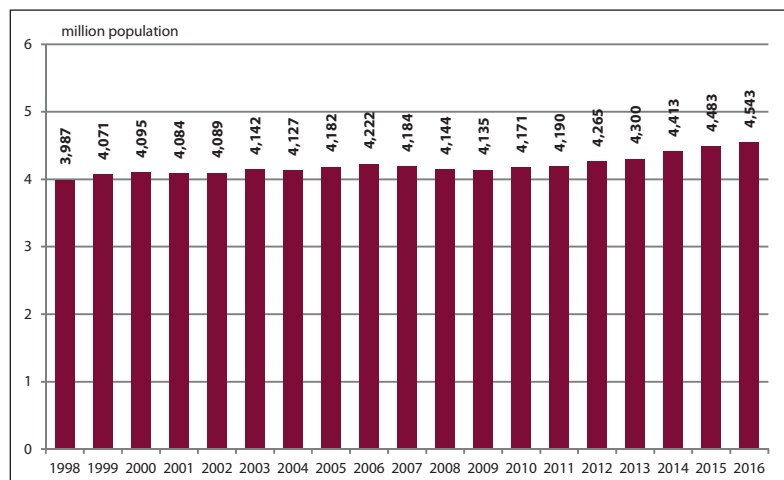
The indicator reached its best value to date in 2016 (67%), which is the highest of the V4 countries.

P.4.1. Economically active population aged 15–64

This indicator shows the number of people aged 15–64 in the economically active population, calculated annually starting from 1998.

The positive trend seen in employment in recent years continued in 2016. According to labour force surveys, the number of employees grew to 4.3 million on an annual average, i.e. it was higher by 141,000 (3.4%) than in the previous year.

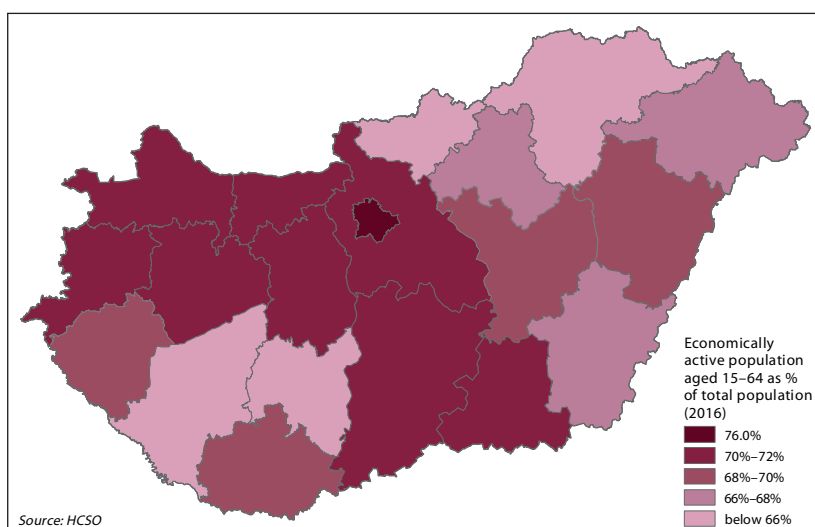
In 2016, the employment rate calculated for the population aged 15–64 was 66.5%. The employment rate of men aged 15–64 was 73.0% and that of women was 60.2% in 2016, as a result of a 2.7 and 2.4 percentage point increases respectively. The employment rate of those aged 15–24 improved to 28.1%, which was also due to a larger share of student work generated by the increasing shortage of labour in the economy. As a result of the steadily increasing retirement age, the presence of the senior generation is also increasing. In 2016, in addition to the retirement age of 63 years (to which women are entitled after 40 years of service), 59.7% of men and 41.5% of women in the 55–64 age group qualified as employees. In parallel with the expansion of employment, the domestic labour force was transforming from a supply-driven market into a demand-driven one. As a result of the 620,000 increase in employment recorded since 2010, the number of people employed in the primary labour market grew by 66% and those employed in public work by 23%, while the ratio of jobs taken abroad was 11% in 2016. In that year, every third employee was employed in the Central Hungarian region, where the increase was over 30 per cent over these 6 years. The ratio of employees and their share in the increase in employment was the least favourable in South Transdanubia during



Source: HCSO

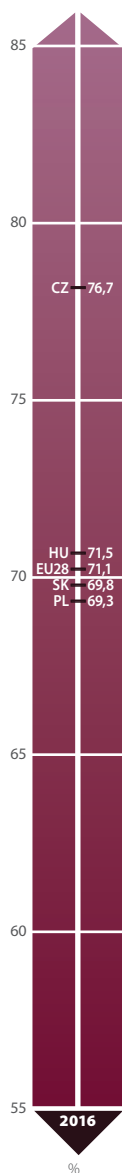
the period under investigation, where the expansion in employment was also below the average in 2016. Employment barely improved in Western Hungary and stagnated in Central Transdanubia, which is mainly due to the fact that the mobilisable reserve labour has been practically depleted in these regions.

For the purposes of international comparison, we examined the indicator in more detail for the employment rate for persons aged 20–64. This ratio is highest in Sweden (81.2%), followed by Germany (78.7%) and the United Kingdom (77.6%). The list of EU member states ranks Croatia (61.4%), Italy (61.6%) and Spain (63.9%) as laggards. The domestic employment rate for persons aged 20–64 is more favourable than the EU28 average (71.8%) at 71.5%. Only the Czech Republic (76.7%) has superior data among the V4 countries, while Poland (69.3%) and Slovakia (69.8%) both lag behind the Hungarian and EU28 values.



Source: HCSO

The value of the indicator has been increasing since 2010 and is the second highest among the V4 countries, exceeding the EU28 average.



Source: Eurostat

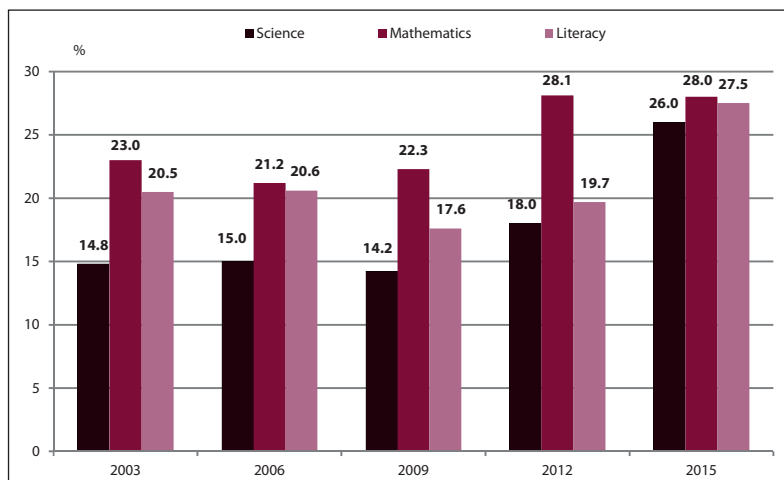
P.4.2. Ratio of underperformers in the PISA survey

The PISA survey measures the quality of education in three areas (mathematics, science and literacy) every three years, with a primary focus on suitability for the labour market and further education. The results are presented according to the OECD points system and broken down by country, including, along with the average value, the ratios of students who are performing well and poorly (in other words, it also provides information on inequality in the education system). The OECD handles the three areas separately and displays the results individually, since they measure different competencies. The improvement in scores shows that student competences are improving.

The use of the PISA results as an indicator raises the problem that the test measures the performance of the education system (and thus the effects of education policy interventions) with some delay as it tests the 15-year-old age group.

At the same time, and in contrast to curriculum-based performance measurement systems (PIRLS, TIMSS), the approach taken by the PISA survey better suits the public well-being dimension as it places the emphasis on the practical use of knowledge acquired in school. The importance of the PISA survey is also supported by the fact that the bad results caused a *PISA shock* in several countries, resulting in considerable changes to the education system.

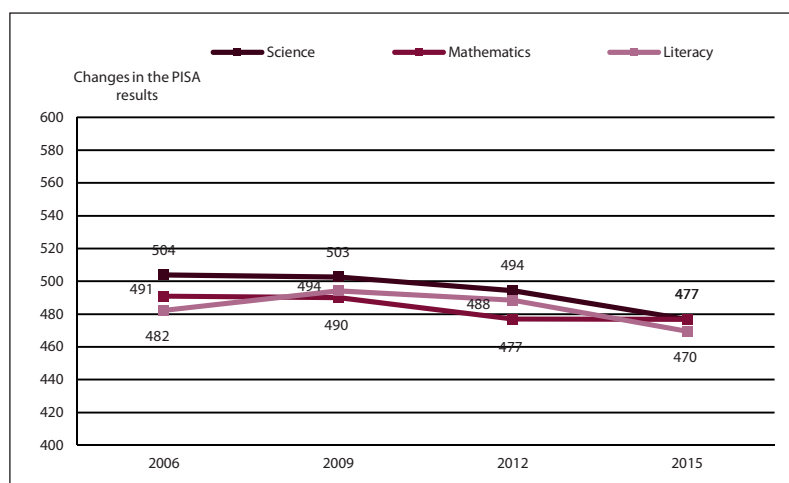
Hungary's results have worsened since the 2009 survey: The figures around the OECD average have fallen greatly and are now significantly lower than the international average. The ratio of underperforming students indicates an even more serious problem than the deteriorating average values: the ratio of students who performed below level 2 in mathematics was even higher than the previous 2012 survey,



Source: OECD

and a similar decline was recorded for the other two competences in 2015. The ratio of underperforming students in all three competence areas is 13% in the OECD countries, and the Hungarian value of 18.5% is significantly worse as compared to this (it is 5%–10% in the best performing countries). Along with this, the ratio of best performers has also declined.

The introduction of electronic testing itself cannot have resulted in such a strong deterioration and the social and economic background of the students has not changed significantly either. In all likelihood, the worsening results are due to problems related to the quality of the work of schools. It cannot be clearly established how much and in what way the centralisation of public education after 2010 has influenced the quality of education. According to one analysis in the OECD publication¹ summarising the 2015 PISA study, "students score better in science in education systems where principals exercise greater autonomy over resources, curriculum and other school policies".



Source: OECD

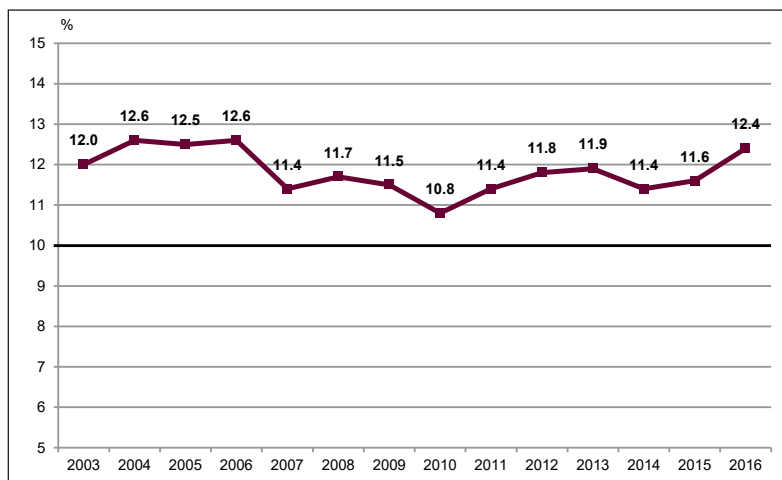
¹ OECD (2016): PISA 2015 Results in Focus.

The worsening PISA results and the high and increasing ratio of underperforming students require corrective measures.

P.4.3. Ratio of early school leavers

The ratio of early school leavers is an important indicator both of individual and public well-being: It shows the percentage of young adults aged 18–24 who have not completed more than primary education and are not participating in any further education or training. This data originates from HCSO data covering the entire population. The development of this indicator therefore shows the percentage of youths entering the labour market who only have a basic education. Low educational achievement is a significant individual limiting factor for participating in the active labour market, while a high percentage at the societal level harms the country's competitiveness.

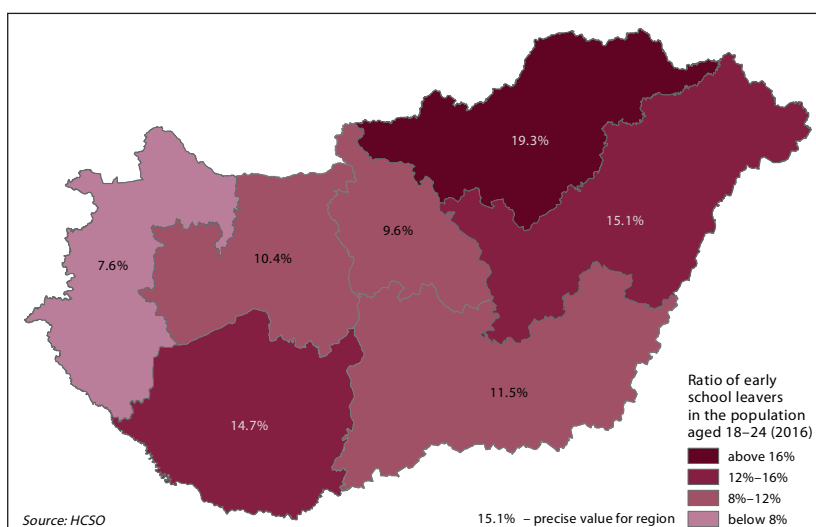
Reducing the ratio of early school leavers to below 10% by 2020 is one of the key objectives of the EU 2020 Strategy. The EU member states have set their own objectives and Hungary aims to accomplish the 10% target. Early school leavers are influenced by social, economic and education policy factors that determine the functioning and quality of the education system. Efficient school management and school governance, attractive and relevant curricula, as well as the strengthening of teacher competences in identifying and engaging vulnerable students and those lagging behind all have a key role in the resolution of the problem, but the approach should be more comprehensive, covering the entire environment and a wide range of stakeholders beyond the school system. Cooperation and communication with parents should be strengthened and the local community (local governments, local public services, unions, enterprises) should also be involved. The 2014–2020 Action Plan to Combat School Leaving without Qualifications is designed to implement measures in these areas.



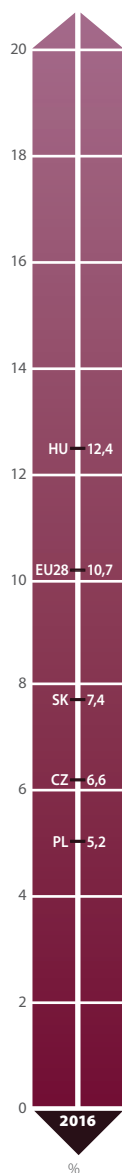
Source: HCSO

There was a significant improvement in the percentage of early school leavers in the late 1990s and early 2000s (from 1997 to 2003, their percentage fell from 17.8% to 12%), but, with minor fluctuations, there has been no further improvement since. There is a worsening trend that started in 2014; this ratio grew by 0.8 percentage points last year. In the same period, the situation improved in the European Union: the ratio of early school leavers was 11.2% in 2014, 11.0% in 2015 and 10.7% in 2016. On the other hand, the situation also worsened in the Czech Republic and Slovakia (in two years, the ratio increased by 1.1 and 0.7 percentage points, respectively); Hungary is in a significantly worse position compared to the base value than the V4 countries as Hungary's value is twice as bad as that of this reference group.

Among women, early school leaving is somewhat lower (11.8%) than for men (12.9%). Regional disparities within the country are considerable: In the least developed regions of the country, the gap to the benchmark is considerable. What is more, the disparities continued to increase between the best and the worst regions: from 11.2 per cent in 2014 to 11.7 per cent in 2016 (while the gap was only 8.6 per cent in 2015).



There was no improvement in the ratio of early school leavers, and regional differences are great and have not shown any improvements.



Source: Eurostat

P.4.4. Percentage of young adults with higher education qualifications

There is a close correlation between obtaining higher education qualifications and the increase in individual income level. According to the report that presents OECD education indicators, the wages of people with higher education qualifications is considerably higher everywhere, than those with lower education, and Hungary is among the countries where the *added value* of a university degree is especially pronounced, resulting in wages twice as high. The situation is similar with regard to employment. Higher education qualifications constitute an important component of individual well-being through higher income. The higher level of qualifications in the labour force is also important to the competitiveness of national economies, too: participation in the performance of complex functions that represent higher value added in international production value chains requires a higher percentage of people with higher education qualifications.

This indicator shows the percentage of young adults aged 30–34 who have completed higher education based on HCSO data covering the entire population. The higher education objective of the EU 2020 Strategy is for the percentage of people aged 30–34 with a higher education qualification to reach 40% by 2020. In the interest of achieving this, the Member States have committed to various targets, with Hungary committing to 30.3%.

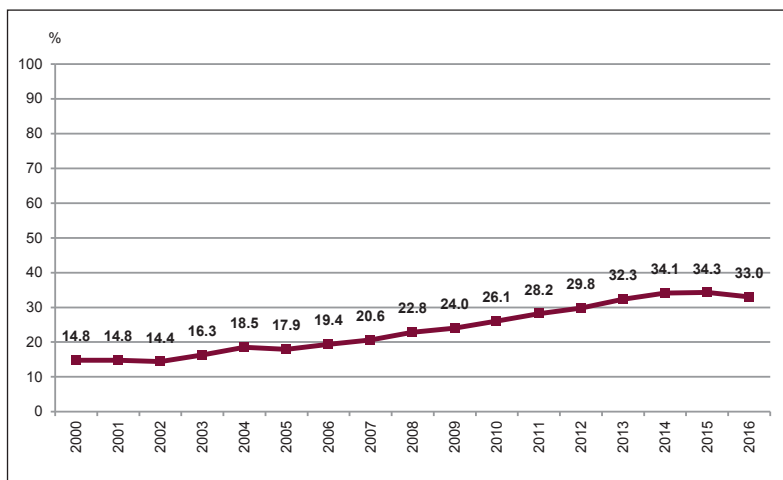
Since the measurements were taken in the 30–34-year age group, the effects of government intervention can only be felt with a delay over time (though there are limited possibilities to make short-term interventions too, e.g. by passing missing language proficiency exams). The large-scale expansion of education places in the 1990s and early 2000s has consistently improved this percentage over the last decade. As a result of demographic trends, however,

the number of students studying in higher education is gradually decreasing, from the former level of 400,000 to below 300,000 today. This change is putting pressure on the current higher education structure.

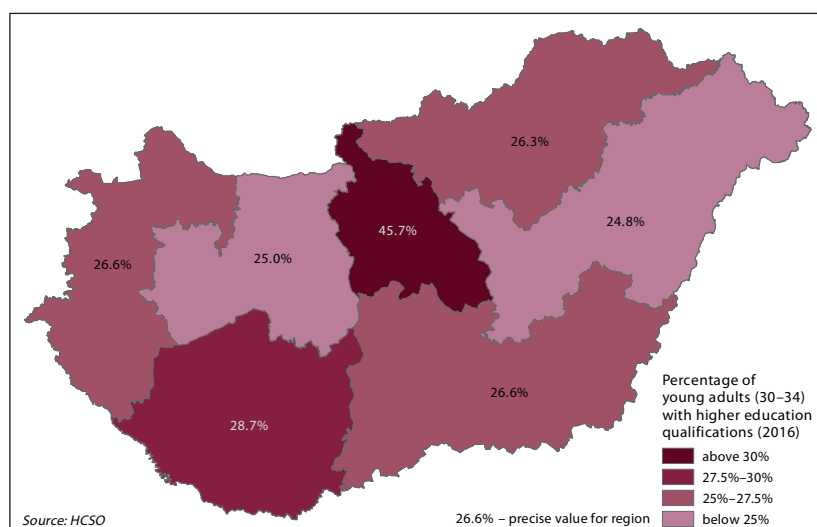
The value of the indicator for Hungary was 33% in 2016, so the country achieved its benchmark value. This commitment is lower than the EU average, so, in order to improve competitiveness, the need remains to grow the number of those with higher education qualifications. This can support the improvement of access to higher education especially for disadvantaged students.

Regional disparities are apparent in this indicator too, although only Central Hungary is ahead of the average of 25–30% in this case. In 2016, 45.7% of young people aged 30–34 had higher education qualifications, which exceeds the EU target and corresponds to the average value of the developed Western European countries. This also means that, with the exception of the central region, the other Hungarian regions are significantly underdeveloped. Although there

was a slight decline between 2015 and 2016, these regions were also characterised by an improving trend in the long term. Between 2012 and 2016, the largest improvement was recorded in Southern Transdanubia (5 percentage points) and Northern Hungary (6.2 percentage points).



Source: HCSO



Source: HCSO



Source: Eurostat

The percentage of young adults with higher education qualifications improved significantly over the last decade, but further growth is necessary in the future if competitiveness is to be improved.

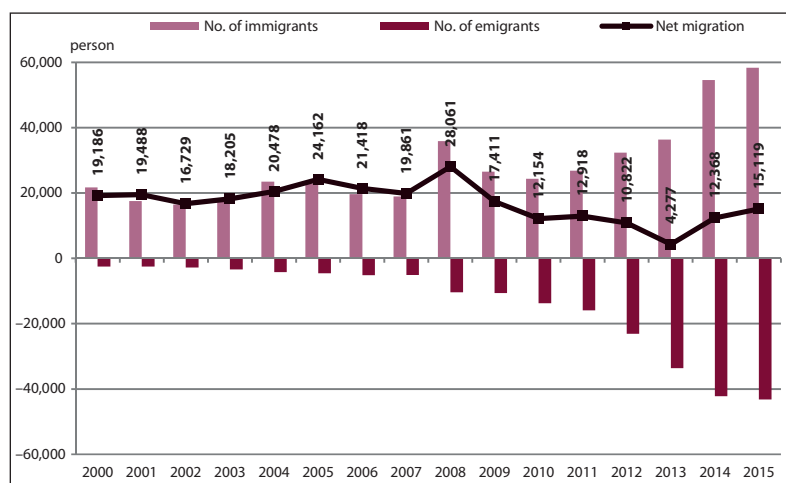
P.4.5. Net migration

Immigrants are people who were born and lived abroad but indicated their intention to permanently settle in Hungary, as well as those who returned home after temporarily residing abroad. Emigrants are people who leave Hungary in order to settle down abroad for good or temporarily reside abroad. The difference between emigrants and immigrants gives us annual net migration.

The number of immigrants has been steadily growing since 2010 reaching the highest number in 2015: 58,344 people in that year. In 2015, the distribution of immigrants by age group was 9,557 people aged 25–29 and 8,956 people aged 25–29 in Hungary, which is a 10% increase in the former and 9% in the latter age group. It can be established that the number of people immigrating to Hungary is slowly but steadily growing.

The number of emigrants has been continuously growing since 2007, and saw a 46% increase in 2013 (33,693) as compared to 2012 (23,074). The figure grew by only 20.2% (42,213) from 2013 to 2014 and 2.3% (43,225) from 2014 to 2015. Thus, the pace of emigration appears to be slowing. Although the number of emigrants grew in 2015, the pace of growth was slower than the increase in the number of immigrants. In 2015, the number of immigrants was 58,334, 1.35 times higher than the number of emigrants. The distribution of emigrants by age group shows the majority of people leaving Hungary and this was in the 25–29 age group (9,804).

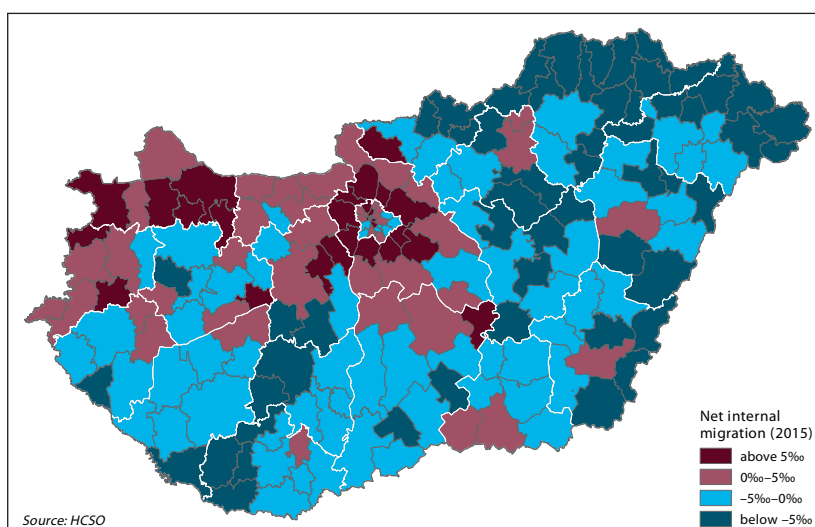
According to net migration figures showing the ratio of immigrants and emigrants, more people are coming to Hungary than leaving by 12,368 in 2014, which is a 2.89-times increase as compared to 2013. This trend continued in 2015, when net migration was 15,119, 1.22 times higher than in 2014.



Source: HCSO, census

When discussing net migration, we should not neglect the development of internal net migration for the regions within the country, the indicator of which is the difference between immigration and emigration per 1,000 population, and also includes permanent as well as temporary migration. On this basis, and according to the relationship between net migration and natural reproduction, a distinction can be made between recipient regions (where net migration is positive) and regions experiencing population loss (where net migration is negative).

An important indicator of the individual's societal well-being is net migration, the value of which is enhanced by factors such as easing of tensions in the labour market and improvements in living conditions. According to the indicator, Central Hungary is the primary receiving region for internal migration within the country. This is supported by steady and significant population growth between 2003 and 2015, particularly in the period from 2007 to 2010. The receptive nature of this region is primarily related to its more favourable employment opportunities.



Source: HCSO

Net migration has been positive since 2013, which means that more people are coming into the country than leaving it.

P.5.1. Satisfaction with life

Overall satisfaction of the Hungarian population with life can be said to be moderate, scoring 6.1 on a 10-point scale in 2016, which shows a slight decline in satisfaction with life among Hungarian people. In international comparison, this score ranks Hungary among the countries less satisfied with life; the lag behind the average of the 28 countries of the European Union (7.1) was almost a full point (6.2) in 2013. This score puts Hungary closer to the country least satisfied with life (Bulgaria, 4.8 points) than to the most satisfied countries (Finland, Sweden, Denmark with 8.0 points and Austria with 7.8 points). Hungary also has the lowest score of the V4 countries (Czech Republic with 6.9, Poland with 7.3 and Slovakia with 7.0 points).

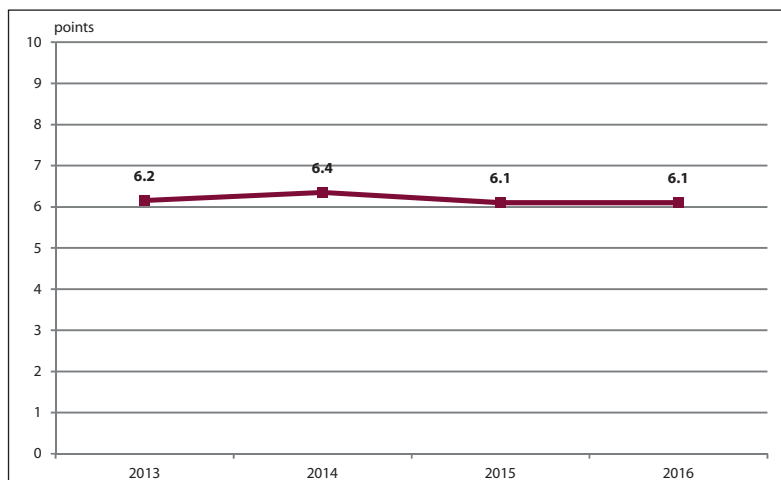
Although the economic and social situation is becoming increasingly stable in Hungary, overall satisfaction with life has not increased since 2013; after a rise in 2014 (6.4 points), it fell back below the 2013 value (6.2) to 6.1 points. In order to explore the reasons behind these scores, we can examine the level of satisfaction broken down by age group and school qualification, which also reflects the financial, educational, political, social and cultural level of the country.

The age group that is the most satisfied with life includes young people aged 16–24: their score is nearly one point higher than the Hungarian average and was equal to the average of the European Union, France and Romania in 2013. At the same time, the level of satisfaction in this age group also declined from a peak in 2014 (7.2 points) to 6.8 points by 2016. This decline may reflect the turbulence related to the reform of our education system.

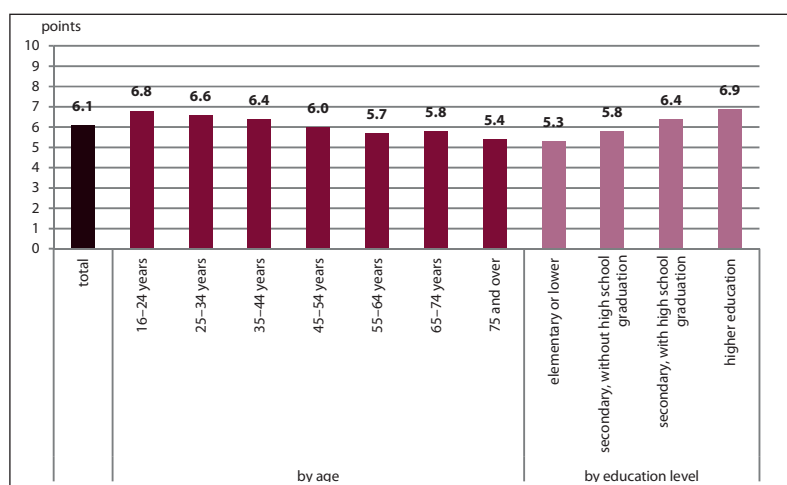
The next age group in the satisfaction with life indicator is the group of young adults. The level of satisfaction in the 25–34

and 35–44 age groups is higher than the Hungarian average (6.6 and 6.4 points in 2016, respectively), and while satisfaction in the younger age group has been steadily declining since 2014, the index for the 35–44 age group has not changed. Similar stagnation was recorded for the next two age groups too: the satisfaction of the middle aged (45–54 and 55–64) has not changed much, although both segments have scores below the Hungarian average (6 and 5.7 points respectively in 2016). The group of people who are the least satisfied with life in Hungary are senior citizens aged over 75 (5.4 points in 2016). The lowest level of satisfaction with life is shown by the breakdown by school qualifications: those with elementary education scored only 5.3 points in the survey on a scale of 0 to 10, which means that they are least satisfied with their life in Hungary. (It is interesting to note that this score was 5.9 in 2014). As we go higher in terms of education level, in 2014, we approached the levels of satisfaction of the United Kingdom and Germany recorded in 2013 (7.3 points).

It is noteworthy that satisfaction with life was the highest in 2014 in all age groups and qualification categories, but there was a gradual decline thereafter.



Source: HCSO



Source: HCSO



Source: Eurostat

Satisfaction with life reflects a country's happiness level and social, economic, political and cultural state. Hungary is below the EU28 average.

P.5.2. Meaningfulness of individual activity

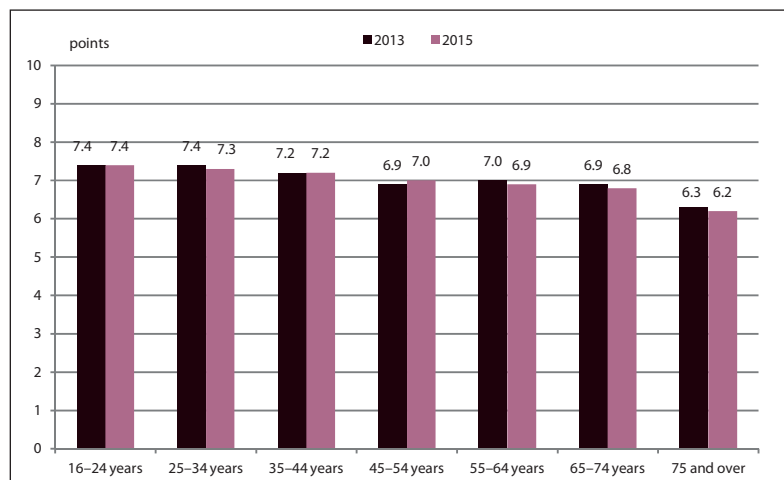
The indicator measuring the meaningfulness of individual activity belongs to the non-material, i.e. immaterial components of the Good State; it is a necessary condition for public good and well-being of citizens. It is in the top level of the hierarchy of values necessary to life as an important precondition for the individual's self-fulfilment.

The meaningfulness of individual activity includes a need for creativity, productivity and positive action, which is reflected, inter alia, by the difference between the age groups and genders in the analysis of the indicator. The Good State and also economic, political and social activity for the public good include efforts with respect to legislation, regulation, management and economic policy that are designed to ensure citizens are able to perform their work and spend their free time, both individually and with their families, in the community and in society in a meaningful manner full of significance and emotion in order to serve their self-fulfilment. This indicator reflects the extent to which such self-fulfilment is successful.

The indicator measuring the meaningfulness of individual activity specifically measures to what extent Hungarian citizens feel, in general, that the processes they are part of are meaningful. By marking the meaningfulness of their activity on a scale of 0 to 10, Hungarians on average rate their activity as more meaningful than the mid-level. Between 2013 and 2015, this value moved between 6.2 and 7.4 points. It is worth examining the different values within this time period by year, age group and gender.

On the basis of the detailed analysis of the indicator by year, it can be established that the scores – similarly to the P.5.1. indicator measuring satisfaction with life – were highest in 2014, and 3% to 4% higher than the values in 2013 and 2015. There was a decline below the 2013 level after 2014. For example, the 25–34 age group scored 7.4 points in 2013 for the meaningfulness of their activity, which rose to 7.8 points in 2014 and fell back to 7.3 in 2015.

The breakdown by age group shows similar results to those recorded for the P.5.1. indicator measuring satisfaction with life: the younger the age group, the higher the scores. It is clear that the correlation between the two indicators is high as the more meaningfully an individual's activity is rated, the more happiness they find in it and the more satisfied they are with their own life. In this indicator, the steadily declining meaningfulness has its median in



Source: HCSO

the 45–54 age group, at the same time it can be seen that the scores for the meaningfulness of individual activity slightly increased between 2013 and 2015. The lowest value for this indicator was also recorded for the oldest age group: those aged 75 and higher scored 6.3 points in 2013, 6.6 points in 2014 and 6.2 point in 2015.

It is interesting to observe the values of this indicator for the difference between genders. It can be established that women rate what they do more meaningful than men. In 2013 and 2014 they rated the meaningfulness and creativity of their activity 3% higher than men, while in 2015 they scored the same points. 2014 was an exceptional year in this respect, too with women scoring 7.4 points and men 7.3 points as compared to 7 points in 2015.

Thus, the indicator measuring the meaningfulness of individual activity represents a transition from prosperity to well-being. It shows that the Good State keeps an eye on the accomplishment of values, individual self-fulfilment as a meaningful, creative and goal-oriented development of its people, as well as work as a meaningful and sensible activity that promotes the creation of value and self-fulfilment, which is nothing other than the precondition for the public good (to the benefit of all people).

The value of the indicator for Hungary in 2013 (7 points) is below that of the Visegrád countries, since the Slovak figure is 7.5 points, and the Polish and Czech values were 7.6 points. It is worth noting that the Romanian value was 7.3 points, and only the Bulgarian value (6.1 points) was below the Hungarian figure in this group of countries. At the same time, the EU average was 7.4 points, and this largely corresponds to the average of the examined countries.

The improvement of this indicator by age group only showed a contribution to the accomplishment of public good to some extent in the 45–54 age group.



Source: Eurostat

P.5.3. Frequency of volunteer social work

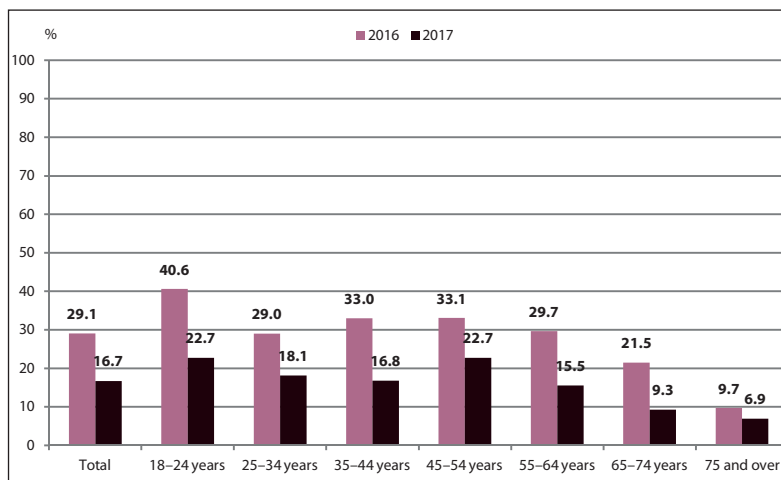
Volunteer social work and its frequency show the maturity of the society of a state and its ability to share in community values and create networks, as well as the strength of human relations. In other words, the quality of social cohesion and social capital.

It can be established on the basis of the charts that the majority of the Hungarian society (around 70% to 80%) do not perform regular volunteer work. Women were slightly more active in volunteer social work than men.

It is striking that the younger age group aged 18–24, followed by young adults and people aged 35–44 and 45–54, are more active on average in volunteer work: around 40% of young people, and 33% to 40% of young adults, participated in volunteer work at least once a year in the years examined, 2016 and 2017. The frequency of volunteer work declines with age: while around 20% of the 65–74 age group perform social work at least once a year, 90% of people aged over 75 do not perform any volunteer work.

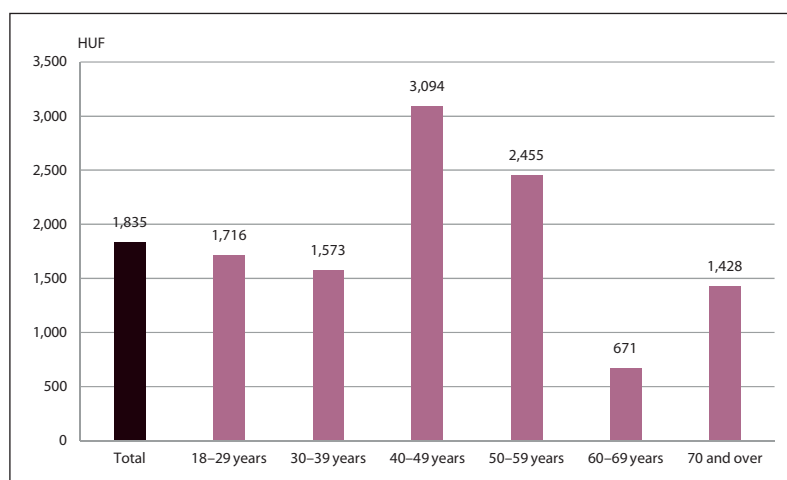
There is no exceptional disparity in the frequency of voluntary social work: the percentage of social work performed every other month and once in a year is nearly the same in 2017 (4.0% and 6.5%, respectively). The highest frequency of voluntary work in 2017 (at least once every two months) was recorded for men, while women performed more voluntary work during the year on a few occasions than men. However, the Hungarian society is characterised by the category of “has not performed voluntary or social work” (83.7% for men and 83.0% for women).

The existence of values and social conscience (paying attention to others) is indicated by the presence of givings and donations, which is measured by the question “How much have you donated



Source: NUPS, GOS

in Hungarian forints to those in need and charity organisations in the past year?” Women donated 30% more in 2016 than men, but the average sum of donations is not high: HUF 1,835. It is interesting to see that people without a job also donated small amounts (HUF 822.7). The breakdown of donors according to education level is also informative: the higher we go on the scale of school qualifications, the higher the amount donated by respondents (HUF 368 recorded for people with elementary education and HUF 4,368 for those with higher education). This fact shows that education level has a positive influence on social capital, on paying attention to others. The breakdown according to age group shows that people aged 18–39 donate around the average (HUF 1,716 and HUF 1,573), while people aged 40–59 donate the highest amounts (HUF 3,093 and HUF 2,455). The 60–69 age group includes people who donate the smallest amount (HUF 670), but the older age group (over 70) shows a higher degree of generosity (HUF 1,427). Households without children tend to donate more than families with children (HUF 1,994 and HUF 1,477), but these sums do not account for even a few thousandths of annual minimal wages.



Source: NUPS, GOS

On average, 20% of the Hungarian population participated in voluntary social work at least once a year.

P.5.4. Satisfaction with the quality of the health care services system

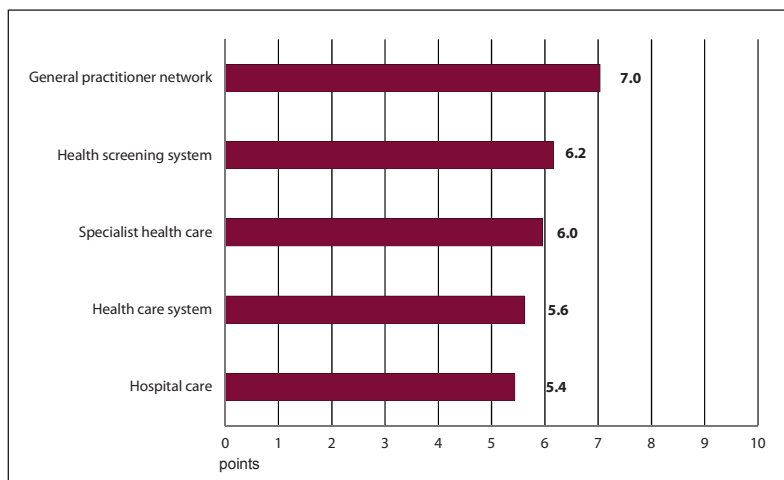
Although the lead time for reforms with regard to the development of the health care services system is measured in years, this is nonetheless the defining factor where government intervention can have the most direct impact on health. Due to the asymmetry of information, patients frequently cannot correctly assess the quality of clinical treatment, nonetheless health care is one of the largest service branches, where the assessment of users is a relevant perspective for numerous operating parameters (waiting times, attention, food, information, infrastructure conditions, etc.). The opinion surveys provide information primarily on the latter, the circumstances of the provision of services.

The indicator presented here shows the average value of the answers to the question *"How happy are you with the health care services you have used?"* The respondents marked their level of satisfaction on a scale between 0 and 10. The source of the data is the *Good State and Governance Opinion Survey*. Due to changes in methodology, the 2016 results cannot be compared directly to the previous year's results: while the question above had to be answered along with several other questions in 2016, the 2015 version was *"How happy are you overall with the quality of the health care services system?"* was listed in the questionnaire along with questions on public education and public administration (and there were no additional questions on the use of health care services or on the assessment of individual types of care).

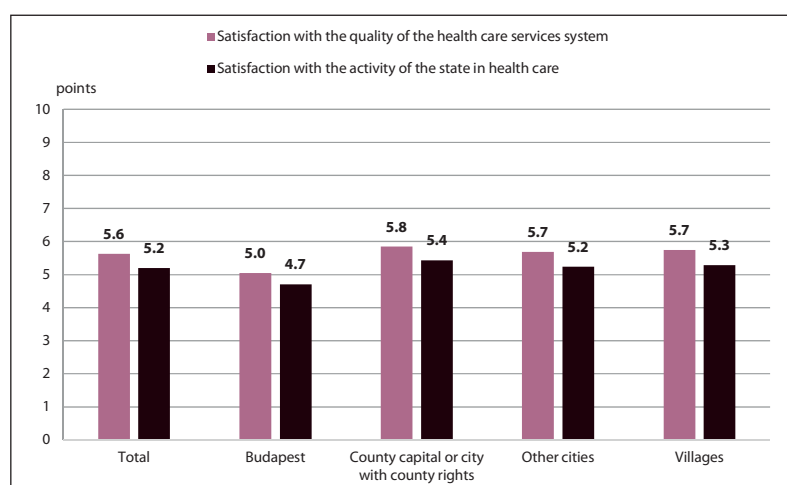
In 2016, the average level of satisfaction with health care was 5.6. (We should note here that the overall level of satisfaction in the previous year was 4.9, which was also measured on a scale of 0 to 10 but another methodology was used.) The respondents were most satisfied with care received from their general practitioner (GP) (7) and least satisfied with hospital care (5.4); frequent visits to general practitioners and the convenient location of GP practices made a significant contribution to the positive picture. The result of the survey confirms that there is room for hospital conditional improvements according to the people. At the same time, the assessment of the quality of the state's function is worse (5.2) than the rating of all the other types of service systems. It can be assumed that, for the individual actors of the service systems, the respondents assessed the quality of service providers in their local area and used by them personally or their family members and friends, i.e. general practitioners and medical institutions; while, in case of the state's performance of its functions, they rated the overall organisation of the system, health care administration, the financing of health care and the burdens on patients.

The percentage of respondents who are moderately satisfied with the operation of the health care system and give 6 points is 41.2%, but some also provided extreme opinions. The percentage of those who are very satisfied (9 and 10 points) is 9.8%, which is much higher than the percentage of very dissatisfied (0 and 1 points, 4.2%). There is more criticism of the state's performance of its functions: the percentage of respondents scoring 0 or 1 points is 8.5% (while the ratio of very satisfied is 9.6%).

The level of satisfaction measured for health care is significantly lower than the value recorded for the education system (average value: 6.61; see indicator P.5.5.).



Source: NUPS, GOS



Source: NUPS, GOS

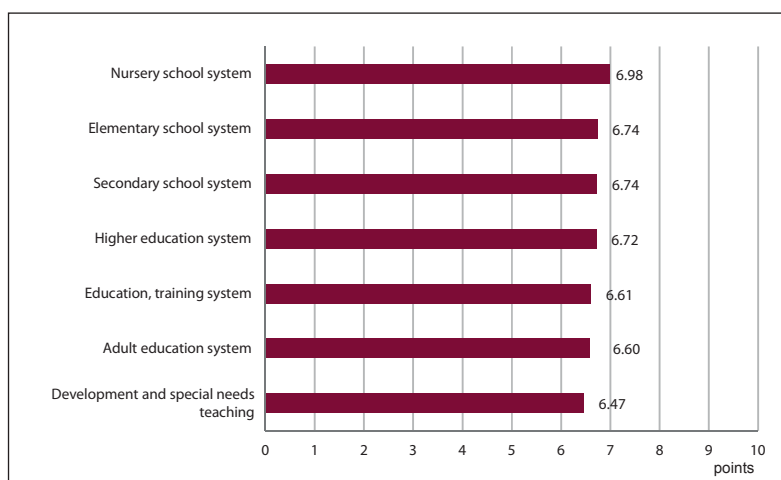
In the opinion of the population, the state's performance of its functions in relation to the health care system is relatively poor.

P.5.5. Satisfaction with public education

The level of satisfaction perceived by users plays an important role in the assessment of the quality of the education system (in addition to the results measured by standard tests and the output results measured by suitability for the labour market). In addition to the work of teachers, the level of satisfaction is influenced by several other factors, such as school infrastructure, communication with schools and the quality of meals served in schools.

The indicator presented here shows the average value of the answers to the question *“How satisfied are you overall with the operation of the education and training system?”* The respondents marked their level of satisfaction on a scale between 0 and 10. The source of the data is the *Good State and Governance Opinion Survey*. Due to changes in methodology, the 2016 results cannot be compared directly to the previous year's results: while in 2016 the question above had to be answered along with several other questions, in 2015 only the following question was included in the questionnaire: *“How satisfied are you overall with the quality of the public education system (elementary and secondary education)?”* This question was put directly along with questions on satisfaction with health care and public administration.

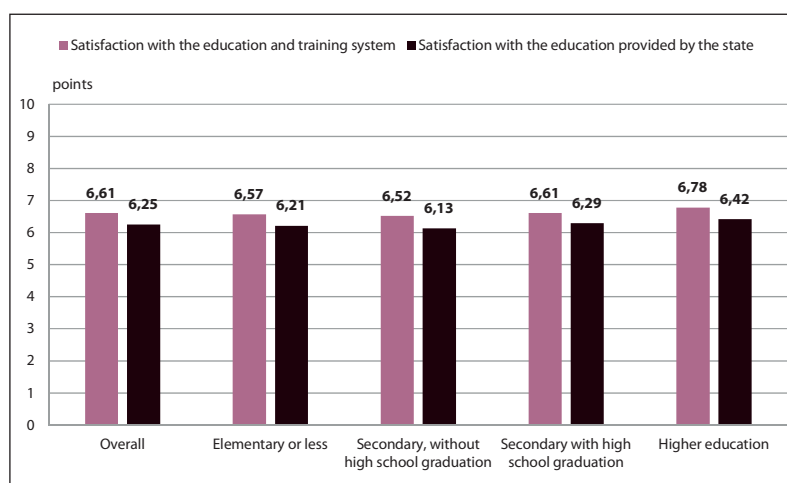
The level of satisfaction for the individual levels of the education system shows a surprisingly uniform picture with no marked deviations. The 6.74 rating of public education and the 6.72 rating of higher education slightly exceeds satisfaction with kindergartens. (We should note here that the overall level of satisfaction in the previous year for public education was only 5.9, which also used the same methodology.) The degree of satisfaction is essentially the same when breaking the respondents down by school qualifications (both in an overall sense and on the basis of education level).



Source: NUPS, GOS

The percentage of those very dissatisfied (0 and 1 points) is extremely low, only 1.1%, while the percentage of those very satisfied (9 and 10 points) is 18.4%. The ratio of respondents giving very positive and very negative answers is also very similar for the individual training levels.

General satisfaction with education is much higher than with the other major service system, health care (although the general practitioner service is rated slightly higher by the respondents than education). While the level of satisfaction with the education system and its individual components shows a largely uniform picture, the respondents are less satisfied with the quality of state functions: in fact, this is lower than the level of satisfaction with any other segment of the education system. The percentage of respondents very dissatisfied with the performance of the state functions is 3.5%, while the percentage of those very satisfied is 17.4%. It is reasonable to assume that the respondents primarily rate the operation of the institutions in their neighbourhood when assessing individual training forms, while they express their opinion on the organisation and financing of the system in connection with the state's performance of its functions, which results in sharper criticism.



Source: NUPS, GOS

The Hungarian population is moderately satisfied with the education system.

FINANCIAL STABILITY AND ECONOMIC COMPETITIVENESS

SUMMARY¹

The quality of government capabilities has a significant influence on outcomes that can be observed at any given time in the area of financial stability and economic competitiveness. What is more, it is also important to emphasise when discussing competition that government decisions taken today not only impact competitiveness now, but also in the future. From the perspective of future competitiveness, it is critical for any country to find ways to participate in the significant processes of change currently underway, including the technological revolution commonly referred to as *Industry 4.0*. Failure to do so is highly likely to result in that nation being left on the side-lines. The condition for plugging into this process – in addition to a sound financial system – is the good development policy. It will be vital to shape the country's economic structure in such a way that the share of high-value-added sectors is able to grow in tandem with a corresponding lengthening of value chains to ensure those links with greater value added that are also in place to help boost productivity and increase the proportion of well-paid jobs.

At the same time, involvement in the digitalisation process is subject to certain conditions: In addition to technology investments, it is a requirement to foster an environment where innovation is encouraged and digital capabilities are developed. The use of up-to-date technologies coupled with the availability of specialist expertise can rise the likelihood of increasing the proportion of exports made up by products and services founded on specialist knowledge, innovation and originality. In other words, we should strive no longer to be in the position of having to purchase the fruits of the expertise and development of others, but to also be able to sell know-how of our own – improving the terms of trade and increasing the creation of new value to be distributed and reinvested. This thereby improves the ratio of the GNI indicator to GDP, in other words, helping ensure value created by market players in Hungary, which is the basis for domestic economic and social development, grows faster than GDP, which includes elements – such as repatriated profit and dividends of foreign companies – that are not put to work in Hungary.

Ultimately, this will make transition possible for the Hungarian economy from competing on the basis of cheap labour to competitiveness founded on knowledge, skills and innovation, i.e. to evolve from a *production centre* into a *knowledge centre*. According to the latest international studies, we are not yet sufficiently prepared to make rapid and effective use of new technologies. On the basis of the EU's Digital Economy and Society Index, we rank 21st of the EU28 member states. According to the report published by IMD Competitiveness Research Institute in June 2017, Hungary is in 44th place of the 63 countries surveyed, and last of the V4 countries. One reason for this might be that the value of R&D investment is stagnating according

to the indicators studied. Although spending on corporate research and development locations is growing in proportion to GDP, that on research institutes and higher education research and development sites is steadily falling. Furthermore, the proportion of those employed in research and development areas has declined relative to the total labour force since 2012. However, it would be important to increase their share in order to improve the usability of modern technologies and develop digital capabilities, as well as retain researchers and accelerate knowledge transfer between educational and research institutions and the business sector.

It is not inconsequential therefore to look at the steps the Good State is taking to ensure Hungary is able to play an active role in the technology and knowledge revolution. In order to map the current situation and help define the necessary tasks, we introduced new indicators in 2017, with the help of which we can evaluate the current structure of the economy, its diversity, the length of the value chain, and the contribution of the technology-intensive processing industry and knowledge-intensive service enterprises to the production of gross value added, as well as the number of people these sectors employ. Alongside the traditional indicator of productivity, gross national product per employee, we are using what is known as the development indicator as a new indicator, which compares the development of the Hungarian economy against the average level of development in the EU economy, as well as the change year on year and the regional breakdown of values. Improving the level of development is also important in ensuring we are able to be part of the process of digitalisation. This is why we also analyse the elements and composition of the indicator known as multifactor productivity. Analysing multifactor productivity is important because it has been shown that this indicator increases faster in the more competitive economies than the traditional productivity factor. This is because the multifactor productivity indicator examines not only how GDP produced by employees measures up, but also how up to date the technology that employees use is, what level of knowledge is required for the available jobs and whether corporate management, organisation and governance are up to date. In other words, looking at this indicator shows how it might be possible to raise traditional productivity. It is therefore also linked to other indicators related to the levels of innovation and education, including, most importantly, the lifelong-learning, or adult education indicator. One good method for increasing the multifactor productivity indicator, though, is continuous training of employees. *Participation in lifelong learning* is an input indicator measuring ongoing investment into human capital. The proportion of citizens engaged in adult education generally has a significant influence on a country's ability to improve productivity, particularly with regard to multifactor productivity, as it makes it possible for workers to acquire new knowledge and skills, thereby increasing the size of the available workforce with superior skillsets. The danger in Hungary is not so much the low participation rate in lifelong learning and adult education, but

¹ The authors of this chapter are Prof. Magdolna Csath, DSc (workgroup leader), Tünde Györfaludmány, Balázs Nagy, Balázs Taksás, PhD, and Szergej Vinogradov, PhD.

the major regional disparities. If further education performance is low in an economically underdeveloped region, this has a negative effect on development investment opportunities. Together, growth in multifactor productivity, innovation and increased economic diversity have a positive effect on the development of the export-import ratio and balance of trade. In order to improve productivity, therefore, it is necessary to invest in the modernisation of technology, knowledge and innovation, improve the ratio and performance of innovative companies, i.e. their contribution to the creation of new value, extend value chains and promote variety and diversification in the economy. This would at once further decrease the energy demands of the Hungarian economy, which continue to be very high in comparison to the more developed countries of Western Europe, despite a downward trend. A higher proportion of innovative companies helps to attract venture capital, which is also something we have analysed this year.

Through the use of previous and new indicators, we wished to provide a broader and more complete picture of the modernity of the economy, its ability to plug into the changes of tomorrow, and also the vulnerability to external factors of government finances and the development of public debt. With regard to the latter, we have found that strides have been made in several areas. For instance, Hungary's financing capability is good, which is the most important factor in determining a country's financial stability. The data also suggest that – in addition to promoting re-industrialisation – the state must also play a key role in fostering the high value-added services sector, as trends show that the contribution of these companies to our financial stability is growing faster than that of industrial output. It is also certainly worth continuing to bring down external debt, given that sustaining the downward path of external debt is necessary to reduce the amount of interest to be paid abroad. Lower interest obligations in turn leave greater budgetary resources available to invest in the technology and knowledge necessary to play a part in the digital revolution. In comparison to its competitors, Hungary continues to pay more interest on its public debt than its competitors, which is restricting the country's ability to improve its competitiveness.

From the perspective of maintaining the financial stability of the national economy, the availability of sufficient foreign currency reserves is also an important factor. Hungary's holdings of foreign currency are currently sufficient. However, the data show that the Hungarian state's high financing needs represent a significant risk factor with regard to our financial stability. Finally, it is worth mentioning that the Good State has an important role to play in expanding the financial and economic knowledge and understanding of the population. This is an important challenge in the interest of reducing financial risks in the long-term – as well as improving competitiveness. Furthermore, the state also has much to do to help the economy become more dynamic and agile in order to ensure it is able to play an active role in the digital revolution, rather than that of a follower, because this is what will improve financial results and bolster financial stability.

It is an important task and at once a responsibility of the Good State to quickly and effectively reverse the negative trends in those regions where we are behind even the V4 nations by increasing the state's

own innovative capability to introduce forms of intervention that yield genuine results in making the business environment more flexible, enterprise-friendly in the interest of accelerating the modernisation of the Hungarian economy and helping close the gap to other countries. It is also important to make efficient use of European Union funds, grow the share of investments in machinery and technology, as well as in infrastructure, in addition to boosting the resources available for and effectiveness of education, research, development and investment. Effective and targeted adult education, as well as increasing the digital know-how of small businesses is essential for improving the digital capabilities of society in general terms. It is very important that we should never examine our current position and emerging trends in isolation, but always in the context of international comparison, as we are in competition with others when it comes to growing our share of the international market, and thereby improving the quality of life and standard of living of the population through the retention of qualified workers. It is also impossible to ignore regional disparities. Ensuring that regions and counties behind the curve are able to catch up is a task of the Good State with which it contributes to the country's sustainable and balanced economic and social development, as well as halting the population decline.

For a more detailed analysis of the quality of governance, it is necessary to examine government spending and the resulting economic and social benefit relationship, that is, the effectiveness of the use of resources.

It would also be necessary to construct a single composite indicator calculated based on the sub-indicators and taking into account their weighting in order of importance. This would make it possible to determine the development of the competitiveness of the Hungarian economy, record preparedness for the future in a single data point and allow us to perform a regional comparison.

The level of financial stability and economic competitiveness is also a measure of a country's economic stability and level of security. Improving financial stability and economic competitiveness is a high priority when it comes to formulating national security strategies. The principal way to reduce economic dependency, or, in other words, to reduce economic vulnerability, is to improve competitiveness. On the other hand, increased financial stability and economic competitiveness result in improved living standards, quality of life and public well-being. Macroeconomic results, which generally reflect the impact in the present of past decisions, also make it possible to invest in social development in the present day, and create a basis for macro indicators to continue to move in a positive direction in the future. The structure of the economy, its need for energy and resources and its operating efficiency, all continue to be closely interrelated with environmental sustainability. The important issue for sustainable development is how we can use the resources currently available, including human capital, in an efficient manner, and continuously redouble our efforts to ensure that sufficient quantity and suitable quality of these resources remain available in the future. The efficiency and transparency of public administration and the degree of bureaucracy establish the basis for the operating environment and conditions for business activity. Research has shown that a government that operates flexibly and quickly based on a performance- and business-oriented approach is itself a factor in improving competitiveness.

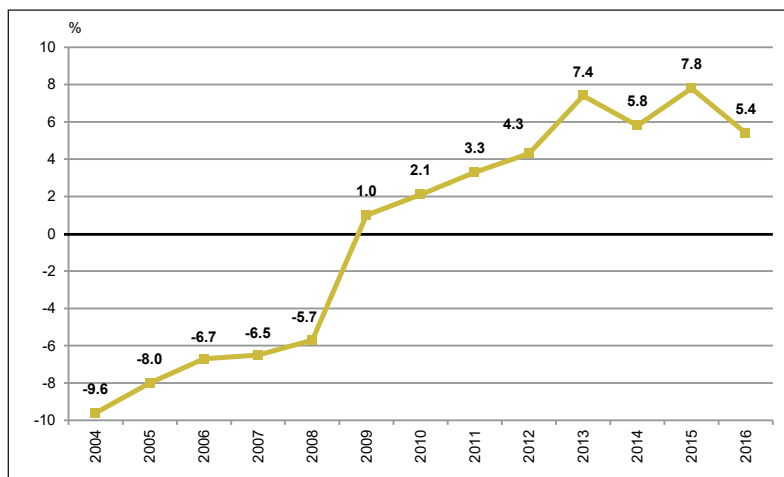
F.1.1. Net international investment position as a percentage of GDP

This indicator is the prevailing core indicator for financial stability and shows the balance of payments, as well as whether the national economy possesses sufficient resources (savings) for its own operation, i.e. for investment in the corporate sector, and – if there is a deficit – the financing of both the budget deficit and the need to develop competitiveness factors, or whether it needs to secure external financing, which is derived from the savings of other national economies. In the latter case, it is obvious that the risks of financing security are higher, as these external sources can – even at a moment's notice – dry up or become significantly costlier.

Following the regime change, the Hungarian national economy was for a long time forced to continuously seek external financing. This necessity increased further as the economic performance and the standard of living rose. This value of 6%–9%, which can be seen in the period under investigation, is higher than the corresponding percentages in eastern and western European countries, and this explains largely why we were hit harder by the financial crisis and why our growth potential remained below that of the neighbouring countries. The growth in foreign currency denominated loans was also the consequence of this.

After 2008, with the sources of financing frozen, the negative balance of payments became unsustainable, and it was only through austerity measures (accompanied by falls in the domestic standard of living, consumption and exports) that our balance of payments became positive again. The financing position of the Hungarian economy has improved substantially, but this is largely the effect of forced adaptation, the lack of opportunities for external financing and growing repayment obligations. Later, this process was supported (simultaneously with the devaluation of the forint) by foreign products becoming more expensive and domestic products and labour becoming cheaper, as well as by a growth in the performance of multinational companies selling their products in the export market.

As for our financing capacity becoming positive, we can say in general that the balance of trade of goods and services is showing a growing surplus within the current account balance (this growth derives from the continuously expanding balance of services, which exceeds the balance of goods), while the value of the balance of incomes is showing a continuously decreasing deficit. (The reason behind this trend of the income balance is due to the fact that many people take a job abroad and that the companies of foreign ownership repatriate only around 40% of their profit compared



Source: HCSO

to the nearly 100% that was characteristic at the beginning of this decade.) The balance of transfers records positive values to various degrees depending mostly on the pace of drawing European Union grants.

The external financing capacity of the national economy increased to 7.8% by 2015, a record height that was due, on the one hand, to the constantly growing foreign trade surplus and, on the other, to the record high balance of transfers (EU subsidies). In 2016, the foreign trade surplus reached another record height (10% trade surplus relative to GDP) and the entire current account balance also reached a historic record (nearly 5% relative to GDP), but due to a significant decline in the balance of transfers, external financing capacity dropped to 5.4%. This, however, still means that the country can both meet its financing needs and repay its debts at a significant pace.

The value of 5.4% is still exceptionally good in the European Union. This is a very positive development for our financial stability, but the data for the regional share of exports and imports also show that the exceptional value is largely due to lower internal consumption in Hungary than in the V4 countries and to our lower standard of living.

The conclusion that can be drawn from the indicator is that a similar situation must not be allowed to develop in the future as prior to 2008, and that the *Good State* must in any case increase society's overall level of economic awareness and education, as well as its motivation to save, by setting a good example and striving for shrewd fiscal management. The data also indicate that, in addition to re-industrialisation, the state should assign an important role to the service sector, which produces high value added, because the trend is that this sector is able to contribute to our financial stability more rapidly than industrial performance.

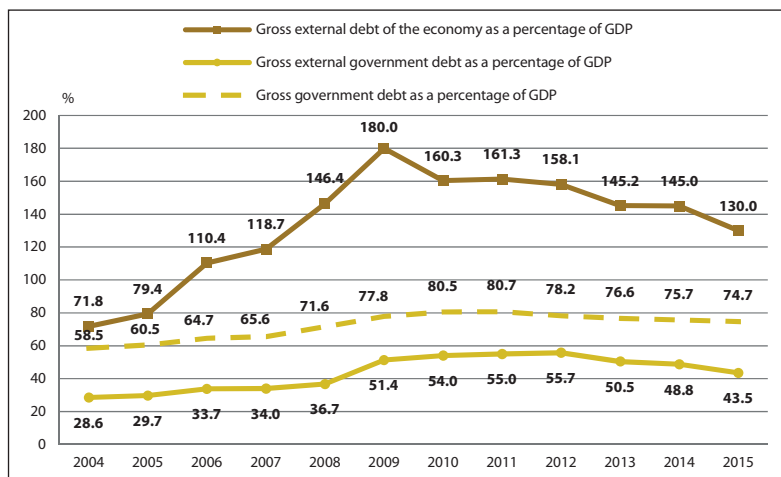
F.1.2. Key debt indicators for the national economy

We used a continuous brown line on the chart to indicate the value of the debt of domestic economic actors outstanding to foreigners as a percentage of the gross domestic product (GDP). Growing debt can harm the external risk rating of domestic economic actors, which on the one hand can make new financing sources costlier and, on the other, increase the need for and expense of renewing maturing sources of financing. (For the sake of international comparability, we used the data published by Eurostat.) Of entire external debt, we used a continuous yellow line to highlight the debt of the government sector (and the HNB) outstanding to foreigners relative to GDP.

Additionally, we used a yellow dotted line to show the value of public debt relative to GDP. We used a dotted line to show that unlike the previous two, in addition to foreign debt, it also includes the debt outstanding to domestic economic actors.

As a result of the negative financing capacity outlined in F.1.1., Hungary's external indebtedness has increased at a growing pace after 2002. The financial sector played a key role in this increase. Since there were no domestic sources available for increasing household lending, external capital market sources had to be used. The external debt of public finances also increased significantly, and so did the direct external financing of the corporate sector (by parent companies), especially when lending to the financial sector was frozen in 2008–2009.

2009 saw the beginning of a scaling down of indebtedness. The decline in the external debt of the financial sector was



Source: Eurostat

the largest as foreign currency denominated loans of companies and households were repaid through the banking system. Since 2010, the external debt of the corporate sector, with small fluctuations, has also decreased. External debt relative to GDP was highest in 2012, 55.7%, which dropped close to 43% by 2015, which is an especially welcome development.

The government should definitely continue to reduce this external debt as the current level of domestic savings could provide sufficient reserves to cover the needs of the potentially growing domestic investment mood.

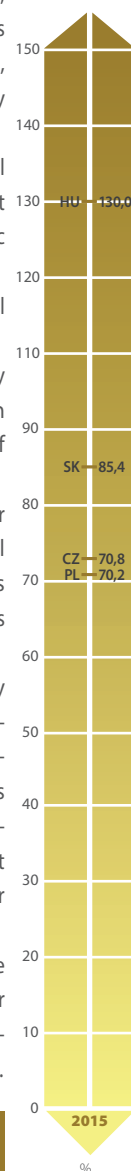
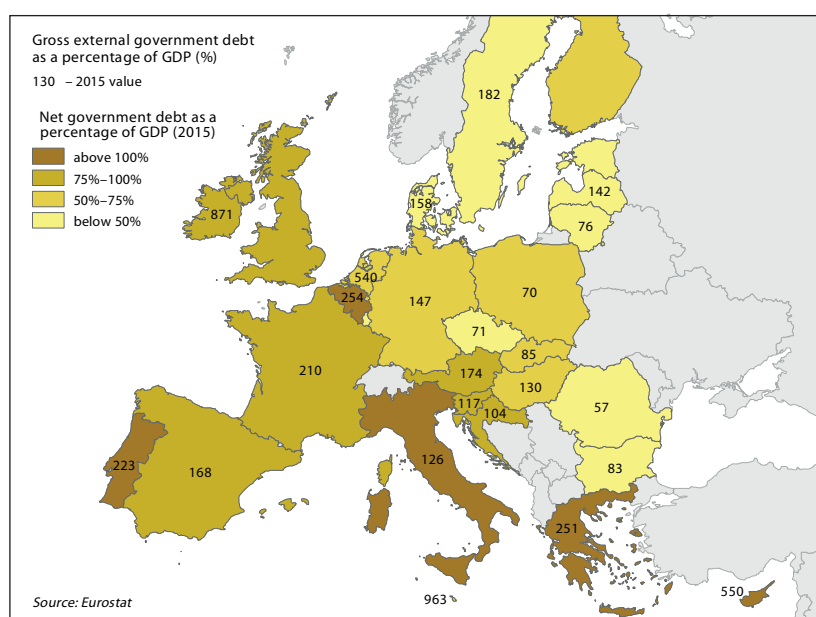
The necessity of reducing debt is also confirmed by two additional pieces of data.

One of them can be seen in the map of Europe shown here: By the end of 2015, gross external debt relative to GDP was still high compared to countries with similar levels of development and competitiveness.

Compared to the value of 130% recorded for Hungary, the average of the rest of the Central and Eastern European EU member states is 89%, while that of the other three V4 countries is 75.5%.

Fortunately, this difference is constantly decreasing, but reduction needs to be continued because, if we compare Hungary's international balance of payments and the countries in our region, we find that the Hungarian economic actors pay considerably more interest relative to GDP on their external loans to their foreign creditors.

This difference may be reflected in more limited resources for development, weaker profitability and lower consumption opportunities and standard of living for the people.



Source: Eurostat

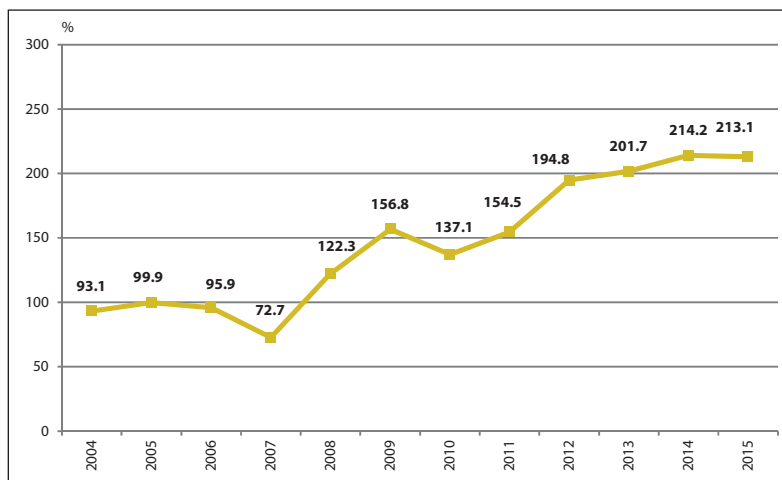
The trend of declining external debt should be maintained in order to reduce interest burden payable to foreigners.

F.1.3. Value of foreign currency reserves in proportion to foreign debt maturing within one year

The maintenance of sufficient foreign currency reserves is an important factor in ensuring the financial stability of the national economy. Firstly, when the international capital markets are frozen and it becomes difficult to obtain financing resources or the market's trust in a particular country is shaken and the market is no longer willing (in part or in whole) to provide finance, the central bank can use its foreign currency reserves to finance its maturing payment obligations and pay for imports to balance the current account deficit, thereby ensuring access to goods that are vital to both the people and the national economy. Secondly, the foreign currency reserve is also needed for interventions in the foreign exchange market by the central bank in order to protect its own currency. Thirdly, setting the appropriate level of the central bank's foreign currency reserves can in itself increase financial stability as it shows that economic policy has the right tools to protect its financing position, which strengthens the confidence of the internal and external market actors. As a result, there is much less chance for a situation described above to occur, where the players in the international money are no longer willing to finance a particular national economy.

The optimal level of foreign currency reserves is estimated in several different ways. The IMF has also developed a calculation method for countries with different levels of development and openness. In most cases, this level is compared to the annual value of imports or the total external obligations of the national economy. In our Report, we used the indicator based on the Guidotti–Greenspan rule for the study of the foreign currency reserves policy of the good state. According to this, foreign currency reserves should cover the given country's foreign debt maturing within one year.

Prior to 2008, the foreign currency reserves of the Hungarian economy were on a downward path due to the negative international balance of payments shown by the F.1.1. indicator, and these had slipped to 72.7% of foreign debt maturing within one year by 2007. This level can be considered low in terms of risk, and a consequence of this was, inter alia, that when external sources were frozen in 2008, the country's monetary policy essentially became unable to react independently without external aid, either through domestic financing sources or by stalling the plunge in the exchange rate. The reason for the foreign currency reserves plunging to a critically low level



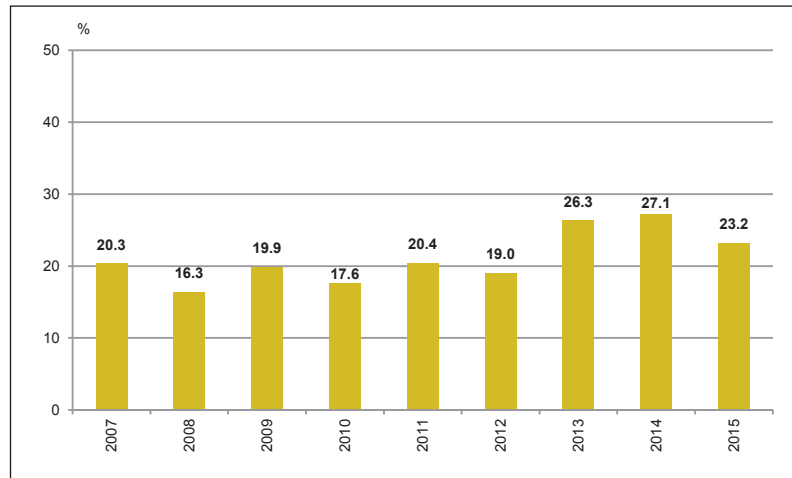
Source: HNB

was that the contemporary monetary policy was ready to sacrifice financial stability instead of taking bold steps to ensure the balance of payments, which would have stalled the otherwise extremely low economic growth further (even compared to the countries in the region). It is irrelevant in terms of the consequences whether this *sacrifice* was made on the basis of economic arguments or as a result of political pressure at that time. At the end of 2008, the loans received from international institutions (IMF, ECB) increased the foreign currency reserves, which grew further due to the positive international balance of payments resulting from that force of adaptation which was described under indicator F.1.1. By 2015, the central bank possessed twice the reserves to cover obligations due within a year, which provided Hungary with a considerable amount of security in the event of the international capital markets locking up once again. Since maintaining foreign currency reserves also has cost implications, the Hungarian National Bank has already considered the artificial and cautious reduction of foreign currency reserves.

For the future, the Good State should definitely bear in mind that a strict line needs to be drawn for increasing the risks of financial stability, and that financial stability should not be sacrificed to promote economic growth (not even on the basis of political considerations). Once a barrier is crossed and the international environment simultaneously becomes unfavourable, our economy would entail losses that are much greater than would have been suffered if we had taken the necessary steps to create economic balance (which may have slowed down growth) by adhering to a risk-averse economic policy.

F.1.4. Government sector financing (net lending/borrowing) position as a percentage of GDP

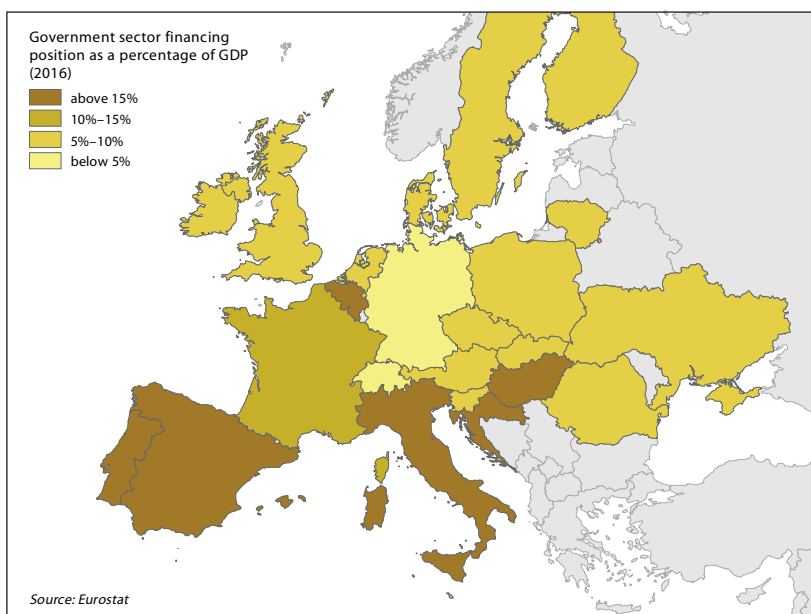
When determining financial stability, we need to pay special attention to examining the issue of public sector finance, since if public financing becomes problematic, the tools of economic policy and the government's room for manoeuvre both become drastically restricted, and not only is the state left without the tools or power to improve competitiveness, but its everyday operation and ability to perform its functions and create well-being can also come under threat. We explained in volumes II and III of *Measurability of the Good State* that the best indicator for measuring the risks of financing the public sector is the government sector financing need position as a percentage of GDP. This indicator takes into account both the existing fiscal deficit and the volume of property acquisitions by the state, as well as the proportion of resources to be used to finance maturing and renewable public debt relative to total economic output. The higher its value, the more financing resources the state will require from domestic and external capital markets. It is clear that the larger sum to be obtained, the greater the risk to financial stability. In addition, a high level also means that economic policymakers need to make particular efforts to please the market and can take only those steps that do not undermine the confidence of economic actors in the given country and its economic policy. High gross financing needs therefore also reduce the government's room for manoeuvre and the tools of economic policy. The chart shows that the gross financing needs of public finances relative to GDP have not changed significantly. (In 2014, after a previous rise, the indicator began to decline again.)



Source: GDMA, HCSO

The fluctuations in the value of the indicator are strongly dependent on, in addition to the restrictive or expansive nature of fiscal policy, whether the state has any significant repayment obligation in a given year. The reason the value of the indicator did not follow the decline in public debt after 2011 is that the average maturity period became shorter and new financing sources had to be found to renew maturing loans. This is an important signal to decision-makers: it is not enough to reduce public debt in order to improve the financial security of public finances; the average maturity period also needs to be extended. (There is an obvious endeavour underway to ensure this.)

However, international data show that the financial vulnerability and capital market exposure of the Hungarian public finances are still extremely high in comparison to other Central Eastern European countries. The map of Europe shows the values indicated by the IMF for 2016, with the value for Hungary at 19.3%, for example, while the average of the other three V4 countries is only 8.5%. This suggests that, relative to the neighbouring countries (except for Croatia, which is in a similar situation), Hungary needs to convince twice as much owners with savings as our economic performance determines to lend their capital to our country. It is an important goal to reduce this difference and eventually eliminate it, or else we will have to make much more severe sacrifices than our regional competitors in the event of a potential shortage of sources in the international capital market.



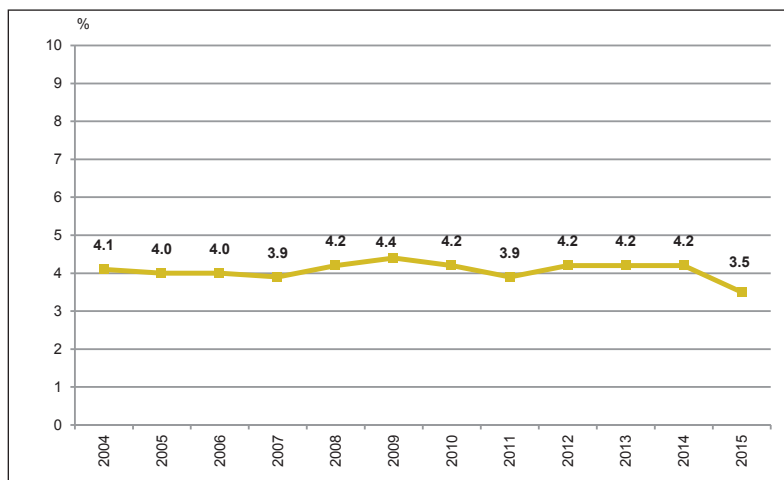
The riskiest factor of our financial stability is the extremely high financing need of the Hungarian government sector.



F.1.5. Interest payments on public debt as a percentage of GDP

This indicator shows how the amount of interest paid on public debt by the government sector relates to the total performance of the national economy. In other words: how much pressure public debt places on the national economy and society and the relative extent to which sources for development and increasing the standard of living are absorbed by these payments.

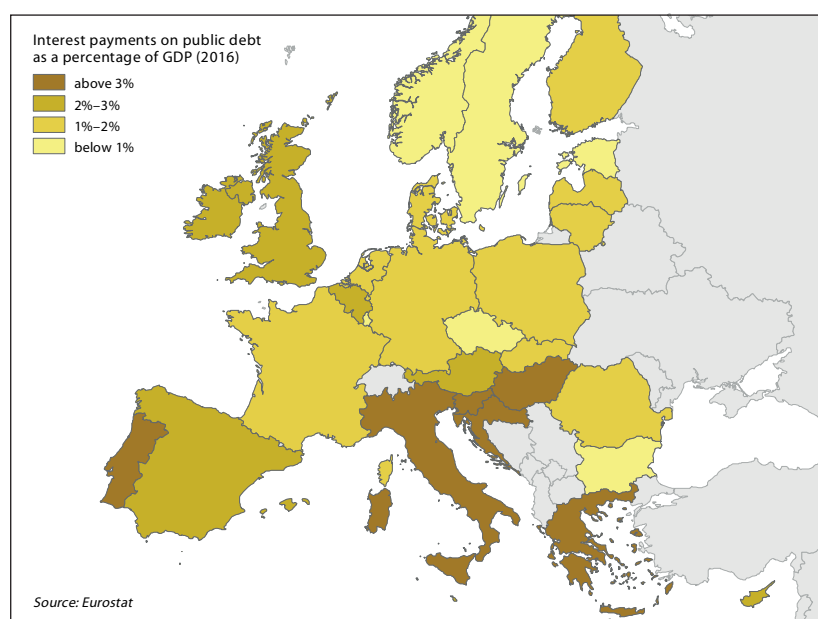
Competitiveness and the development of a particular country does not depend on the extent of its public debt, as the nominal value of public debt simply means that the given country received an amount of X as a loan and later needs to pay the same amount of X. The significant factor is the interest payable on the debt. This is the amount that the national economy needs to generate and pay to the state as a tax. The key factor is therefore the extent of the interest payments that put pressure on the economy, or rather the amount the economy must generate (relative to its own performance) that cannot be invested in its own growth. As we have explained several times in the *Measurability of the Good State*, it often occurs that, although country A has higher gross public debt relative to GDP than country B, this in reality puts less pressure on its economy as, due to the lower interest on credit, the interest charges, country A has to pay relative to GDP, are lower than those of country B. The map shows that – despite the decline in interest charges that began after 2012 – the Hungarian economy is burdened with higher interest charges than the other countries in the region. Fortunately, this gap is shrinking but it is still obvious that, if the Hungarian state imposed taxes on enterprises at the same rate



Source: GDMA

as its competitors in the region, for every 100 euros it could spend, an average of EUR 2.30 less compared to the Czech Republic, EUR 1.50 less compared to Slovakia and Poland, EUR 1.70 less compared to Romania and EUR 2.40 less compared to Bulgaria and the Baltic states on its various tasks (on the development of areas of competitiveness such as education, health care and infrastructure). This is a significant competitive disadvantage as only Slovenia and Croatia has values similar to Hungary. Turning this scenario around, if the Hungarian state wanted to spend the same amount on security, public services and the development of competitiveness as its competitors, it would need to impose taxes on each 100 euros of revenues made higher by the amounts mentioned above, which then would severely damage the competitiveness of its corporate sector. It is obvious, therefore, that despite the positive changes in the past three years (which generated HUF 150 billion in savings for the country's budget), one of the most important obstacles to the improvement of our competitiveness is still the high rate of interest on Hungarian public debt.

By examining the processes underlying these tendencies, we can identify several different factors affecting this indicator. These include the otherwise very welcome trend, which needs to be continued, of the population playing an increasingly direct role in the financing of public debt. This is partly due to the fact that, in addition to Hungary's high financing needs, the country's decline in interest payments has not entirely followed the declining trend of total public debt and the drop in interest rates in the international environment.



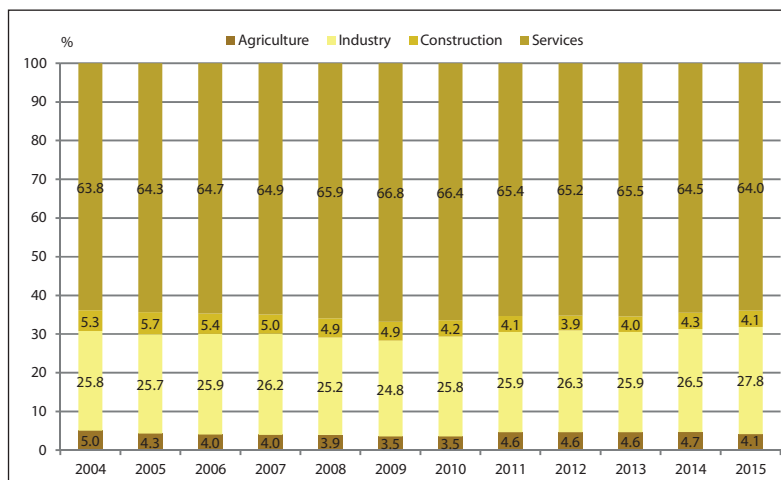
Relative to its competitors, Hungary is paying more interest on its public debt, which is damaging its prospects of improving competitiveness.

F.2.1. The structure of the economy by sectors

The sectoral structure of the economy shows how diversified an economy is, what sectors contribute to the overall performance of the national economy and the creation of new value. On the other hand, temporal change in the sectoral structure reflects how the emphasis has been shifted in the economy, and which sectors have become more or less important. Changes to sectoral structure influence the export potential, the outlook for growth and future competitiveness. The increase in the proportion of advanced industries that create high value added improve export prospects on more demanding markets and, at the same time, increase new value created in the economy (due to higher prices). The analyses generally address the proportion of four combined areas.

These include agriculture, industry, building industry and services. Infocommunications as well as professional, scientific and technical activities need to be emphasised among the services as they are part of the knowledge-based economy. On the one hand, their level of development is crucial to all the other sectors, on the other hand, they can contribute to the expansion of exports, which represent high value added. In addition, in the age of accelerated digitalisation and robotisation, without the development of these areas, the Hungarian economy may end up on the periphery.

The change in the structure of the economy is shown by the fact that, during the period under investigation (2004–2015), the share of agriculture dropped from 5.0% to 4.1%, that of construction from 5.3% to 4.1%, while the share of industry rose from 25.8% to 27.8%, and that of services from 63.8% to 64.0%. This means that the proportion of industry and services increased within the economy, with a higher rise for industry. A trend opposite to the developed countries seems to be unfolding, where the share of industry is declining, while



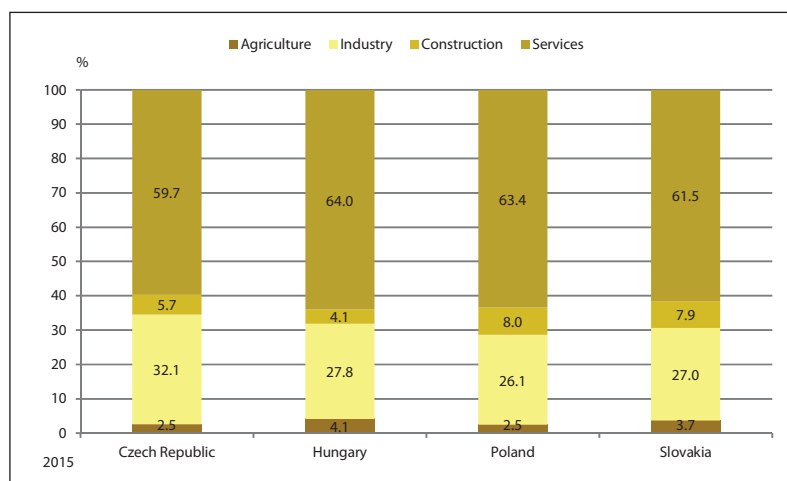
Source: Eurostat

that of services is increasing within the overall economy. The EU average is 19.3% for the share of industry and 73.9% for services.

It should be noted that the share of all sectors under investigation dropped from 2014 to 2015, with the exception of industry, which increased. The role of the service sector after the crisis during 2008–2010 continued to increase, which suggests that the performance of the service sector, which generates higher value added was less sensitive to the economic crisis than the other sectors. In the 2015 international comparison, we can see that the sectoral structures of the V4 countries are similar, although the share of industry in the Czech Republic and that of services in Hungary is higher.

Finally, infocommunications (IC) and professional, scientific and technical activities (TA) should be assigned priority among the service sectors as their role will become vital in the future due the acceleration in digitalisation and robotisation. The share of IC in 2015 was 4.9% and that of TA was 8.9%, with a combined share of 13.8%. This proportion is higher in the more developed countries.

In this respect, however, we are faring quite well against the V4 countries. In summary, we can say that the structure of the Hungarian economy, and the proportion of each sector relative to one another, seems to be well balanced compared to the V4 countries. The proportion of knowledge-based services, however, is lower relative to the developed countries.

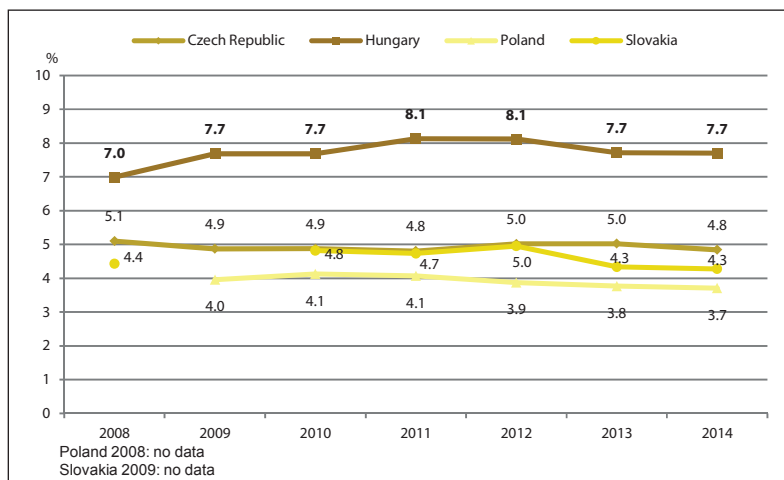


Source: Eurostat

F.2.2. The share of gross value added created by technology-intensive (high-tech) manufacturing industries and knowledge-intensive service sectors

The creation and use of new products, technologies, knowledge and services has a significant impact on competitiveness, export possibilities and hence on the *smart*, knowledge-based development of the economy. These are the sectors of the future as it will be impossible to participate in the fourth industrial revolution without advanced technological and knowledge-intensive sectors. This is why it is important to examine the share of these sectors in gross value added. According to the Eurostat definition, technology-intensive manufacturing industries include the pharmaceuticals sector, the manufacturing of IT equipment, as well as the production of electronic and optical products. Knowledge-intensive services include all activities related to infocommunications, R&D, science and engineering.

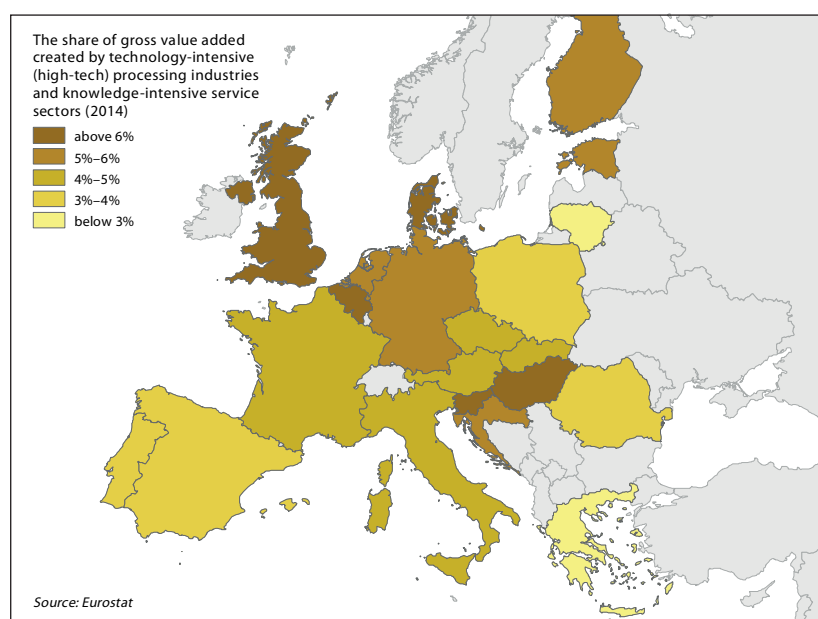
The available data are for the period between 2008 and 2014. In an international comparison, we can observe that the Hungarian figures were the best among the V4 countries in 2014. Compared to 2008, only Hungary's figures improved by more than 10% in 2014, so growth was dynamic only in our country. However, the pace of development, for example, was much higher in Germany, with 23%. The value of the indicator depends on the number of companies operating in these sectors, on the one hand, and on the value added generated by these companies on the other. According to 2014 Eurostat data, there were 36,679 such companies in Hungary, 1,525 working in the manufacturing sector and 35,154 in the service sector. The new value created by these companies relative to the total value of production was 23.1% and 54.2% respectively, so the proportion



Source: Eurostat

of new value created locally in the service sector is higher. Both data are the best among the V4 countries but worse than, for example, Austria or Germany. Another interesting Eurostat figure is that in 2014, 46,000 manufacturing companies representing especially high levels of technological advancement were working in the EU, more than half of them, or 53%, in four countries: Germany, Great Britain, Italy and Poland. The share of Hungarian companies was 3.3%, while the same value was 7.2% in the Czech Republic, 7.5% in Poland, and 0.9% in Slovakia. Significantly more companies were working in the area of knowledge-intensive services in every country. It should be noted, however, that the statistical categorisation of these companies is based on their core activity, so it is quite likely that not all activities of these companies can be considered to be technology- and knowledge-intensive.

In summary, we can say that the Hungarian data are quite good compared to the V4 countries. Any increase in the number of companies working in technology- and knowledge-intensive sectors, their share in the structure of the economy and the activities creating high value added locally has the potential to considerably increase both the export capacity and the international competitiveness of the Hungarian economy, enabling Hungary to switch to a more knowledge and innovation-based competitive model.



The number of companies working in the technology- and knowledge-intensive sectors and the amount of new value added generated by them locally must be increased in order to sustain knowledge and innovation-based economic growth.

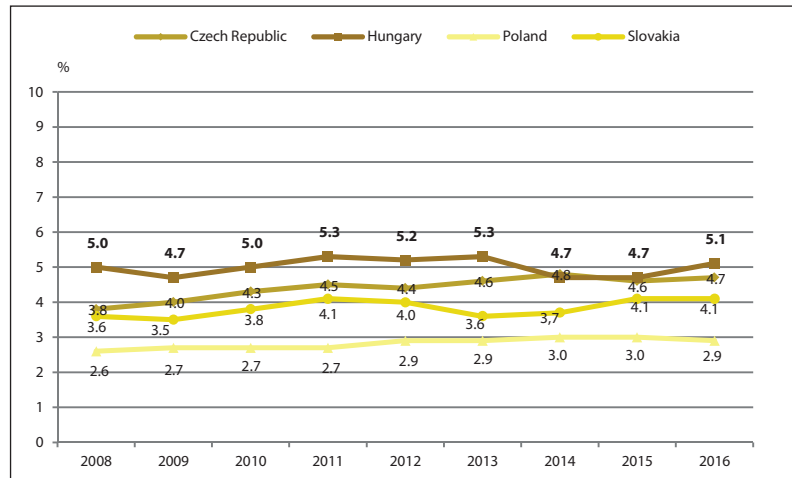
F.2.3. The share of technology-intensive (high-tech) manufacturing industries and knowledge-intensive service sectors in employment

The employment rate in technology- and knowledge-intensive industries shows the share of knowledge and innovation-based jobs in a given country and whether the economy can retain its highly trained labour force and create high value added by utilising knowledge for competition. This figure is also important because knowledge-based jobs are, in general, also well-paid, so their share in the economy can improve the standard of living.

Statistics for this indicator have only been available since 2008. The chart shows that technology- and knowledge-intensive employment was around 5% in Hungary during the 2008–2016 period. It was 5% at the beginning and 5.1% at the end of this period, falling below 5% in three years and rising above 5% in four. The average is also 5%. Accordingly, although the Hungarian value was the highest in 2016 among the V4 countries, the pace of development was the lowest: hardly any progress was made.

Compared to 2008, the Hungarian figure improved only by 2% while it grew in Poland by 11.5%, in the Czech Republic by 23.7% and in Slovakia by 13.9%. The Hungarian values tend to be stagnating, while there was considerable progress made in the other three countries. This puts us at a disadvantage and makes it difficult to retain trained experts. In addition, if this trend continues, the other three V4 countries may overtake us in the near future and take the lead in the area of knowledge-based competitiveness.

The more developed countries also show a varied picture. For example, the improvement was 22.9% in Austria and 22.2% in Slovenia during this period.

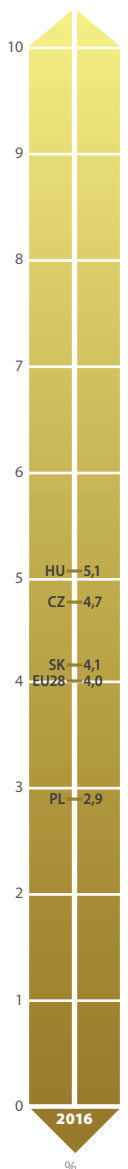
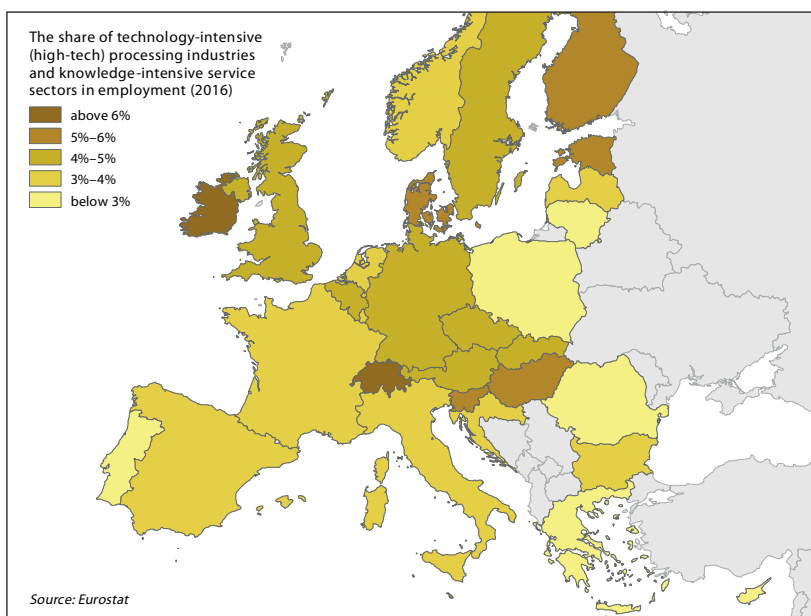


Source: Eurostat

The EU average was 5.3%. If we study the data for technology-intensive manufacturing industries and knowledge-intensive services, we can see that this value was 2.4% in 2016, 14.3% lower than in 2008. The average value is 2.6%. As for knowledge-intensive services, the 2016 value is 2.7% (2.7% + 2.4% giving the 5.1% value), which is a 17.4% improvement compared to 2008. The average value is 2.4%. This shows that the combined value is brought down by the weaker figures of the manufacturing industry, so the number of knowledge-intensive jobs is not growing in the manufacturing industries statistically ranked as technology-intensive.

We can see that knowledge-based employment grew intensively in the knowledge-intensive services. Finally, we should note that there are non-knowledge-based jobs even in the technology- and knowledge-intensive sectors and that jobs requiring a high level of knowledge exist even in industries requiring a low or medium intensity of technology and knowledge.

The number of jobs in all knowledge-based areas should be included in order to improve competitiveness. This is why it is important to increase the number of companies working in the technology- and knowledge-intensive sectors, and the number of knowledge-based jobs available across the entire economy.



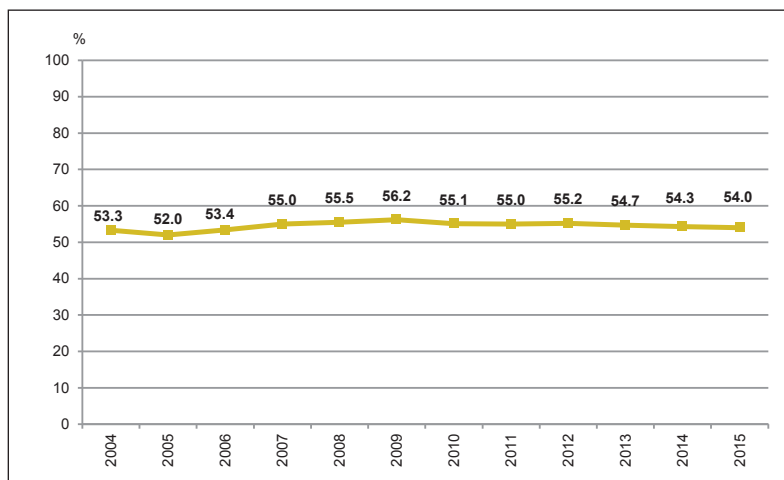
Source: Eurostat

The number of knowledge-based jobs generating high value added must continue to grow in order to improve competitiveness, as well as the standard of living and the quality of life.

F.2.4. The SME sector's share of gross value added

According to the data for the period between 2004 and 2015, the share of the SME sector in gross value added fluctuated between the lowest value in 2005 (52%) and the highest value in 2009 (56.2%). It grew between 2007 and 2009 and has been on a declining trend since 2012. The Hungarian value in 2015 is the third (54.0) among the V4 countries, weaker than the EU average (57.4%). Incidentally, none of the V4 countries reaches the EU average. Low value added suggests that there are very few innovative companies in the SME sector that produce high value added products and services. Additionally, the level of productivity is also low. Obviously, there are variations within the sector, so it is worth examining the details further.

According to Eurostat figures, the ratio of SMEs in Hungary was 99.8% of the total number of companies in 2015, which matches the EU average. Their share in value added was 3.4% lower according to Eurostat figures than the EU average. In 2015, the SME sector employed 69.7% of all employees, which is 2.9% higher than the EU average. If we examine the data of the SME sector separately for each company type, we can see that, of the V4 countries, the proportion of micro companies is the lowest (5.0%) in Hungary and the proportion of small companies is the highest (94.1%). The ratio of mid-sized companies is low everywhere, less than 1% of the total, but the Hungarian figure is the second highest (after Poland) at 0.8%. Medium-sized companies employ between 50 and 249 people. This is important to the economy because these are the companies that have the best chance of marketing their export products on the global market. It is noteworthy that in the SME sector, value added is growing at the fastest pace in the infocommunications area. This means that knowledge-based small enterprises are growing stronger, which will enable them to export knowledge-based services on the one hand, and help the spread of digitalisation in the economy more rapidly on the other. In Hungary, most SMEs work in trading (26.5%) and in professional, scientific and technical areas (21.8%). The latter figure is better than the EU average (18.2%). 6.6% of the SMEs work in the infocommunications sector, which is also a better figure than the EU average (4.6%). Their combined proportion in services is 52.9%. The EU average is 48.6%. The number of SMEs engaged in



Source: HCSO

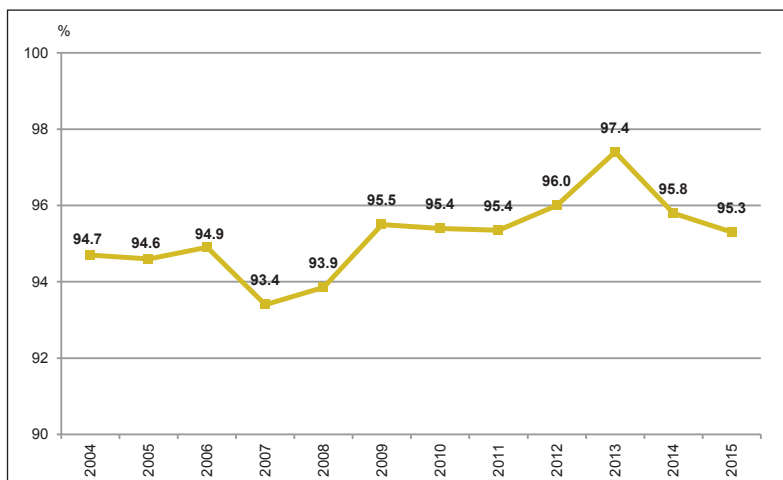
knowledge-intensive services has been growing since 2013 and this is where the EU forecasts estimate the fastest growth for 2016 and 2017. In the area of infocommunications and knowledge-intensive services, however, (due to the acceleration of digitalisation) further development is necessary, which would have a positive impact on the share of gross value added of these companies and the increase in their exports. The share of the entire SME sector in gross value added could be improved primarily by increasing innovation and productivity. The goal to be achieved could be the level of Austria (61.5%), which is 7.5 per cent higher than the Hungarian figure (54.0%). This would require, inter alia, considerable work training in this sector, including the area of information technology. In addition, it would be important to ensure that the SME sector, and micro and small enterprises in particular, are provided with ample opportunity to apply for funds in order to improve their technological level and to be able to join in the accelerated process of digitalisation. Since these companies maintain a large number of jobs, they also create a lot of jobs, especially in underdeveloped regions. This is why they play such an important role in the economy. More efficient innovation, higher levels of productivity and an increase in the number of SMEs working in information technology and knowledge-intensive sectors could facilitate the improvement of economic competitiveness and the creation of additional knowledge-based jobs. It could also contribute to expanding knowledge-based exports, which could improve the terms of trade.

The value added created by the SME sector in Hungary could be increased primarily by strengthening innovation and improving productivity.

Source: Eurostat

F.2.5. GNI as a percentage of GDP

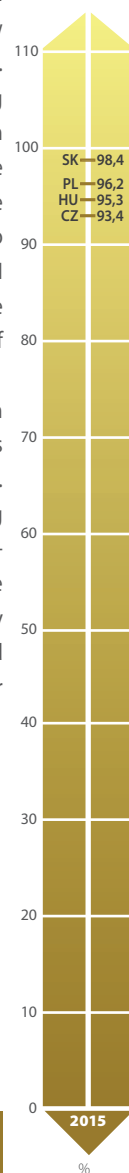
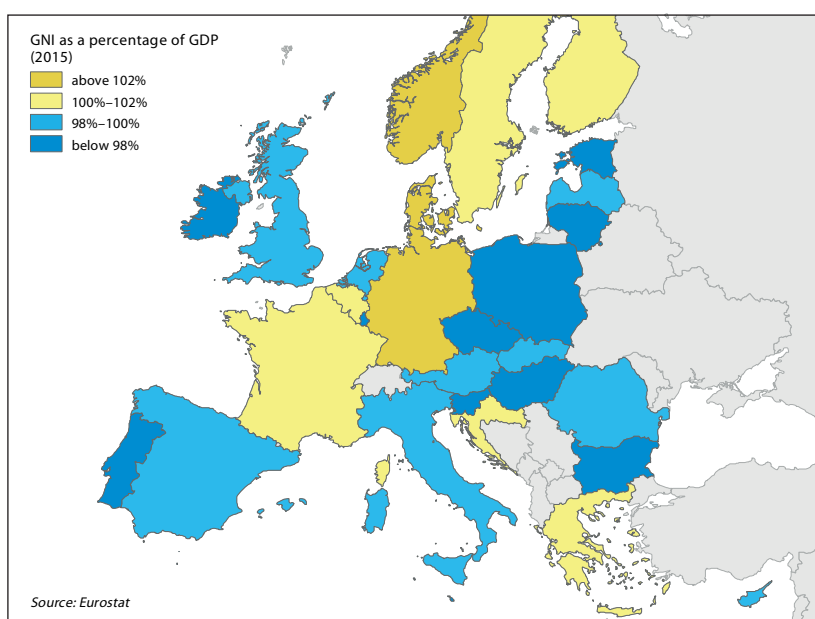
This indicator shows gross national income as a share of gross national product. Gross national income is the value of gross domestic product reduced by the sum of employee and owner income flowing out of the country, as well as by the amount of tax paid in the EU, increased by the income flowing into the country and the amount of aid coming from the EU. It does not therefore include the profit, wages and dividends repatriated by foreign companies. On the other hand, it includes payments coming from the EU, such as agricultural direct payments and employee incomes sent home from abroad. The relationship between these two indicators therefore only partly measures the performance of economic organisations in national hands in the given country. GNI is typically higher in developed countries and GDP is higher in less developed countries, i.e. the ratio is higher than 100% in the former and lower in the latter case. The value of GNI relative to GDP decreased in Hungary in 2014 and 2015. The worst figure was recorded during the financial crisis (2005 to 2007). There can be various reasons for this. There was a significant amount of value pulled out of Hungary during this time. Money outflow related to assets increased by 60% from 2005 to 2006 and by 32% from 2006 to 2007. In 2014 to 2015, the decline may have been due to the slightly lower level of aid coming from the EU compared to 2013. It should also be noted, however, that, in these two years, the financial results of the companies in foreign ownership increased significantly. This gave a boost to GDP. At the same time, wages sent home from abroad have been increasing dynamically since 2012: by 6% from 2013 to 2014, and by 11% from 2014 to 2015. This improved the value



Source: HCSO

of the GNI. All in all, it is noteworthy that there was not a single year when the GNI/GDP ratio in Hungary was greater than one between 2004 and 2015. In international comparison, the 2015 figures show that the Polish and Slovakian data are better than those for Hungary. In Poland, this may be due to the larger number of people taking a job abroad, as well as the fact that Poland has strong companies in national ownership, including small enterprises. In Slovakia, the value of EU transfers grew significantly and the amount of wages sent home was also high in 2015. It is also important to note that, according to the calculations of the NBH, the difference between GDP and GNI rose in every V4 country over the past two years, but the change was the biggest in Hungary – primarily due to growing incomes of companies in foreign ownership.

The GNI/GDP value is typically over 100% in the countries with a well-developed economy. The highest values are recorded in Norway, Denmark and Germany. One of the reasons for this is that the strong companies also operating abroad send significant incomes home. On the other hand, these economies are much more characterised by production and services with high value added and extensive R&D than the V4 countries, for example.



Source: Eurostat

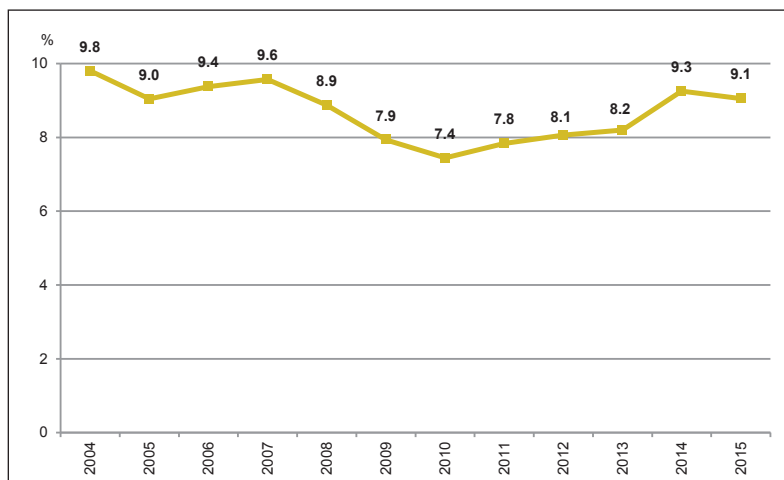
The ratio of GNI relative to GDP should be improved primarily by strengthening the national economy and increasing the knowledge and innovation content of products and services. This would also improve competitiveness.

F.3.1. The value of investment in machinery and technology as a percentage of GDP

During the assessment of competitiveness, the quantity and quality of investments is a key area of analysis. If investment is insufficient, it slows economic growth and recovery. This is why it is important to examine how efficiently the state utilises its available resources. With regard to investments, this raises questions about the kinds of projects the state wishes to invest in, how carefully project costs are planned and to what extent the actual total costs of the implemented projects differ from the plans. This latter question is especially important to competitiveness as any costs that have not been planned and arise later take resources from other areas (such as education, health care and R&D).

As for innovation and boosting productivity, investments in machinery are crucial as this is what allows the introduction of new technologies and more efficient work processes. The use of advanced technology also requires the further training of the labour force, which can also contribute to multifactor productivity. This is why we think it is important to look at investments in machinery for the improvement of competitiveness. The indicator shows the proportion of technological investments as a percentage of GDP.

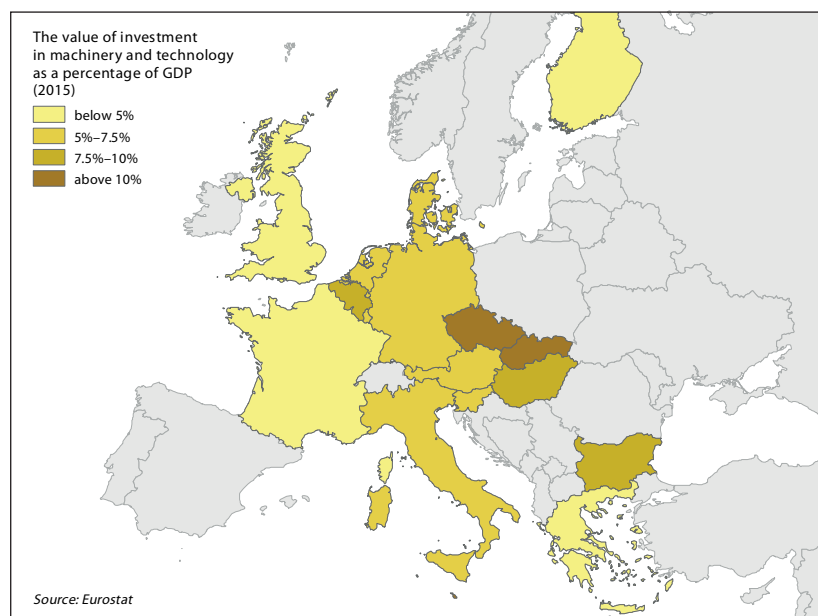
The period under investigation is 2004–2015. During this period, the highest value was 9.8% in the base year of 2004. In the next year, there was a 0.8 percentage point drop to 9.0%. 2008 saw a more significant change and the nadir came in 2010 with 7.4%. This negative trend is in all likelihood due to the effects of the financial and economic crisis that also engulfed Hungary. 2012 saw the beginning



Source: HCSO

of a growth period with 9.3% of investment in machinery in 2014. At the same time, there was a slight drop of 0.2 percentage point in 2015, the last year of the period under investigation. By comparing the 2015 figures with the V4 countries, Hungary falls behind the Czech Republic (11.9%) and Slovakia (10.4%). On the other hand, it is worth examining the technological and machinery investments of the countries that are leaders in competitiveness: Denmark with 5.8%, Germany with 7.3%, the Netherlands with 6.1%, the United Kingdom with 4%, and Finland with 4.7%. It is clear that the values recorded for these countries are much lower than in Hungary or the V4 countries. It is also important to note that, since the indicator measures the value of investments in machinery relative to GDP, in those countries with higher GDP, a smaller percentage will represent a higher actual investment than is reflected in the larger indicator values for the countries with lower GDP. Additionally, it should also be taken into consideration that knowledge-based countries invest in R&D and activities boosting innovation, in contrast to those countries where the proportion of production is higher.

In order to improve competitiveness, one of the key tasks of the state should be to ensure that the right resources are available and that they are utilised as efficiently as possible. In addition to the volume of investments, the efficiency with which they are utilised is also crucial. The emphasis must therefore be placed on knowledge-intensive sectors.



As the role of investments, including investments into technology and machinery, is vital to improving competitiveness, special attention must be devoted to ensuring that investments in machinery reach the required level.

F.3.2. Lifelong learning among those aged 25–64

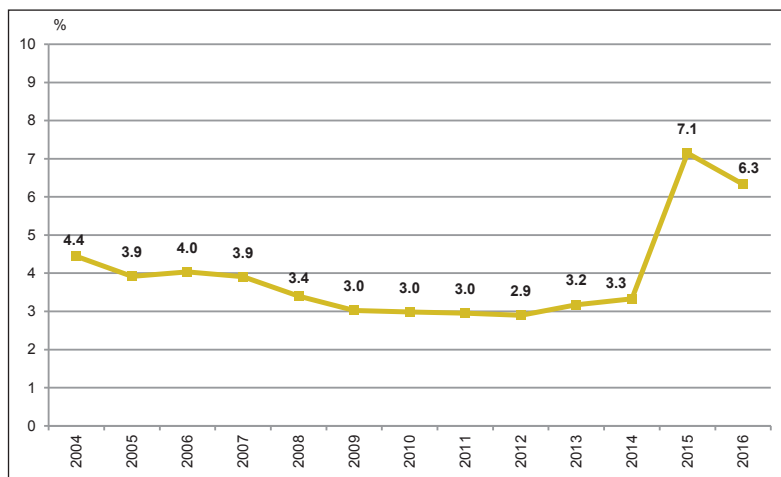
An advanced and competitive economy that relies on knowledge and innovation can only be created with trained professionals who have up-to-date knowledge, which is why it will remain necessary in the future for the Good State to continue to make efforts to raise the level of knowledge and to ensure that professionals are able to find suitable jobs.

Participation in adult education is an input indicator measuring continuous investment into human resources. The rate of participation in adult education generally has a significant effect on the possibility to increase productivity, especially the possibility to raise multifactor productivity, since it makes possible to acquire new knowledge and skills, thereby growing the size of the available workforce with higher qualifications.

This indicator measures the proportion of the population aged 25–64 that has participated in formal education or adult training in the four weeks prior to the survey. The data is provided by the HCSO.

We observed a larger decline in the period under investigation to 3.4% in 2008 and 3.0% in 2009; thereafter, the values are by and large the same up to 2012. This might have been one of the consequences of the economic crisis. The trend was growing from 2013 during which there was a more substantial increase of 3.8 percentage points between 2014 (3.3%) and 2015 (7.1%). The reason for this is probably the result of new professions being obtainable free of charge, as well as continued training for those employed in the public work programme. However, this does not necessarily mean real lifelong learning. Unfortunately, the latest figure shows an 0.8 percentage point decline; in 2016 the proportion of people participating in adult education was 6.3%.

As the map clearly shows, there are significant differences in lifelong learning. The national average (6.3%) was recorded in



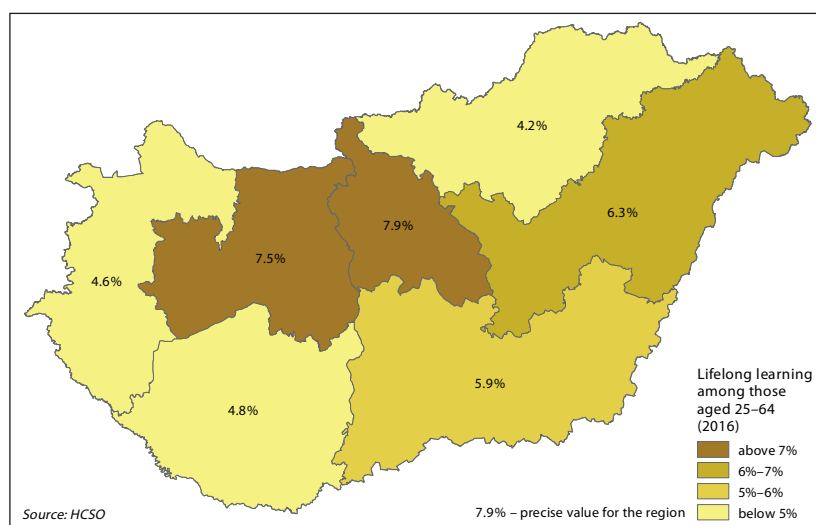
Source: HCSO

the Northern Great Plains region, with Central Hungary (7.9%) and Central Transdanubia (7.5%) performing better, and Northern Hungary (4.2%) and Western Transdanubia (4.6%) well below the average.

The importance of this indicator is shown by the fact that the European Innovation Scoreboard published annually by the EU also takes this as an important sub-indicator for analysis. In 2015, 10 countries were ranked below Hungary. Since the EU28 average is 10.7%, Hungary (with 7.1%) lies below the average.

By looking at the V4 countries, we can see that Hungary is in second place with 7.1%, right behind the Czech Republic (8.5%), although we need to step up competitiveness improvements to make up the gap to the rest of the EU. Poland (3.5%) and Slovakia (3.1%) recorded similar results in terms of participation in adult education.

A lack of up-to-date knowledge hinders economic development, prevents increased export capacity and competitiveness and ultimately diminishes GDP growth prospects. This is why it is important for the Good State to call the attention of society to the significance of knowledge and constant development, and to provide all the necessary conditions for lifelong learning to flourish.



Source: HCSO



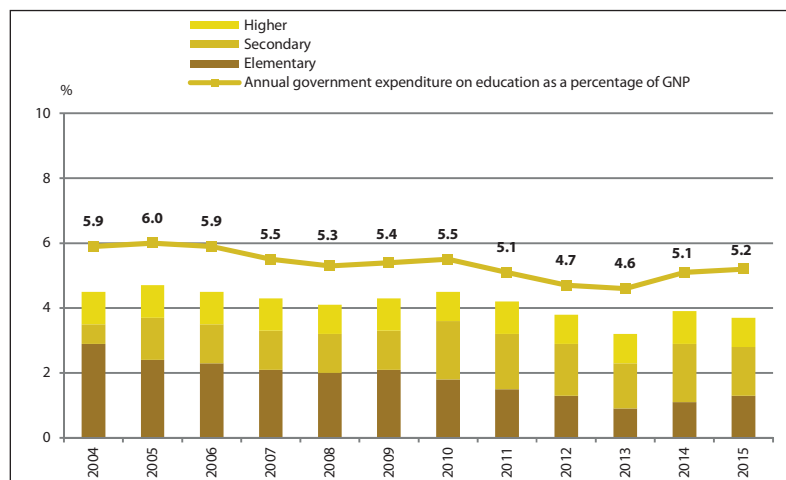
Source: Eurostat

The essential tool for increasing productivity and expanding employment is constantly raising the level of knowledge of employees, which is why significantly increasing the participation rate in adult education is necessary.

F.3.3. Annual government expenditure on education as a percentage of GDP

In a competitive economy it is vital for citizens to have knowledge that ensures their long-term development. For this, it is indispensable for the country to have a competitive education system and institutions that are provided with adequate resources by the state. It may be an obstacle to lasting economic growth and improved competitiveness if the country does not devote due attention to education. This is why we chose the indicator that measures annual government-sector expenditure on education as a proportion of GDP. This indicator shows the share of government-sector expenditures on education as a ratio of the gross domestic product. At the same time, it also represents the investment in developing human capital.

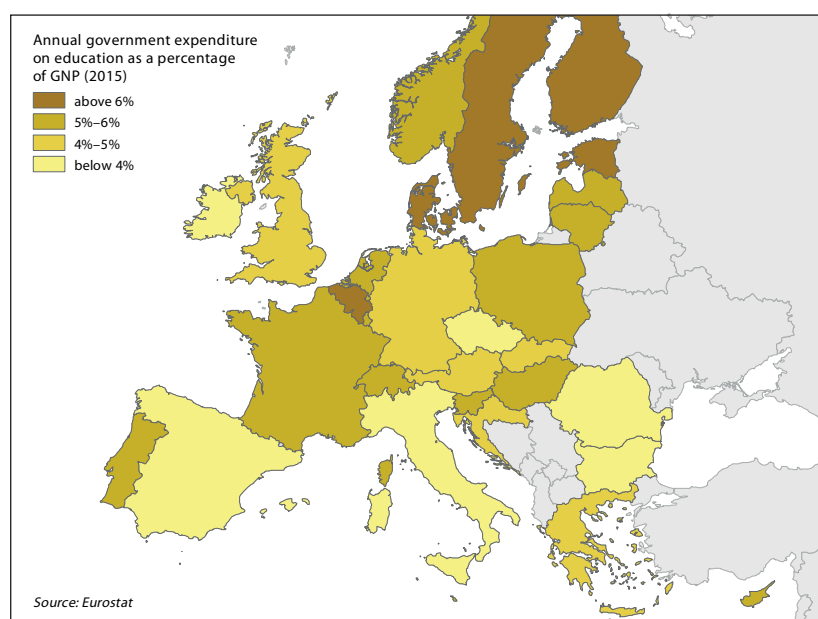
In 2004, which is marked as the starting year of the period under investigation, the amount of expenditure on education was 5.9%, which, after a small increase of 0.1 percentage point, declined between 2006 and 2009. There was a slight increase in 2010 compared to the previous year to 5.5%, but there was a significant decline from 2010 to 2013: the expenditure on education dropped to 4.6%. 2014 saw a 0.5 percentage point increase compared to 2013. The growth may have been impacted by wage increases, and the data may be warped by structural reforms. This figure continued to grow in 2015 by 0.1 percentage point, falling only by 0.3 percentage points below the 2010 value (5.5%). By examining expenditure on education by qualification, we get the following figures for 2015: 1.3% at the primary school level, 1.5% at the secondary school level and 0.9% at the higher education level.



Source: HCSO

It is interesting to observe that while expenditure on elementary education declined by 1.6 percentage points from 2004 (2.9%) to 2015 (1.3%), the trend was just the opposite for secondary education. The expenditure on this level of education grew by 0.9 percentage points from 2004 (0.6%) to 2015 (1.5%). In the past 11 years, there has been practically no change in expenditure on higher education. In 2004, it stood at 1%, while 0.9% was spent on higher education in 2015.

This indicator is especially telling from the point of view of international comparison regarding the extent to which a highly trained labour force will be available in the future for the improvement of competitiveness, which is definitely a necessary objective for the country. According to 2015 international data, Hungary was above the EU28 average of 4% with its 5.2%. Hungary and Poland were in first place among the V4 countries (5.2%), beating Slovakia (4.2%) and the Czech Republic (4.0%). It is also important, however, to examine the figures of the countries that are in the forefront in competitiveness and education, such as Denmark (7%), Finland (6.2%) and Sweden (6.5%). It is obvious that, although Hungary performs better relative to the EU28 average and the V4 countries, it falls behind the countries that are exemplary in this area of investigation.



There is an improving trend with regard to expenditure on education. This is important to ensure that there is sufficient expertise in the country to operate a knowledge-based economy.

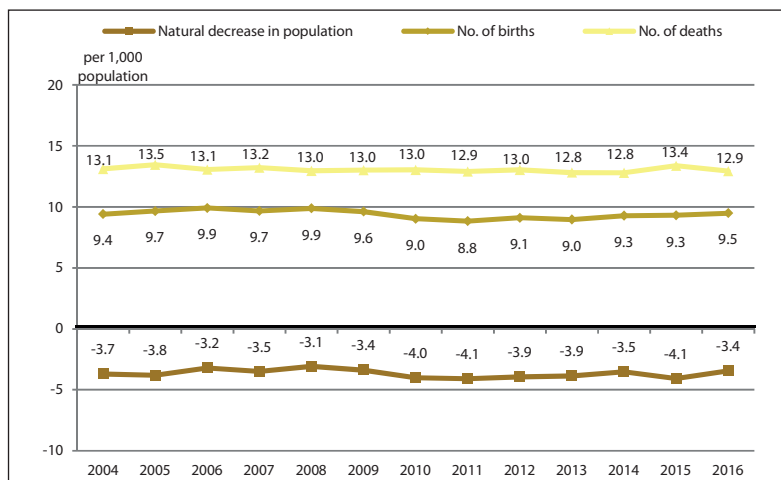
F.3.4. Natural decrease in population

The level of natural decrease is an important assessment factor taking into consideration that long-term development and future competitiveness are to a high degree determined by the extent of available human resources. Natural decrease means that the number of deaths exceeds the number of births. The indicator combines the most important characteristics of the demographic situation. The source of the Hungarian data is the HCSO and international data is provided by Eurostat.

There were two serious nadirs during the period under investigation (2004 to 2016): 2011 (–4,1) and 2015 (–4,1). After 2011, the trend improved up to 2014. In 2014, when, in addition to an increase in the number of births, the number of deaths also decreased, the rate of natural decline moved in a favourable direction by reaching –3.5. Unfortunately, the data from 2015 show a weakening trend, and Hungary fell back to its 2011 level with its value of –4.1. Last year, however, another up-trend could be seen with 12.9 for mortality and 9.5 for births, which is a combined value of –3.4.

By looking at the number of live births projected onto 1,000 people, it is clear that there are significant differences by counties. The national value was 9.5 in 2016. It was the lowest in Baranya and Zala counties (8) and the highest in the counties of Szabolcs-Szatmár-Bereg (11.2) and Borsod-Abaúj-Zemplén (11). With 9.2, Budapest falls slightly behind the aggregate national value.

As for the number of deaths, the national average is 12.9. The two highest values were recorded for Békés County (15.7) and Nógrád County (15), while the two lowest values were for Pest (11.3) and

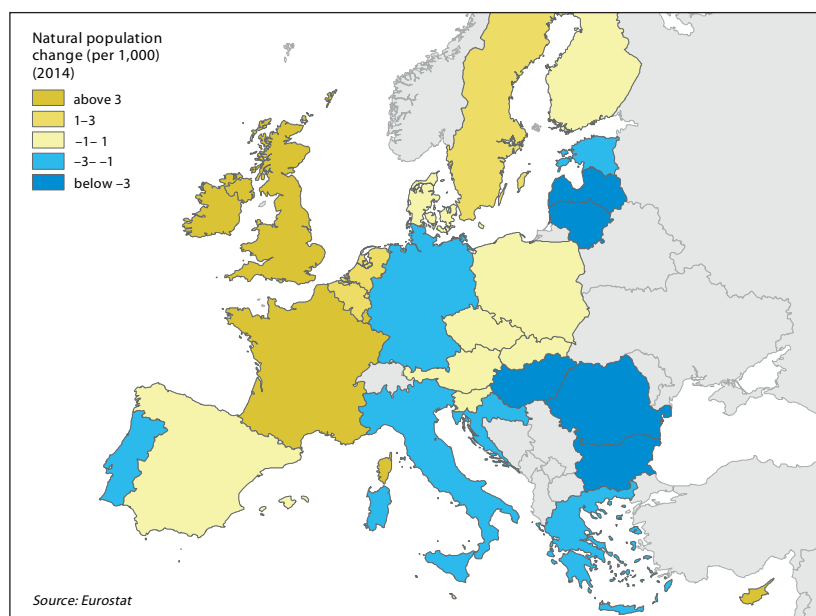


Source: HCSO

Győr-Moson-Sopron (11.4). The death value for Budapest was 12, which is lower than the aggregate national value.

It is interesting to compare the national falling population numbers in Hungary with international figures. Unfortunately, the picture is not positive for Hungary. According to the 2014 figures, Hungary's value of –3.5 is in last place of the V4 countries (Poland with 0.0, the Czech Republic 0.4 and Slovakia 0.7). The data are much worse in Hungary compared to the 0.3 average of the EU28 countries and the countries that are leaders in competitiveness, such as Denmark (1), Sweden (2.7), Finland (0.9) and the Netherlands (2.1). With its value of –3.5, Hungary is at the same level as or close to countries like Romania (–3.5), Latvia (–3.4) and Lithuania (–3.4).

It is an important task for the Good State to preserve its human capital. Therefore, it needs to set goals for the future that help improve health conditions, encourage marriages and increase the desire to have children. In addition to the natural decrease in population, the actual rate of decrease also represents an important and substantive problem, which is exacerbated greatly by the number of emigrants leaving Hungary.

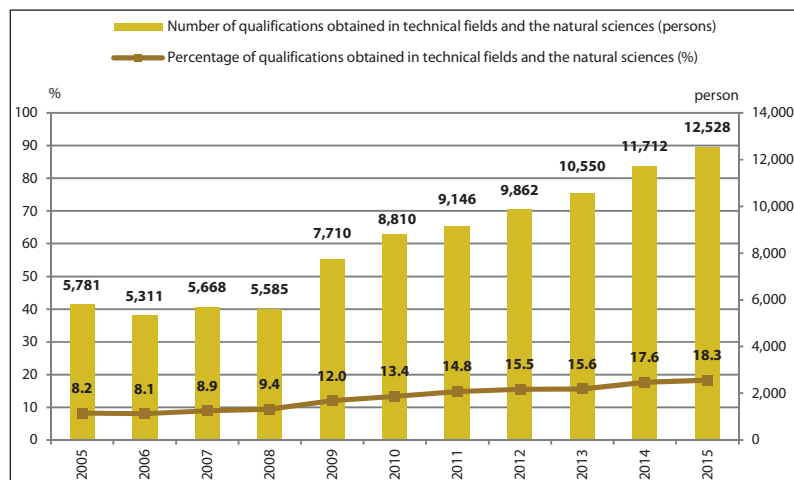


The available human capital is the greatest value of a country and its decrease damages the national economy and competitiveness in the long term. Therefore, the natural decrease in population must be stopped.

F.3.5. The number of qualifications obtained in technical fields and the natural sciences

No country can be competitive in the long term without innovation, so it should be a key task for the government to encourage innovative activities, create the necessary conditions and ensure that the right human resources are available. The number of experts with technical qualifications and education in the natural sciences can therefore make a significant contribution to innovation. This requires the right training. It is important to note, however, that it is not sufficient for competitiveness simply to increase the number of graduates. It is crucial that these people utilise their knowledge at home. This indicator shows the number of certificates and academic degrees obtained in technical fields and in the natural sciences, based on HCSO sources.

The number of higher-level qualifications obtained in these fields started to decline in 2005, reaching a nadir of 5,311 in 2006. After two years of relative stagnation, the number of new diplomas and science degrees in these fields gradually began to rise. This is presumably partly due to the Bologna system introduced in 2005. The first group of students to receive a graduate qualification (BSc) in the new higher education system now divided into three levels completed their studies in 2008, although they generally appear in the 2009 data due to courses lasting at least six or seven semesters. The first declining and then stagnating trend was replaced by a growing trend in 2009, when the number of graduates in this field exceeded the value measured in 2005 by 1,929 students. This was the beginning of a constantly growing trend and as a result, 11,712 people obtained a degree in technical fields or the natural sciences by 2014, and 12,528

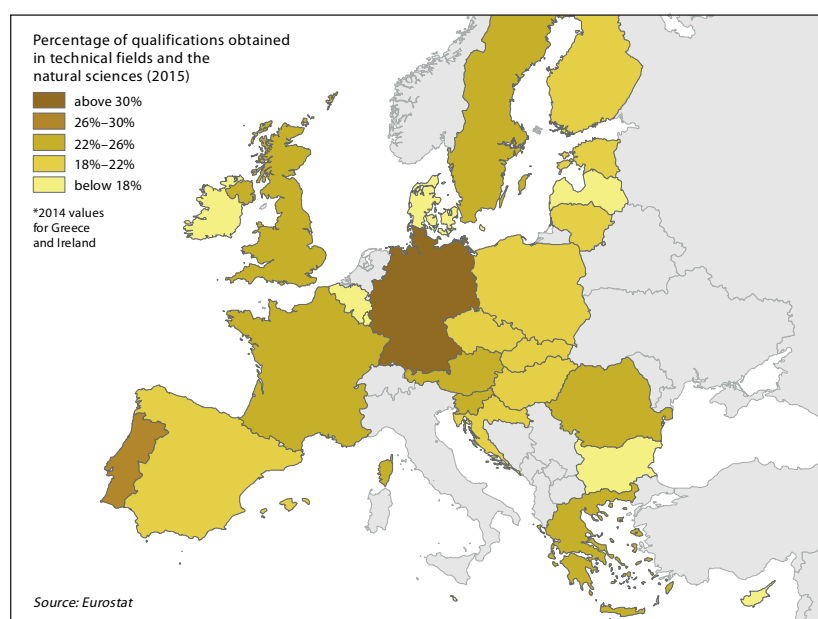


Source: HCSO

people by 2015. This means that the number of graduates increased by 6,747 by 2015 compared to 2005.

The breakthrough in these two fields becomes obvious if we compare the number of students graduating in technical fields and the natural sciences to the total number of graduates in higher education. Taking 2005 as the base year (8.2%), this value grew by 10.1 percentage points by 2015, giving a value of 18.3% against the total number of graduates. This rise is favourable as these are the experts that represent the engine of product innovation.

As we are dealing with an area that is vital to competitiveness, an international comparison is indispensable. When comparing specific countries, it seems expedient to examine the proportion of graduates in these fields against the total number of students obtaining a degree. Unlike the Hungarian sources, the Eurostat database also includes those within the total number of graduates who obtained higher qualifications at a public education institution (ISCED Level 5). This is why the Hungarian value differs in this comparison from the value given above. When comparing the figures of the V4 countries, we can see that Poland (19.22) and the Czech Republic (19.25) have nearly the same values behind Hungary (19.7). For this indicator, Germany (32.19), Portugal (26.75) and Austria (25.25) produced the highest figures in the European Union.



The number of qualifications obtained in technical fields and the natural sciences represents the engine of innovation. In recent years, the number of graduates has gradually increased in these fields, which is definitely a positive trend.

F.4.1. Total (state and corporate) R&D expenditure as a percentage of GDP

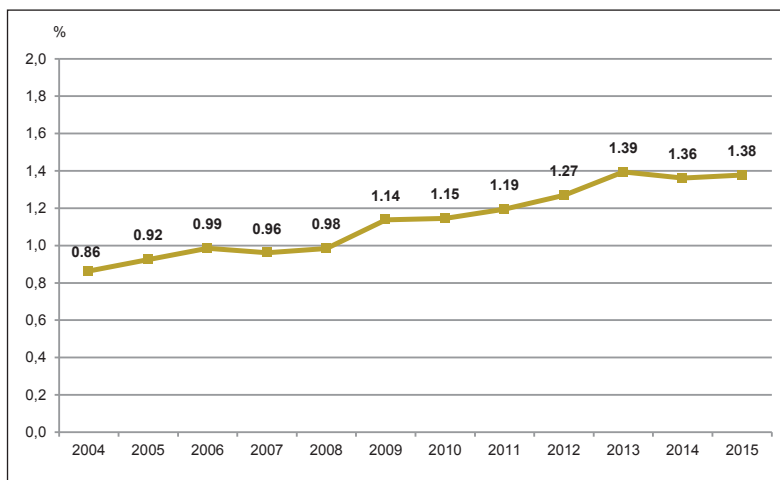
It is also important from the points of view of both the national economy and society that by developing education, respecting knowledge and raising the standard and GDP-proportionate value of R&D, it becomes possible to build a knowledge- and innovation-based economy that contributes over the medium- and long-term to increasing the given country's competitiveness, reducing its dependence on foreign capital, and also improving the position of the society in terms of income and well-being.

Government and corporate expenditures on research and development came to 1.38% of GDP in 2015, which shows a significant increase compared to the value (0.86%) for 2004. Between 2006 and 2008, the value of expenditures relative to GDP did not change. From 2009, however, (despite the economic crisis) it grew again until 2013.

In the *2015 Good State and Governance Report*, we showed a steady increase in state and corporate R&D activities as the percentage of GDP spent on R&D has steadily grown since 2008.

With the data from 2014 and 2015 added to the timeline, we can see that the indicator fell compared to 2013.

By examining the state and corporate sector's combined R&D activities divided by region, it can be determined that the superiority enjoyed by Budapest that was described in the previous year's report continued to exist, although the capital's share of all R&D spending fell from 59.19% in 2014 to 58.96%. This research activity draws attention to the inequality within the country. In comparison to last year's report, the counties and regions falling behind could not significantly improve their positions. Csongrád county, however, recorded outstanding results, where the expenditure on R&D was 85.4% higher, which is the second highest value in absolute terms



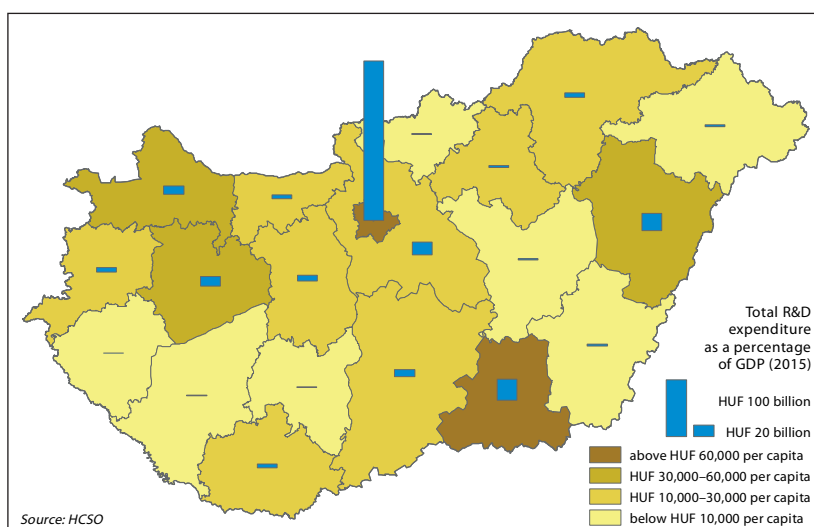
Source: HCSO

after Budapest. Tolna county became the laggard in 2015 in the area of R&D spending. This is due to the fact that the (previously low) R&D expenditure declined by 53% from 2014 to 2015.

Companies play a key role in research and development activity, since it is not sufficient for the state to conduct R&D work it has financed itself. Instead, other actors in the economy must be encouraged to engage in such activity. The R&D expenditures of companies relative to GDP grew significantly compared to the 2004 base year (0.36%), amounting to 1.01% of GDP by 2015. At the same time, the spending of research and development departments and other centres and the R&D institutes of higher education relative to GDP dropped between 2004 and 2015. The decline in the former case was to 0.18% from 0.26% and from 0.21% to 0.17% in the latter case.

Upon examination of the international data, we find significant variances among the V4 countries in terms of R&D. The Czech Republic is unequivocally in the lead (1.95%) compared to the other countries. The Slovak and Polish data are nearly identical (1.18% and 1.00%), and

show equally weak R&D activities compared to the EU average (2.03%). Austria, which was taken as a reference country, reached its EU 2020 target (3%) as early as 2015 (3.07%), and Austria now wishes to raise its percentage of GDP spent on R&D to 3.76% by 2020. Of the Scandinavian countries, Denmark achieved 3.03% and Finland 2.9% in 2015. Estonian R&D spending is more favourable than Hungary's, and recorded a level of 1.5%.



Source: HCSO



Source: Eurostat

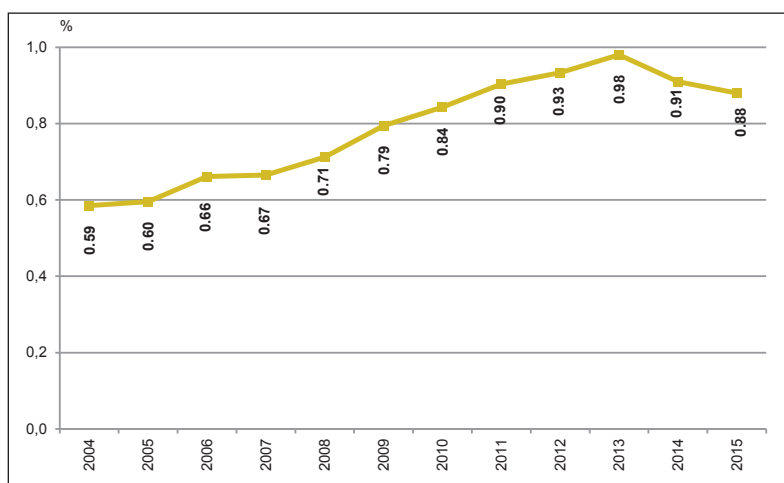
The value of R&D relative to GDP expenditure stagnated in the past few years. It is a key area of competitiveness, so it deserves increased attention, especially in the public sector.

F.4.2. Total R&D personnel as a percentage of total employment

Research and development activity requires human resources of sufficient quality and quantity. Therefore, along with increasing expenditures, the number of researchers and developers also has to be increased. While not in itself sufficient, it is at the same time important for their numbers to increase as a percentage of all employees. This percentage, however, fell from 0.98% to 0.88% between 2013 and 2015. The change was not only in relative value, but also in terms of a fall in the absolute number of employees with R&D jobs from 38,163 to 36,847. What makes the situation even worse is that, despite growth in employment, the absolute number of researchers and developers declined.

Those employed in R&D can be further divided into three staff categories: researchers and developers, auxiliary research staff (e.g. technicians, lab technicians, assistants) and other physical and non-physical staff. If we take into account only the researchers and developers who create new knowledge, products, methods and procedures, the staff category represents 0.6% within the entire number of employees. Budapest is the centre of research and development in Hungary not only in terms of expenditure but also in terms of the number of people employed as 60.8% of the researchers and developers work in the capital. Budapest is followed, with a considerable lag, by Csongrád (6.6%), Pest (6.3%) Hajdú-Bihar (5.1%) and Veszprém (3.5%) counties. In certain counties, the number of people working in R&D is less than 0.5%. This value is 0.36% in Tolna county, 0.35% in Zala county, and 0.31% in Nógrád county.

The number of people employed in R&D in 2014 and 2015 grew in Szabolcs-Szatmár-Bereg (+11.1%), Pest (+8.3%) and Nógrád (+4.6%) counties, but it should be noted that this was an addition of only five



Source: HCSO

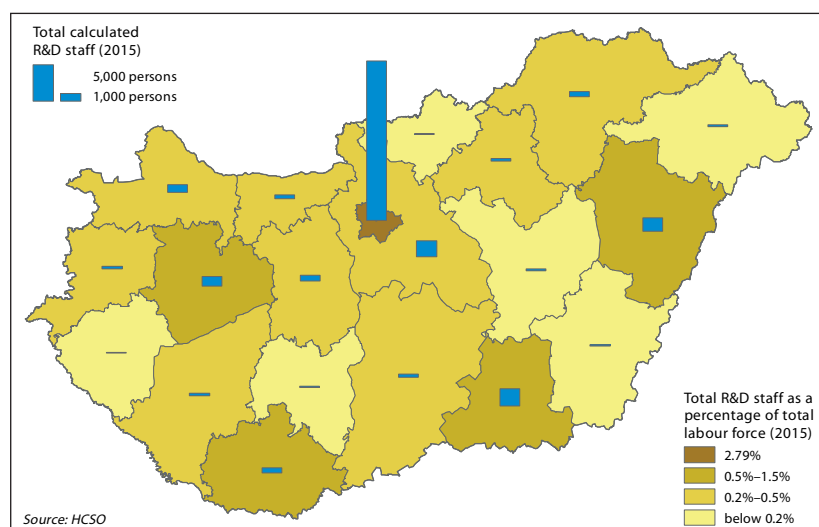
people in the latter county. The largest decline was recorded in Zala county (–41.2%), with Heves and Békés counties recording –30%.

As we already suggested, increasing inequality in R&D activities is shown by the fact that, despite a national decline, the number of researchers and developers increased in Budapest and Pest County from 2014 to 2015.

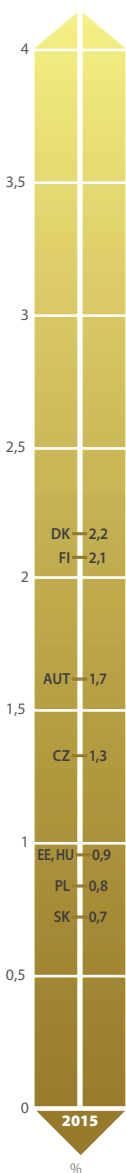
57% of the researchers (21,030) work in the corporate sector, while 21% (7,706 people) are employed in higher education and 22% (8,111) at research and development centres financed from the central budget. The large-company sectors are clearly outstanding among enterprises as 10,618 researchers and developers were employed in 2015. At the same time, they also play an important role at SMEs as 31.2% of the researchers and developers (6,557 people) working at companies can be found in this sector. It should be added that the proportion of people employed in R&D dropped by 16% in the SME sector between 2014 and 2015, while an 8% increase was recorded in the large company sector.

The analysis of international data shows that the proportion of those employed in R&D is 1.35% in the Czech Republic, 0.73% in Slovakia and 0.78% in Poland in 2015, which is in line with the R&D spending of these countries.

For the additional countries provided as a reference, the values are 1.70% for Austria, 2.24% for Denmark, 2.13% for Finland and 2015% for Estonia, all of which were ahead of Hungary with respect to this indicator.



R&D expenditures in themselves are insufficient to develop the knowledge base, as an innovative economy with a modern structure cannot be developed if the percentage of knowledge-based jobs does not increase.



Source: Eurostat

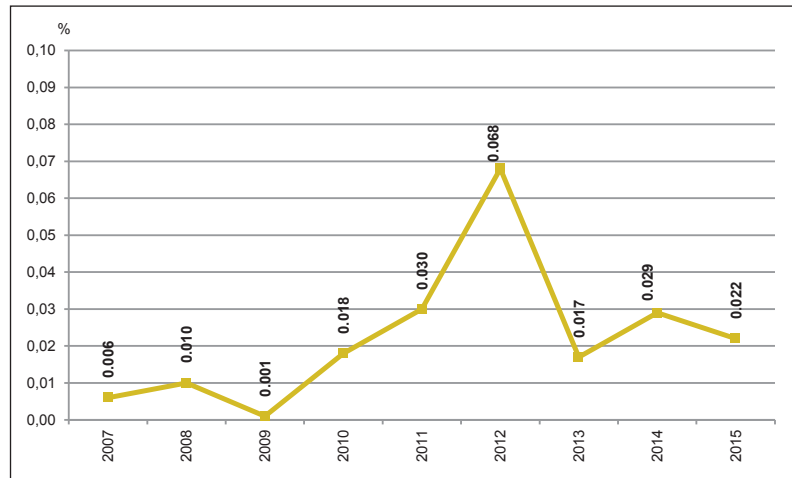
F.4.3. Venture capital investments as a percentage of GDP

Venture capital is a source of financing that enables high-risk companies that are in their initial phase but have great growth potential to develop significantly. As these enterprises are typically innovative, access to venture capital can boost entrepreneurial inclination and the development of innovative ideas. The most important role of venture capital investments can be seen in seed financing. During this period, the enterprise may not even have been founded or may have started to operate only recently.

The capital funds supporting micro, small and medium enterprises using joint European funding under the JEREMIE programme (Joint European Resources for Micro to Medium Enterprises) have been critical in the domestic venture capital market in recent years.

The JEREMIE programme provided start-up companies with sources under the enterprise development programme of the European Union. These funds appeared in the domestic capital market in the form of credit, credit guarantees and venture capital. Although the JEREMIE programme did contribute to the development of domestic start-up companies, according to some analysts, the programme also supported enterprises that did not have high-growth potential or that later proved to be unsuccessful.

It is beyond doubt, though, that significant funding appeared during the time of the JEREMIE programme, and when it was closed, venture capital financing also declined. The financing provided by the JEREMIE funds in this period (HUF 130 billion between 2010 and 2016) can be substituted through the involvement of private

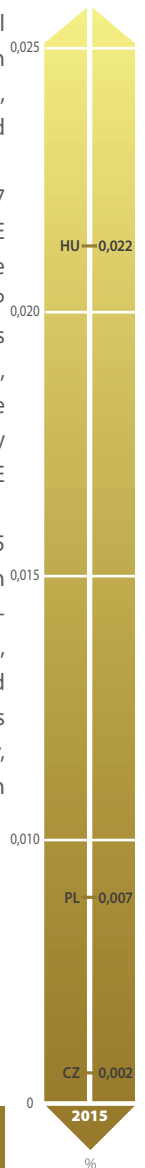
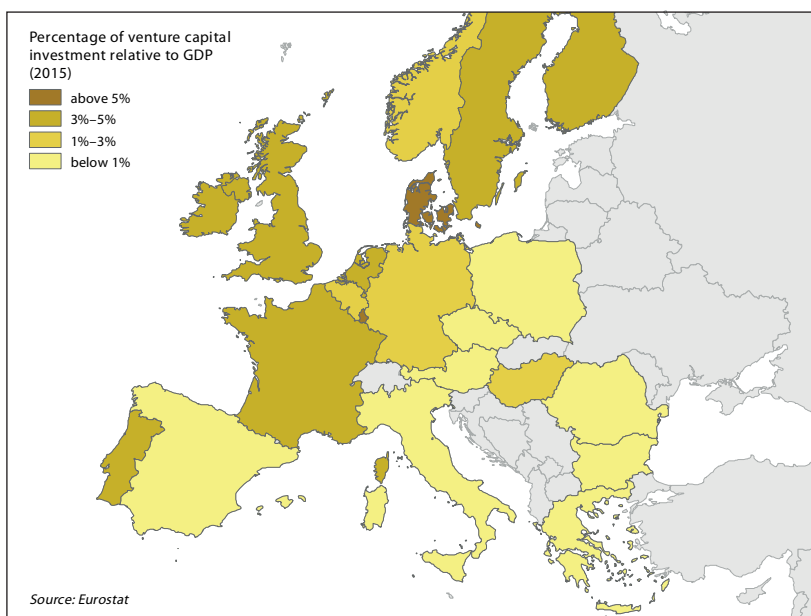


Source: Eurostat

investors. The state-owned Hiventures venture capital company was founded, or better to say established, in order to mitigate the shortage of venture capital, and works in tandem with the National Research, Development and Innovation Office and the Hungarian Development Bank. Hiventures manages HUF 50 billion in capital, of which HUF 30 billion come from the EU (GINOP programme) and 20 billion from own sources (HDB).

By examining the rate of venture capital investment between 2007 and 2015, it is clear that in the actual starting year of the JEREMIE programme (2010), the effects of the programme can already be seen as the proportion of venture capital investments relative to GDP increased significantly. The peak of venture capital financing was clearly 2012, when this value reached 0.068% of GDP. These figures, however, do not yet show the effect of Hiventures, but the influence of the state-owned venture capital company are later comparable to those of the JEREMIE programme.

It becomes obvious by looking at the 2015 figures that the order of countries with the highest value of venture capital investment relative to GDP are Denmark (0.109%), Luxembourg (0.079%), Finland (0.047%) and Ireland (0.041%). By way of comparison, this value in the same year was 0.022% in Hungary, 0.007% in Poland and 0.002% in the Czech Republic.



Source: Eurostat

It is important for the state to ensure that enterprises with high growth potential are provided with appropriate financing in the initial phase. This can contribute to boosting the innovation and competitiveness of Hungarian enterprises.

F.4.4. The share of innovative enterprises

Despite the growth in expenditure on research and development and the proportion of workers in the area of R&D, the ratio of companies involved in innovation has been falling since 2003 (for all companies producing innovative products and/or processes). The reason for this is clearly the drop in innovation performance on the part of small enterprises (the survey did not include micro companies with 0 to 9 employees). Whereas 20.9% of the enterprises in this sector were involved in innovation in 2003, by 2014, this figure was only 15.0%. With respect to mid-sized and large enterprises, we can establish that, compared to the base year of 2003, the ratio of companies engaged in product and/or process innovation increased up until 2010, but the innovation performance of both sectors already deteriorated significantly in 2012 and 2014. Projected across the entire corporate sector, the percentage of innovative companies dropped between 2003 and 2014: from 23.3% to 18.2%.

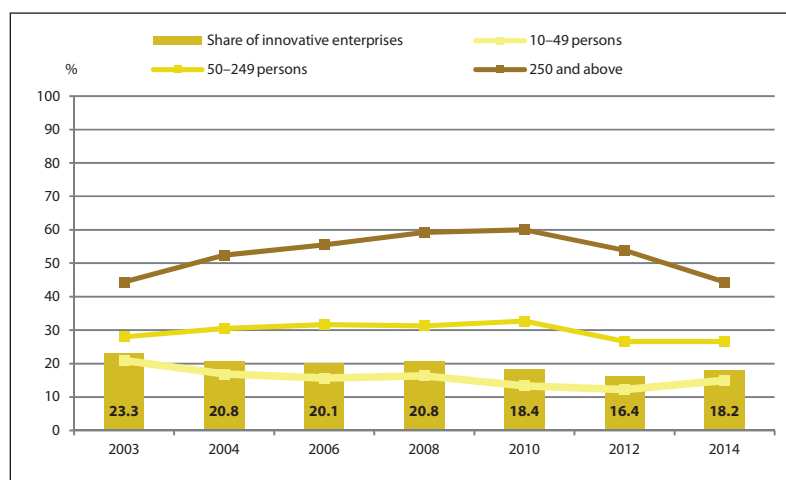
According to HCSO data, a company engaged in product and/or process innovation typically purchased machinery and equipment (72.9% on average). In addition to the acquisition of tangible and intangible assets, in-house R&D activity is also typical, especially for large companies (60.1%). For small companies, the proportion of in-house research and development is lower, 47.8% in this sector. Product innovation characterised 9.7% of the small enterprises and 17.4% of the medium-sized enterprises included in the survey, while 32.1% of the large companies were engaged in such innovative activities. This proves that product innovation is primarily typical of large companies. Within product innovation, the highest value

(9.2%) was recorded for goods innovation, while service innovation characterised only 4.9% of the enterprises.

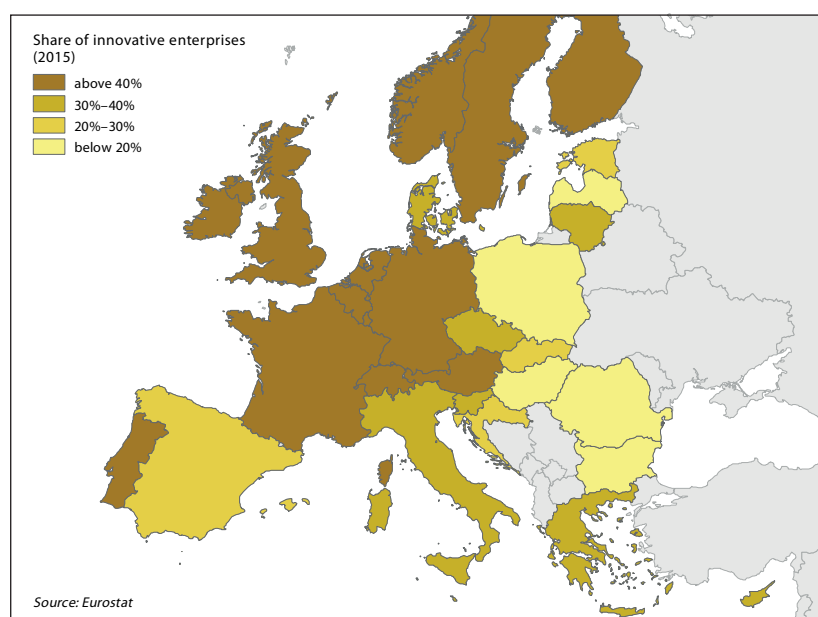
The figures show a similar picture for process innovation, where 7.1% of small enterprises, 15.6% of medium-sized enterprises and 30.2% of large companies were engaged in this type of innovation. The companies focused primarily on introducing new or significantly improved methods for producing goods and services (6.1% on average, 21.6% at large companies).

Of the domestic companies included in the survey, 9.6% implemented process innovation and 11.3% marketing innovation between 2012 and 2014. For organisational innovation, the most frequent method was the introduction of new work processes and decision-making systems. Marketing innovation manifested itself mostly in the use of new media and technology. It is interesting to see that small enterprises are willing to use innovative methods in the pricing of goods or services, while large companies have a preference for significant changes in design and packaging.

By examining the international data, we can see that the proportion of innovative enterprises is highest in Western European and Scandinavian countries. With regards to the V4 countries, the Czech Republic (35.7%) and Slovakia (20.3%) precedes Hungary, while this value is only 15.8% in Poland.

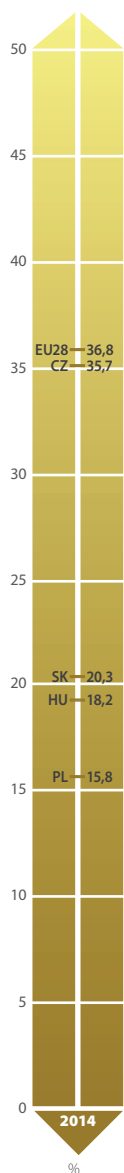


Source: HCSO



Source: Eurostat

Since the activities of innovative companies produce high value added and generate exports, special attention should be dedicated to this area.



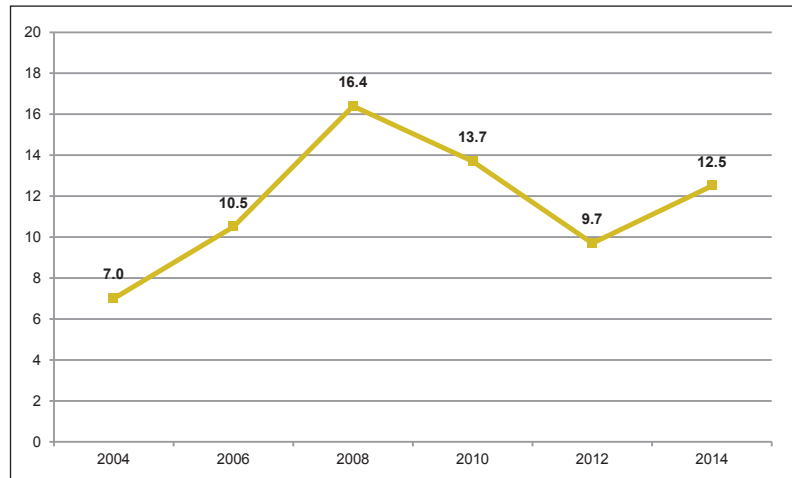
Source: Eurostat

F.4.5. The proportion of turnover derived from innovation as a percentage of total turnover

We generally consider companies to be innovative if they appear on the market with new or significantly improved products and services or introduce a new or significantly improved production process or marketing method. A company can be innovative even if it appears with an improved product in the market but there is no demand for the given product, so, essentially, there is no revenue from innovation. By investing capital into innovation, enterprises expect to improve their profitability. This can be achieved essentially in two ways: by increasing revenues and/or by reducing costs. In this indicator, we examine the former factor.

This indicator measures the proportion of turnover derived from innovation as a percentage of total turnover of companies is based on the Eurostat Community Innovation Survey. This sample includes enterprises employing at least ten people that implement innovation according to the conditions mentioned above. In Hungary, the proportion of revenues derived from innovation was 7.0% of the total revenues in 2004. This value improved significantly (to 16.4%) by 2008. From this year, however, there was a decline as the value of this indicator was only 9.7% in 2012. The domestic figures of all innovative companies improved by 2014, reaching 12.5% in this year. It is also important to note that the proportion of revenues coming from innovation in the services market is lower (4.4%) in Hungary than in the industrial sector (12.9%).

Looking at international data from 2012, we see that the highest value for this indicator was recorded in Slovakia (19.6%), Spain (14.3%),

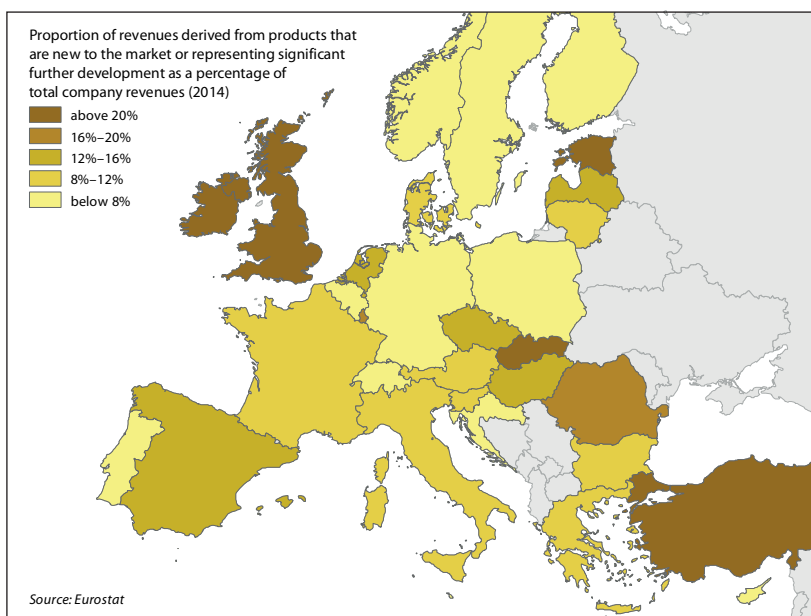


Source: Eurostat

Great Britain (14.1%) and Denmark (13.9%) among the member states of the European Union. As for the member states of the V4 countries, the Czech Republic recorded very positive results (13.4%), while Poland produced 6.3%, lagging even behind Hungary. The EU28 average was 11.9%.

Innovation efficiency is also dominated by the industry in the EU since revenues derived from innovative activities amounted to 16.9% of the total revenues, while this value was only 8.7% in the service sector. There were only two countries in the European Union where this value was higher in the services sector than in industry: In Belgium, it was 12.0% and 9.9%, while it was 12.1% and 9.4% respectively in Cyprus.

The proportion of turnover derived from new products or significantly improved products in Hungary (12.9%), exceeds the average of the EU28 member states (10.4%), as shown on the map. However, further investigation needs to be carried out to explain why the value of this indicator is lower for countries at the forefront of competitiveness and innovation than it is in eastern and southern states.



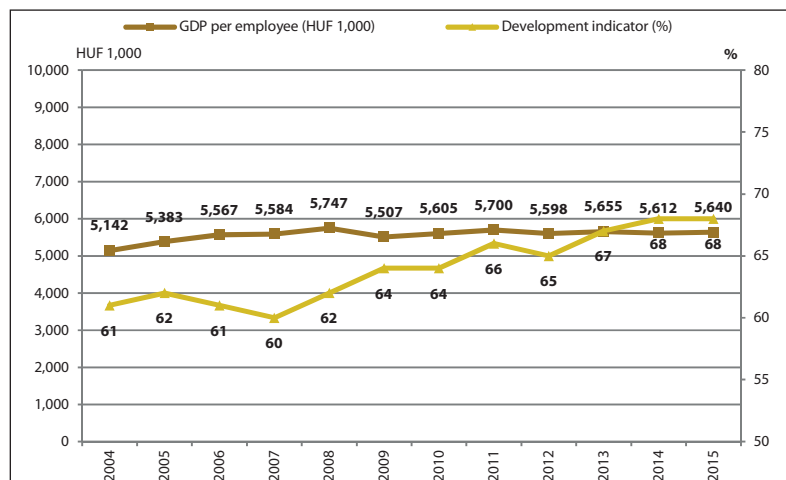
The effectiveness of the innovative activities of domestic companies must be increased as the proportion of turnover generated by innovation has failed to increase significantly.

F.5.1. GDP per employee and development indicator

The chart on this page shows two indicators: one of them is GDP per employee (in HUF 1,000), while the other is the level of development indicator showing GDP per capita compared to the EU28 average (expressed as a percentage). There is an important relationship between the two indicators. GDP per employee is a productivity indicator in general use that measures how much of the gross domestic product is generated by an employee on average. The level of development indicator sheds light on the available gross domestic product produced relative to the total population of our country compared to the EU average, i.e. how rapidly we are developing and catching up to the EU level of development within the period under investigation. An increase in productivity accelerates the closing of the gap.

By examining productivity data, we can see that there is a varying increase in productivity from 2004 to 2015 (the latter is the last year for which HCSO data are available). From 2012, a slowdown can be observed. This may be due to the deteriorating effect of the lower productivity of the work performed by the people employed in public work. Productivity could also be measured by GDP per hour worked. According to this indicator and taking the 2010 value as 100, the productivity of the V4 countries based on Eurostat figures in 2015 is shown on the temperature gauge. We can see that Hungary's performance is the worst for this indicator of all the V4 countries.

The weakness of both indicators is that they may lead to incorrect conclusions in an international comparison. Both productivity indicators can show those values because employees do not work with efficient technology or their work is not organised properly. This is because productivity cannot only be increased by raising the intensity of work, i.e. performing more work within a given

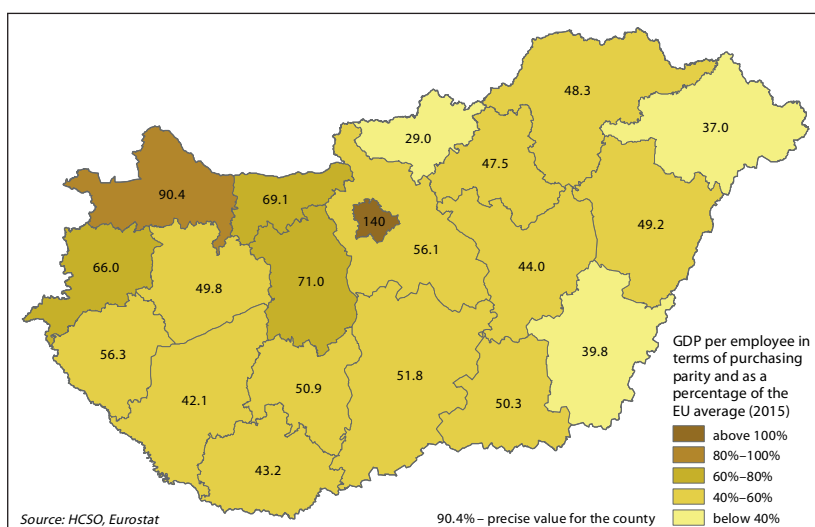


Source: HCSO, Eurostat

time or performing more work by the given number of staff (e.g. by overtime), but also by improving work organisation and using more advanced technologies. The indicator that takes into account these factors is the multifactor indicator for productivity. However, there are no comparable Hungarian statistical data available for this analysis.

Changes in productivity also have an influence on the level of development. We can see that the value of our level of development deteriorated in 2006 and 2007, while it stagnated in 2009 to 2010 and 2014 to 2015, i.e. we were not catching up to the average EU level in these years. Hungary's level of development improved by 11.4% compared to 2004. In the Czech Republic, this improvement was 11.5%, while this figure was 37.5% in Poland and 35.7% in Slovakia. This puts Hungary in last place of the V4 countries.

It should also be noted that there are considerable disparities between the regions of Hungary in terms of the level of development, and this is shown on the map. In four of the country's seven regions, the level of development is below 50% of the EU average. 11 of the 19



counties do not reach half of the average EU level of development, with Nógrád county recording only 29% and Szabolcs-Szatmár-Bereg county clocking 37%. It would be important to improve productivity in order to raise the level of development both in terms of the national average and regional and county data.

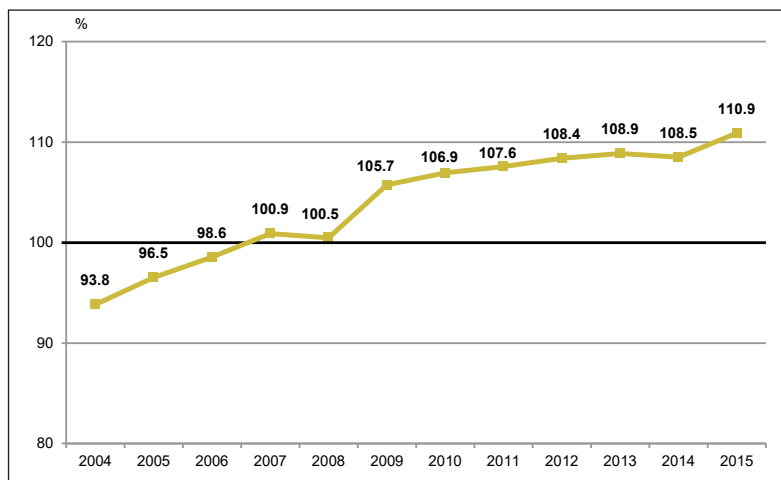
Productivity could be improved primarily by investing in knowledge, strengthening adult education and through innovation.

F.5.2. Export to import ratio

This indicator shows the national economy's exports as the percentage of imports, so it is an important indicator of trade balance. The figure shows that the value of the indicator has been rising steadily since 2009, with a slight deterioration only from 2013 to 2014. The latest Hungarian figure available, which is for 2015, is better than the EU average, as well as the average of the other V4 countries. However, the Polish figure improved most in 2015 compared to 2014, by 4%, while the Hungarian value improved by 1.8%. The Czech data were slightly worse and the Slovak figure fell further.

According to Eurostat figures, the better Polish data are due to the fact that Polish exports grew more, while imports increased less than for Hungary.

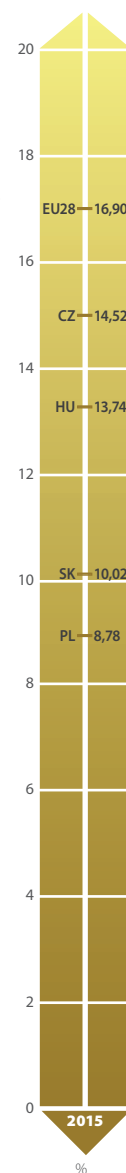
Total exports are related to the global demand for the products of a given country. This demand, however, can be generated through high-quality marketing. Active marketing includes the strategy to open the markets to the east and south. On the other hand, it is also important to consider what a given country wants to sell. First of all, the right quality and quantity of goods are needed. In addition, the higher the knowledge and innovation content in the goods and services to be exported, the higher the price that can be charged on the global markets. However, if we export goods and services with low knowledge and innovation content, (as we do not have better goods and services for sale), then we need to enter a price competition, i.e. we should offer low prices, which damages the terms of trade. On the basis of Eurostat and World Bank data, the share of exports representing cutting-edge technology (such as computer components, drugs, research equipment, electronic devices and units, space research products, etc.) fell from 26.5% in 2000 to 13.74% in 2015 within the total exports in the process industry. At the same time, this figure grew from 8.5% to 14.52% in the Czech Republic, from 3.6% to 10.02% in Slovakia, and from 3.4% to 8.78% in Poland. This marked decline started in 2005 in Hungary and showed an accelerating trend from 2012. This may be due to the fact that the companies settling in Hungary after the accession to the EU do not produce high-tech products and contribute to exports more significantly.



Source: HCSO

According to the 2015 data for the 30 countries examined, the share of high-tech exports based on a high level of knowledge is the highest in France (25.4%) and Ireland (25.8%). The Hungarian value is 13.74%, the Czech figure 14.52%, the Polish percentage 8.78%, and the Slovak figure 10.02%.

Accordingly, we still have a strong position among the V4 countries, holding the second place after the Czech Republic, but we are still lagging behind in the growth trend. In order to improve our position, we need more knowledge-based products and services, i.e. diversification of the economy should be improved and the value chains of the companies operating here should be lengthened, which will enable Hungary to attract more R&D activities in addition to assembly work. Additionally, it would be important to increase the knowledge-based exports of the SME sector. The ratio of export and import value is obviously affected by factors that we cannot control, such as energy prices. On the other hand, total imports also depend on the performance of the companies operating in Hungary that largely perform assembly work as the basic units and components necessary for this work generally come from abroad. This also shows that a concerted economic policy should be applied to increase the complexity of the activities performed by these companies in Hungary and extend their value chains, i.e. increase the value added created in proportion to all business. One of the methods to achieve this goal would be to increase the share and value of primarily knowledge-based goods and services.



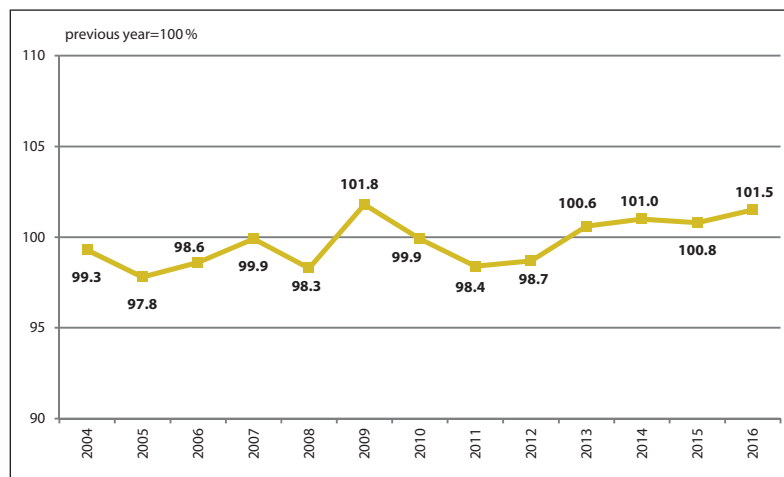
Source: World Bank

The increase in the share of exports with high value added and innovation content requires further modernisation of the structure of the economy, longer value chains and more innovation in the SME sector.

F.5.3. Changes in terms of trade

Changes in terms of trade measure whether or not a country has a comparative advantage in exports, and if it does, whether or not it is capable of exploiting it properly. We could also look at the quantity of knowledge and innovation a given country can sell in the export market and how much it needs to import in order to meet the needs of its companies, because the given product or service is not available internally.

The chart shows that the terms of trade strongly fluctuated between 2004 and 2016, deteriorating five times and improving seven times year on year. The changes in terms of trade are not primarily influenced by the quantity and proportion of exports and imports, but by the quality of export products and services, their innovative and knowledge-based content, as well as high-quality marketing work and the prices resulting from it. If we export products and services with low innovation and knowledge content, we are forced to enter a margin cost competition and can generally reach markets only by offering cheap prices. Since 2009, the (high-tech) export of products and services with high knowledge content has declined both in terms of percentage and value. One of the reasons for this is that the proportion of products with high knowledge and innovation content has declined within production. According to World Bank figures, the high-tech share of total production was USD 20.65 billion in 2011, while it was USD 11.8 billion in 2015. This is a 43% decline. Incidentally, the trend of growth was first broken in 2005, then in 2009 and most recently in 2012, and it has been declining ever since. This suggests that, although the value of production has dynamically increased, the share of non-technology- and knowledge-intensive activities has risen. For example, there has been a strong rise in rubber processing, which is not a technology- and knowledge-intensive activity according to international standards. On the other hand, our export of services, which are characterised by higher knowledge content, is constantly growing, though occasionally with small downturns. According to World Bank data, its value was USD 22 billion in 2015, which is a good figure, though a bit weaker than the 2014 USD 24.6 billion. In this respect, we are in third place along with the Czech (with USD 22.7 billion) in 2015 among the V4 countries. On the other hand, the low oil prices since 2012 have positively contributed to the changes in terms of trade, which is important because the Hungarian economy is



Source: HCSO

strongly dependent on energy in comparison to the developed EU countries.

The highly developed countries are generally characterised by a high proportion of knowledge-intensive exports and a low proportion of knowledge-intensive imports. These two values were 16.0% and 7.7% in Denmark, while they were 13.7% and 12.6% in 2015 in Hungary (World Bank data).

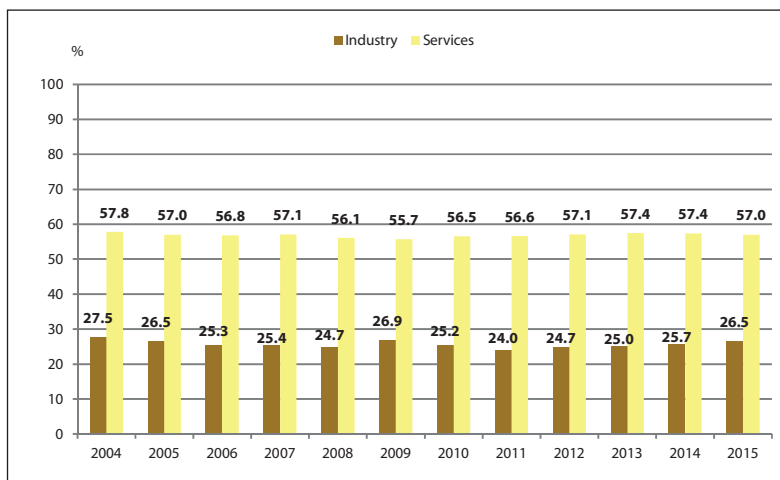
Finally, the export value index, calculated by mapping the value of exports in current prices expressed in USD onto the average value in 2000 (2000 = 100), is also an interesting figure. This index shows the dynamics of export growth. Rapid growth can be seen primarily in Poland and Slovakia within the V4 countries. The Hungarian value in 2015 is 349.6, the Czech Republic scores 543.6, the Polish figure is 624.4 and Slovakia comes in at 638.8. As we can see, improvement in terms of trade depends on several factors, including those that can be changed both in the short and the long term. The modernisation of economic structure, the increase in diversification, the strengthening of the knowledge and innovation content take a long time. It takes less time to improve marketing work, rationalise imports and lengthen value chains. Innovation in the SME sector, however, is also required for the improvement of the terms of trade. By the right incentives and state support good results could be achieved in this area even in the short term. The tendering system designed to help modernise the economy, the efficient and effective innovation system and the investment and training system financed by the central budget can move all the factors in a favourable direction. Thus, the Good State has a number of opportunities and a role in the improvement of the terms of trade.

The terms of trade could be improved by increasing the knowledge, innovation and value added content of exports as rapidly as possible.

F.5.4. The length of value chains

The length of value chains is an important feature of an economy. It shows the share of the entire value chain in the economy from research and development, materials and parts for manufacturing through assembly and sales right through to after-sales services. Obviously, this does not mean that all these activities should be performed within a single company. The length of the value chain could be lengthened with the help of the domestic supply system. However, it is not easy to measure the length of value chains. As an approximate indicator, we can use the ratio of new value created in a given country and within that, the ratio of new value created in individual sectors to overall output, which includes the total value of products and components not produced locally but imported from abroad. The indicator shows this ratio for two important sectors, industries and services.

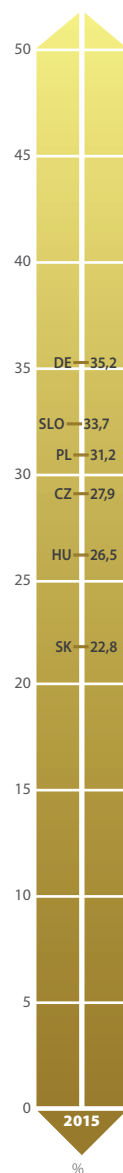
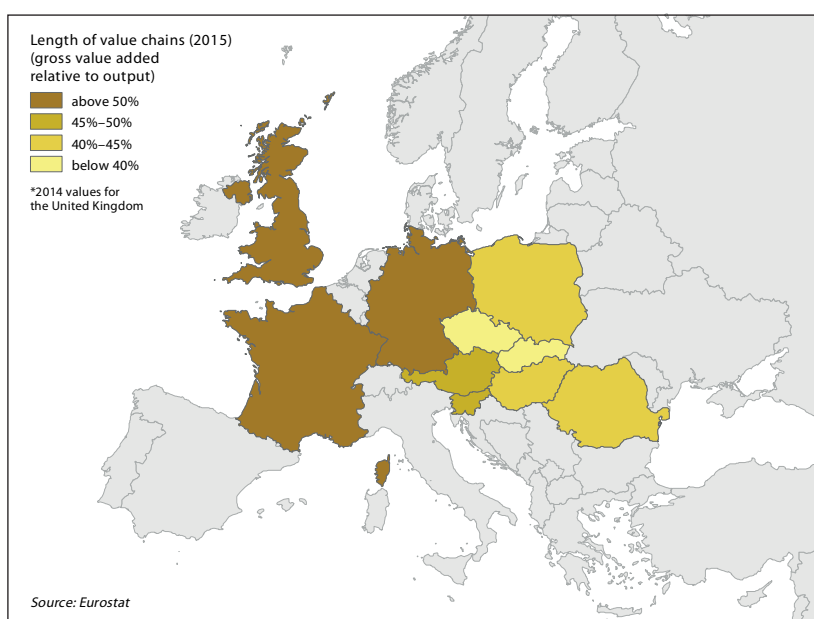
In Hungary, this ratio is extremely low in industry. It even declined from 27.5% in 2004 to 26.5% in 2015. This is a 3.6% decline. This may be due to the fact that since then only companies performing assembly work have moved here. Assembly is a phase in which the least amount of value added is created along the entire value chain. For services, the ratio is more favourable, although its value slightly declined from 57.8% in 2004 to 57.0% in 2015. This much higher value is due to the fact that there are primarily Hungarian-owned companies working in the services sector that are not integrated into the international value chain and which (along with other domestic companies) cover the entire value chain from development to sales. The value chain in the industry is the longest in Poland and the shortest in



Source: Eurostat

Slovakia of the V4 countries. Hungary is in third place after Poland and the Czech Republic. In services, we top the list with Poland. It is noteworthy that the value chain of the developed countries is longer in their own countries, especially in the industrial sector. For example, the figure is 35.2% in Germany. One of the reasons for this is that the section of the value chain representing the highest value added, research and development, is typically performed in the developed countries at home and only assembly work that produces less value added is outsourced to less developed countries. From this, it follows that much higher wages are paid in sectors that create new value. A longer value chain is favourable as it reduces the economic dependence of the given country and unexpected external events have a milder influence on the companies' business. It is also beneficial in that it increases the number of jobs available and within that, the number of well-paying jobs. The map clearly shows that the developed countries are generally characterised by long value chains and the less-developed nations by short value chains. This also shows up in wage differences.

Hungary is not in a bad position among the V4 countries as far as the length of the value chain is concerned; in fact, its position is reasonably strong in the services sector. Compared to the highly developed countries, however, it has a considerable lag to make up.



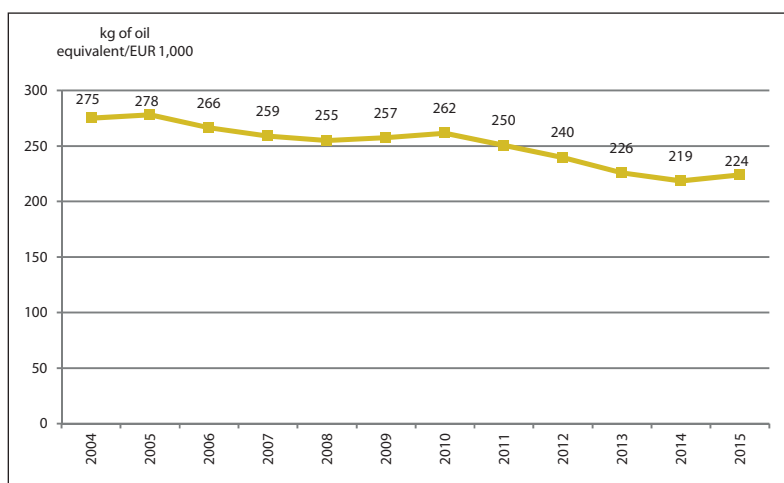
The value chain could be lengthened by increasing the share of activities performed at home that create high value added.

Source: Eurostat

F.5.5. The energy intensity of the economy

The figure shows that the energy intensity of the Hungarian economy is steadily declining. The very high 2004 value dropped from 275.1 to 224 by 2015, which is an 18.6% improvement. At the same time, this value is still high in comparison with the EU. Furthermore, the EU28 average value is 120.4, so the Hungarian value is 86% higher than that of the EU. The map shows, for example, that the Austrian value is 107.1, which is less than half of the Hungarian value (47.8%), while the German value is 112.6, which is just half (50.2%) of the Hungarian value. The Hungarian value is the second lowest after Slovakia of the V4 countries. Incidentally, it is obvious that the energy intensity is much higher in the Eastern European countries that joined the EU than in the developed countries. This is due, on the one hand, to the high proportion of highly energy-intensive but less knowledge-intensive industries and, on the other hand, to the lower proportion of highly knowledge-intensive but less energy-intensive services. We could also say that the countries with developed economies primarily moved their energy-intensive activities to the Central European countries. Moreover, the higher proportion of inefficient buildings and household appliances also increase the energy intensity in these countries. High energy-intensity, especially for countries short of energy, entails high exposure and dependence.

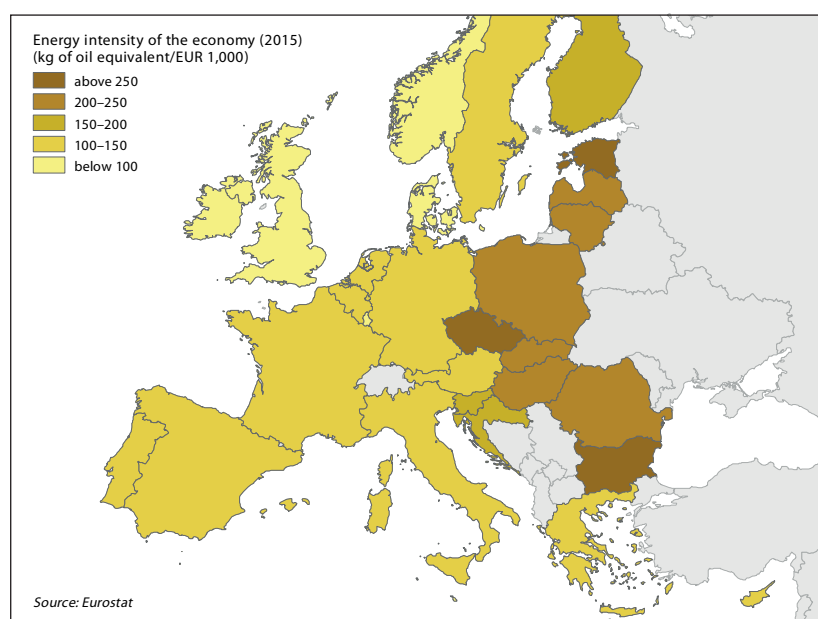
The Hungarian economy continues to be characterised by high energy intensity, which could be mitigated primarily by the modernisation of economic structure and the reduction of the energy needs of households.



Source: HCSO

This requires deliberate intervention by the state, a decision made by the Good State to reduce energy intensity. Furthermore, as in the V4 countries in general, the use of alternative energy sources is quite low within the overall energy consumption. According to the 2014 Eurostat figures, this value is 8.4% in Hungary, 8.8% in the Czech Republic, 9.1% in Poland and 8.8% in Slovakia. By contrast, it is 30.0% in Austria, 35.8% in Sweden and 29.4% in Finland. The EU average is 12.5%. It should be noted that Hungary pledged to reach 14.65% alternative energy within the total energy use under the EU 2020 initiative.

The current value is 6.25% lower. The reduction in the energy intensity of the economic structure and the increase in its knowledge intensity would not only improve competitiveness, but also the quality of life as it offers innovative, well-paying and knowledge-based jobs. The use of alternative energies provides the economy with new knowledge and modern technologies, thereby it helps increase the share of knowledge-based activities within the economy; eventually, it will contribute to sustainable economic growth, as well as to a sustainable environment in view of the right of the coming generations to a proper quality of life.



By modernising the economic structure, energy intensity should continue to be reduced and the share of renewable energy sources should be further increased.

SUSTAINABILITY

SUMMARY¹

Today, no organisation can be successful in the long-term without taking into account sustainable development and human well-being, and the (welfare) state is no exception. The duties and the role of the state and government can be approached in many ways, but in this chapter we would like to highlight and examine them using an approach which also constitutes the state's most important task and objective: ensuring its citizens have the opportunity to live well and live happily.

In pursuit of this aim, naturally, there are a range of activities to be carried out which classically fall under the remit of the state, including establishing balance in the economy, safeguarding of public assets and addressing inequalities of wealth and opportunities.

- **The creation of institutional and legal conditions**, such as competition authority and bank supervision.
- **Allocation**: making state funds available for distribution.
- **Redistribution**: primarily the redistribution of income through taxation and transfers of payments.
- **Stabilisation**: stabilisation measures are usually concerned with the following four objectives: full employment, price stability, balanced budget and trade balance.

According to both our definition and the systematic approach, these activities are merely tools. The ultimate goal is to provide the opportunity for a harmonious life for every individual to be able to survive and thrive. While the *pursuit of happiness* has been identified as an unalienable human right, happiness is ultimately subjective and difficult to quantify. The absence of happiness, however, can be measured, as there are certain basic conditions without which happiness is either more difficult or impossible to attain. It must also be noted that some of the conditions necessary for achieving well-being and happiness are only indirectly connected to the duties and capabilities of the state. And so we arrive at one of the biggest challenges of the sustainability dimension. Sustainability means living well within the boundaries set by the natural world. In the preamble to the resolution accepted by the United Nations Assembly on 25 September 2015, *Transforming our world, the 2030 Agenda for Sustainable Development*, sustainable development was characterised as when "...all human beings can enjoy prosperous and fulfilling lives and that economic, social and technological progress occurs in harmony with nature."

In other words, well-being and sustainability mean that environmental, social and economic success are in harmony, so that systems operate through the optimisation of all three factors. If we were to rank these three aspects, then it makes sense to have some kind of relative standing where society is nested as a subsystem of the environment, and the economy then forms part of the society.

Sustainable development is a peaceful alternative to environmental destruction, social conflict and inequality, which in the long term can provide well-being for everyone on Earth. This would mean a world where everyone can benefit from the equitable distribution of goods created without exploiting nature. For the continuance of the human race, it

is essential to understand that sustainable development is a matter of survival. Therefore sustainability is not an unobtainable utopian vision but rather a practical, pragmatic conscious choice between the possible future scenarios, one which takes into account not only economic interests but other (often unquantifiable) values, too.

We believe that it is important to remember and draw attention to the fact that the Millennium Development Goals have been replaced by the Sustainable Development Goals (SDGs). Under the guidance of the UN, the sustainability roadmap, developed by Hungarian specialist coordinators H. E. Csaba Körösi and János Zlinszky PhD, is becoming a strategic decision tool for nations that recognize the imperative of sustainable development.

The analysis of these goals and their implications for Hungary is currently taking place across several different research agendas. From the point of view of the *Good State Research*, it is also extremely important how sustainability indicators also relate to these related goals, and to determine which of them are not represented or assigned sufficient weight. While the SDG goals of the UN define tasks on a global level, a number of these require some explanation in terms of Hungary. We cannot say that there is a single one of these goals that have been fully addressed in Hungary, although there are some which are of lower priority due to the relative seriousness or weight of the relevant tasks. This means that the question is not which goals we should focus on, but rather how to address them all in an effective and synergistic manner.

By definition, the 17 SDGs all address one of more of the triad of environment, society and economy, and all are ambitious (to be achieved in theory by 2030), aspirational and measurable, each having their own targets and indicators:

1. No poverty
2. No hunger
3. Good health and well-being
4. Quality education
5. Gender equality
6. Clean water and sanitation
7. Affordable and clean energy
8. Decent work and economic growth
9. Industry, innovation and infrastructure
10. Reduced inequalities
11. Sustainable cities and communities
12. Responsible consumption and production
13. Climate change
14. Life below water
15. Life on land
16. Peace, justice and strong institutions
17. Partnership for the goals

Overall, it can be said in relation to the results of the *Good State and Governance Report* that regardless of how good and relevant the indicators produced may be, their value is dependent on how widely and effectively they are used now and in the future.

Sustainable development is a complex system that must permeate our lives, penetrate the operations, organizations large and small, and be

¹ The authors of this chapter are Mónika Besenyei (workgroup leader), László Földi, PhD, Zsolt Hetesi PhD, and Ágnes Zsóka, PhD.

deployed throughout the activities of the state. The secret to the long-term and successful sustainable development of a country, region or society lies in whether the principles are able to be translated into practices that ensure harmonious existence in a given place and time. This means that there are no absolute and eternally valid truths.

One of the challenges with the term sustainability is that it is hard to define across all three domains. The second difficulty lies in the fact that the method of realising sustainability is not constant in either time or space. As with every living system, a sustainable system is one that is in a state of constant flux or dynamic equilibrium, so it needs the right conditions to survive and thrive. Negative effects not only make sustainability more difficult now, but also make it more difficult for sustainability to flexibly adapt to any changes.

The results of the latest research² show us that the most critical environmental factors (those that threaten human life) are the loss of biodiversity and the changes in biochemical processes, which have already passed the limits of flexible adaptation. In other words, they have led to irreversible changes. Climate change and the transformation of the Earth due to human activities are approaching the boundaries of flexibility, but if these processes do not change direction they will also become irreversible.

During our research, we strove to identify and group the indicators that:

- highlight current challenges
- are suitable for use in supporting policy-making
- are understandable and easy to communicate
- are comparable

It is now clear that in terms of environmental and social sustainability, economic considerations constitute the biggest challenge. Information, communication and the shaping of perspectives are also taking on increasing significance since they help motivate and inform action to reverse destructive trends.

At the same time, the economic system still substantially shapes our thinking and the operation of the country. Both individual organisations and the national economy are the result of systems based on material energy flows coupled with financial systems that may not necessarily articulate in environmental and social factors and impacts.

The state has a responsibility to be a careful guardian of the values of the environment and society. While mistaken economic decisions are visible and easily felt in the short term, waste and harmful decisions regarding environmental and human resources are generally catastrophic in the long term.

The Fundamental Law defines this as follows: "Natural resources [...] shall form the common heritage of the nation, it shall be the obligation of the State and everyone to protect and maintain them, and to preserve them for future generations." (Article P)

When reviewing and selecting these indicators, we considered that all dimensions (environmental, social and economic) should be included in the final complete set of indicators.

The following dimensions have been added to the sustainability impact area of the 2017 report:

1. Climate change

Though Hungary ratified the Paris Climate Agreement and is in a good position in terms of fulfilling the goals of

the agreement, according to The Global Risks Report³ this issue unfortunately remains at the top of the list of priorities. It is difficult to reverse climate change, and the most important goals are related to adaptation. In Hungary, increased priority must be made to slowing down and reversing greenhouse gas emissions and related activities, which requires individual, local, national, regional and international action and cooperation.

2. Natural resources

It is stated in the Fundamental Law and is also well-known as a general principle that economic production is based on those resources which can be made available and processed by a given technology in a given place. We have to create systems which only place a burden on nature in terms of its renewable capabilities. Without natural capital, the economy and society will ultimately collapse.

3. Energy and water management

For a society to function, the management of two resources, water and energy, are of exceptional significance. The goal is to develop an energy system that, in addition to ensuring supply security and competitiveness, also embraces sustainability. The conservation of water and the protection of existing water supplies are of strategic significance.

4. Environmental burdens

Today, the impact of human beings on nature has become synonymous with the concept of an ecological footprint. Tracking the emissions stemming from human activities serves as a measure to the size of the burden being placed on the environment, but other impacts on the environment, other metrics are also relevant. Today, the model of the circular economy, the *cradle to cradle* approach embodies the ideal of a waste-free economy, where all environmental burdens are tracked and minimized to reduce impacts and maximize resilience.

5. Social sustainability

Due to the diversity of the individuals who comprise society and their diverging desires and interests, social sustainability is difficult to track. When forming the indicators for this dimension, we have tried to use indicators which are most appropriate for measuring well-being. The aspirational ideal of well-educated people living dignified, long and healthy lives was at the forefront of the minds of researchers.

Our task was to analyse the current situation and challenges for Hungary, with both global and local aspects included. We have shown where Hungary stands internationally and how we are affected by global and regional processes. When a country, in recognising its long-term interests, treats sustainability as a priority, it also creates a competitive advantage for the circular economy and socially responsible enterprises.

The market and individuals do not necessarily make decisions by taking into account long-term perspectives, which is why the creation of conditions for sustainable development are primarily the responsibility and duty of the state.

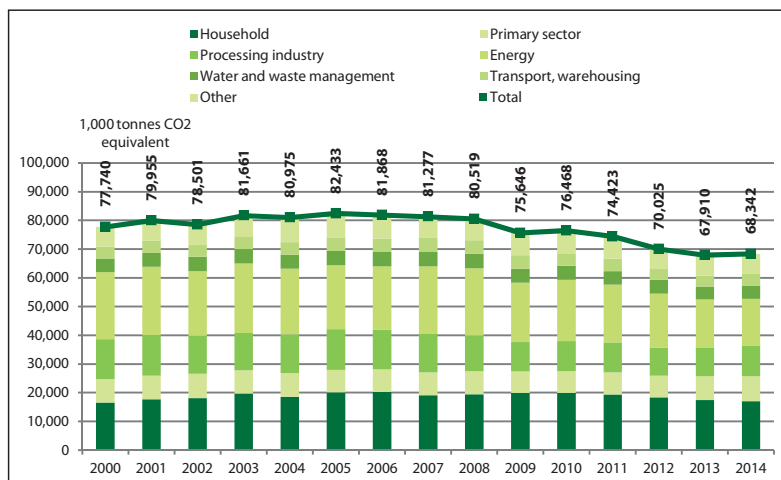
² www.stockholmresilience.org/research/planetary-boundaries/planetary-boundaries/about-the-research/the-nine-planetary-boundaries.html

³ The Global Risks Report 2017 (www.weforum.org/reports/the-global-risks-report-2017)

S.1.1. Greenhouse gas emissions

Global climate change is one of the greatest environmental challenges of our time. By now, scientists, and the majority of the general public accept that human activity is responsible for causing the over-abundance of greenhouse gases (GHG), such as carbon dioxide, methane, nitrous oxide, various halocarbons and sulphur hexafluoride. The greenhouse effect is a natural process essential to the balance of life on the planet. It becomes a problem when greenhouse gases are produced in excess, which has been the case since the Industrial Revolution – first and foremost due to the increase in fossil fuel use – after which it has grown at a rapid rate. In recent decades, we have reached a threshold where the atmosphere is no longer capable of cleansing and balancing itself to compensate for this excess and the negative effects have now become tangible.

The greenhouse effect primarily affects the temperature of the atmosphere, which is why this phenomenon was first christened *Global Warming*. It has since become evident, however, that the consequences are much more widespread. The complex elements of this phenomenon point to an overall increase in the quantity and intensity of extreme weather conditions, which include more severe wind storms, rain storms and unseasonal temperatures. In Hungary, for example, a minimal decrease in precipitation results in uneven distribution, causing water surplus in some areas (floods, inland inundation) and lack of water in others (drought, desertification). Because of this, climate change and water conservation are significantly intertwined.

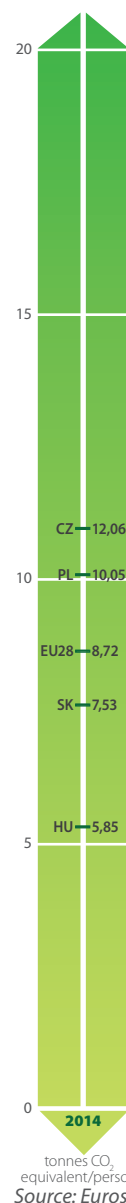
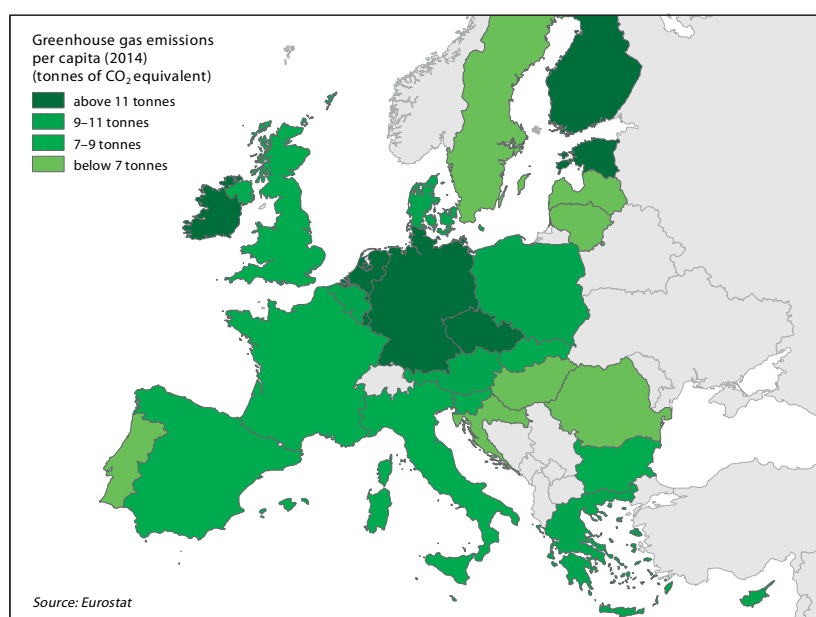


Source: HCSO, HMS

Since the 1990s, international climate treaties created on the recommendations of experts have set reduction of greenhouse gas emissions as their primary goal. On 12 December 2015, the Paris Climate Accord was signed by 194 states, including Hungary, promising to keep the average temperature increase below 2°C from pre-Industrial levels by 2100, and committing to do everything possible to bring that value below 1.5°C.

As seen on the chart, Hungary has kept its GHG emission rates low for the past 15 years, and has in fact surpassed the pledged emissions reduction rate.

Hungary's achievement is only truly revealed in comparison to other European countries. Looking at the map showing GHG emissions per capita per year, Hungary falls into the leading category (below 7 tonnes/person). Maintaining this process is still emphasised as a major objective, alongside finding a solution to replace fossil energy sources with carbon-free or carbon-neutral energy, using as many varieties of renewable energy as possible.



To halt climate change and ensure sustainability, GHG emissions must be decreased at a very high rate.

S.1.2. The change in average temperature in Budapest

One of the key characteristics of global climate change has been the increased average annual temperatures around the world. The ocean, which covers more than two thirds of the planet's surface, absorbs much of the heat surplus generated by GHG, which spreads multifariously, so the rate of temperature increase in the atmosphere does not clearly represent the full severity of the problem.

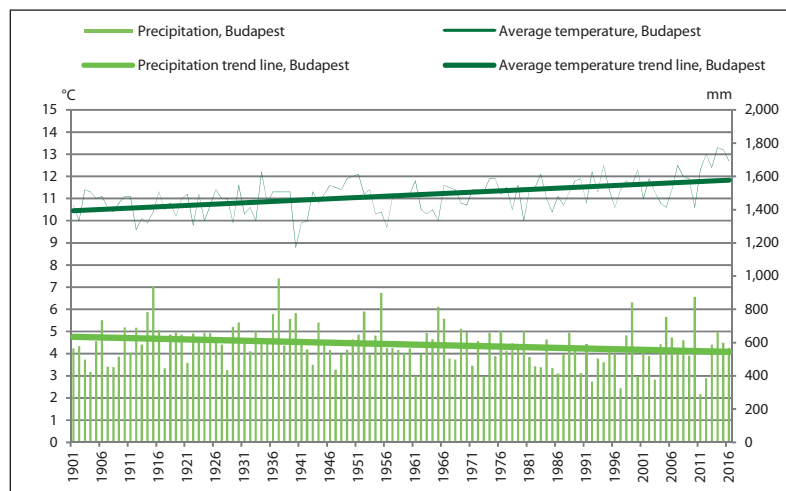
Focusing on global average temperature increases obscures the reality that extremes in temperature and weather events have increased. In addition, while at the Equator there has been a few tenths Celsius degrees increase, in higher latitudes the increase is much greater, with some areas reaching a 5° Celsius temperature swing.

These changes, which may be locally extreme, such as the melting of mountain glaciers and icecaps, are blurred into insignificance by global averages; nevertheless they endanger the local ecosystems and negatively affect the local flora and fauna. Since snow and ice are freshwater-based, their loss results in a significant decrease in global freshwater supplies.

Another serious danger in some areas of the world is the dismissal of facts regarding global warming and the delay of any effort to counteract it. The idiosyncrasy of global warming is, in part, that the most severe consequences only become apparent when it is almost too late to rectify them. A related factor is that many GHGs remain in the atmosphere for a very long time (150–200 years in case of N_2O , for example!), which means that even if swift counteractive measures are taken to decrease emissions, it could be decades before we see any decrease in atmospheric concentrations of GHGs.

Hungary is located in the heart of the northern temperate zone, so the temperature increase caused by climate change is also in the mid-range, which is approximately 1.5–2°C if measured from the time of the Industrial Revolution. This trend can easily be seen by using Budapest as an example. Although the distribution of the data is significant, it is clearly evident that there has been a slow and steady warming over the past 115 years, resulting in a total temperature increase of 1.5°C.

The slow rise in average temperatures is producing an elemental change in seasons, causing more frequent and drastic changes to once familiar weather patterns. In recent decades, our winters have become more mild and snow-free, our summers are longer, hotter and drier. Additionally, the shifts between cold and warm weather



Source: HMS

fronts have surged in intensity and frequency. The total amount of precipitation has not changed significantly, but the distribution across the seasons has become more uneven, with sudden heavy rainfall followed by longer dry periods.

From a legislative point of view, these changes generate many problems that need to be handled by instituting corresponding programmes for the various fields of agriculture, health services and infrastructure.

The temperature increase has intensified evaporation, which in turn increases the need for irrigation on a national level. The unpredictable patterns of precipitation make water storage difficult and degrade the quality of topsoil. The occasional, sometimes months-long lack of precipitation causes drought and threatens with desertification. By contrast, excessive precipitation, in the form of floods and inland inundation, causes salinization and erosion, endangering the quality of soils. Within Europe, Hungary has a unique microclimate where, in the course of a year, a plot may be completely flooded in spring, but by the end of the summer drought can wreak havoc.

Weather conditions this extreme and with such sudden changes may also bring many serious health risks. Statistics show a rise in deaths among vulnerable populations during periods of extreme heat warnings. This segment of the population is also more sensitive to weather fronts. During an extreme cold snap, those most at risk are the homeless, the elderly, particularly those living alone in the countryside, those living below the poverty line, and people with additional risk factors, such as cardiovascular illnesses, conditions of the nervous system, as well as children and pregnant women.

S.1.3. Renewable energy as a percentage of total energy production

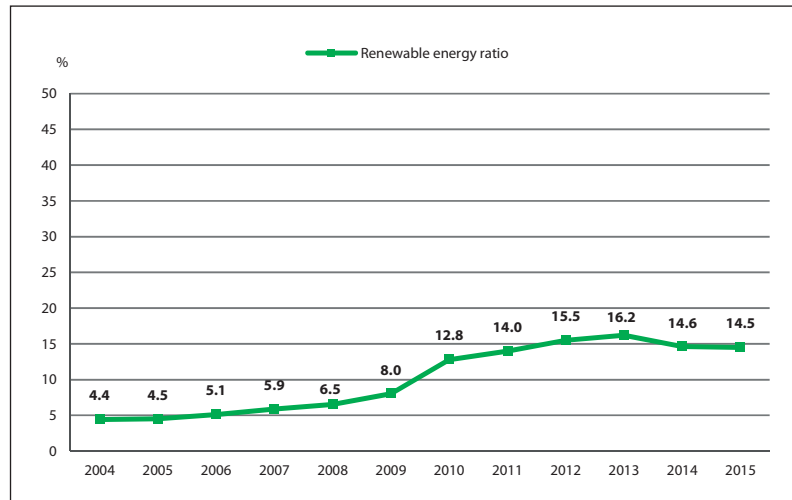
The imperative to reduce CO₂ emissions can be met through a reduction of waste, increase in sustainable lifestyles and a replacement of fossil fuels with renewable or low carbon energy sources. (Nuclear energy, which provides the bulk of electrical energy in Hungary, does not directly release GHGs into the atmosphere, but the mining, refining, transportation and reclamation may involve the use of fossil fuels.) Because of the costs and risks involved with nuclear energy renewable energy sources are the most sustainable long-term solution.

As an EU member state, Hungary committed to using 13% renewable energy out of total energy produced by 2020. As the chart shows, Hungary reached this percentage six years ago, and has maintained that rate since.

The map shows, however, that compared to other EU member countries, Hungary is unfortunately well below the average, and it is not just Western European countries that have achieved higher rates.

If the breakdown of different types of renewables is taken into consideration, then 70%–80% of the energy produced is derived from biomass and waste, the largest proportion of this being residential use of firewood. Unfortunately, burning wood also produces CO₂, but it is considered renewable and therefore carbon neutral. It is imperative to develop and increase the production of other renewable energy sources such as hydroelectric, wind, solar and geothermal power.

Hungary's unique topology is not suited to the construction of traditional hydroelectric power stations on the major rivers



Source: HEPR

of the plains. Contrary to the popular belief, hydropower is not a completely *clean* energy alternative. The construction of these stations has an adverse effect on the environment and operational side effects include rising groundwater levels which cause inland inundation, salinization and soil erosion.

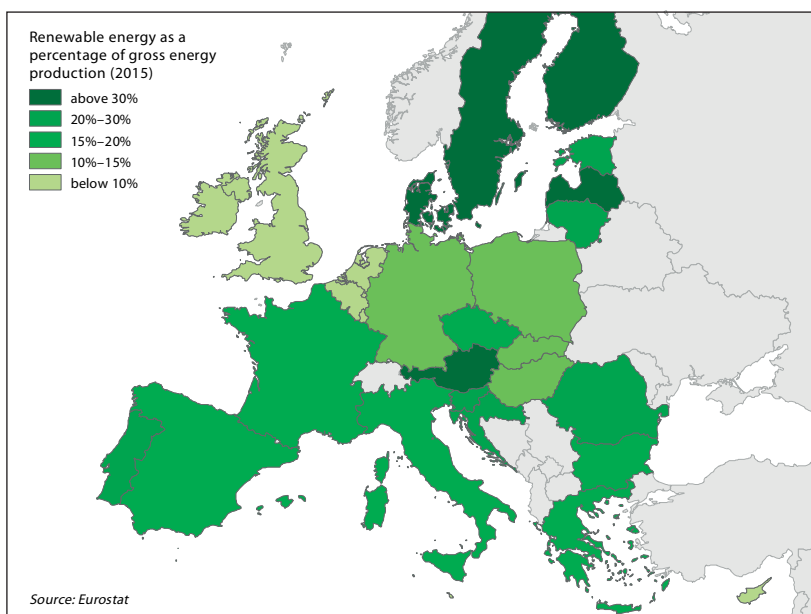
Wind energy is also not as favourable as in some coastal countries, and experts have found it difficult to find suitable *wind corridors*. Hungary began installing wind turbines in large numbers at the turn of the century, but no new permits have been granted since 2006. There are currently 172 wind turbines in use, with a nominal total output of 330 MW.

It is well known that Hungary abounds in geothermal resources and boasts with above the average quantities of hot springs, thermal waters and geothermal energy beneath the earth's surface. Although the local yields on this type of energy are below those of the alternatives, geothermal energy is viable for residential and community systems and should therefore be encouraged.

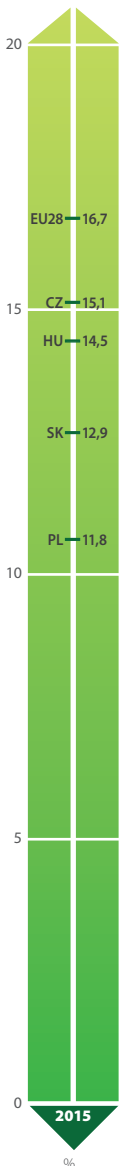
According to experts, making use of solar power will yield the best results.

Today, solar panels, collectors, and power plants provide a variety of affordable solutions, whether they generate just a few kilowatts produced on the roof or many megawatts produced by large power stations.

It is true that Hungary's distance from the Equator means less sunshine and, as with many technologies, assembling these products involves the use of hazardous components, which in turn will create hazardous waste. Despite these negative factors, it is still undeniably beneficial to utilise solar power.



Source: Eurostat



In recent years, the growth rate of renewable energy sources has stalled, which has had a negative effect on CO₂ emissions. Further measures, specifically government policies, must therefore be taken.

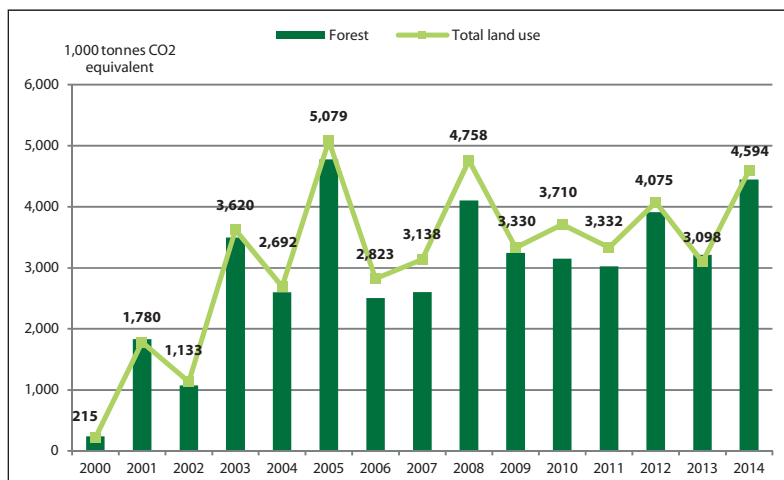
Source: Eurostat

S.1.4. Carbon dioxide absorption rate of forested areas

Until this point, we have emphasised that the primary objective on a national level has to be the reduction of greenhouse gas emissions. Since it is unequivocal that the main reason for climate change is human-produced CO₂ emissions, it is therefore also obvious that there are only two, equally important things we can do. On the one hand, we examine the possibility of reducing CO₂ emissions in every area and develop suitable programmes to realise this; on the other, we do our best to capture the CO₂ in the atmosphere so that it can be removed. The method that has been proven to be most effective and natural is performed by plant life, since photosynthesis transforms the CO₂ found in the air into plant tissue, or valuable biomass.

We need to manage this biomass in much the same way we do our water resources, for example, by maintaining and, if possible, expanding a *static* crop base to capture carbon released by fossil fuel use. It would also be worthwhile to maintain reserves beyond the sustainable level, that is not only carbon neutral, but a source of renewable energy that can be used time and again. Modern forestry combines both these categories: the quantity of wood harvested from forests depends on its viable sustainability. In addition, the use of *energy crops* has emerged. These fast-growing plant species produce a large amount of biomass in a relatively short time, sometimes even in unfavourable conditions.

Since the intensity of CO₂ absorption by plants depends on vegetation coverage, it is no wonder that forests are the most effective solution. For Hungary, it is therefore worth examining the percentage



Source: UNFCCC

of forested area, as well as the rate of afforestation, but in case of every type of similar data the aim is to determine the CO₂ absorption potential of our country's forested areas. It is also useful to compare this against total GHG emissions.

The chart shows that for the past 15 years, the rate of CO₂ absorption of our forests, although slow and at times uneven, shows positive growth. The task is to sustain this rate, possibly improving it further.

Planting of *energy forests* for biomass production must be executed with foresight and the utmost care because a new species introduced into our environment can quickly become invasive and cause great damage to the balance of native species in our ecosystem. It is unfortunate that following the privatisation of large territories after the regime change, gratuitous deforestation and clear-cutting took place.

S.1.5. GHG intensity (HUF tonnes/million) and the GHG intensity of energy consumption

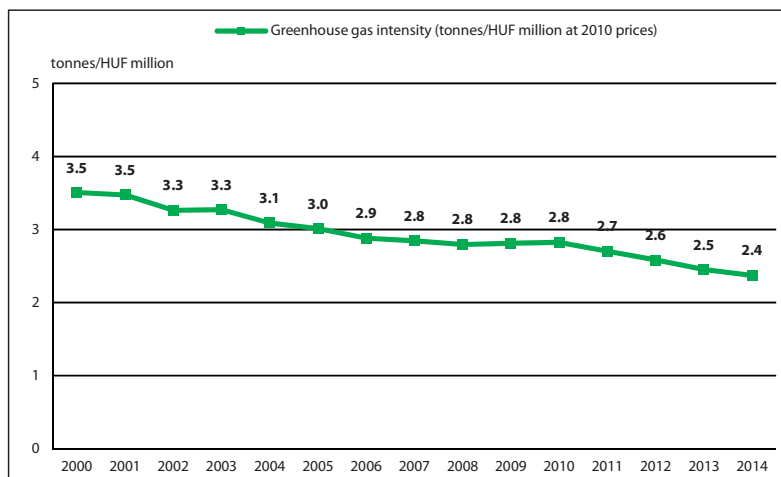
GHG intensity (the intensity of greenhouse gases or the carbon intensity of GDP) shows the level of greenhouse gas emissions correlated with the production of a unit of added value. The indicator's value – calculated on the basis of 2010 prices – declined from 3.5 tonnes/HUF million in 2000 to 2.4 tonnes/HUF million in 2014, which can be considered a significant improvement. Carbon intensity declines if the use of resources in the economy becomes more efficient, as well as if lower energy-intensive economic processes and sectors (such as the services sector) come to the fore. Both of these effects are underway in Hungary.

The carbon intensity of energy consumption during this period (2000 to 2014) dropped by 18.1%, and the carbon intensity of GDP fell by a significantly higher proportion of 32.4%. Across the EU in 2014, the absolute value of GHG intensity was 0.3 kg (gross value added for EUR 1 at 2010 prices) on average, while it was 0.51 kg in Hungary. This means Hungary still needs to take further measures to reduce carbon intensity.

International comparison establishes that carbon intensity was reduced by 10.9% across the EU between 2000 and 2014; including the Czech Republic at 22.6%, Slovakia at 16.1% and Poland at 9.9%. On average, Western European countries achieved values between 0.1–0.3, while the figure for the Czech Republic was 0.71, 0.53 for Slovakia and 0.95 for Poland. It is therefore always constructive to consider the relative indicators alongside the absolute ones.

There is no available carbon intensity data for territories within Hungary. With regard to government capabilities, positive change in both carbon intensity indicators present direct and indirect effects. A direct effect is the decrease in production of carbon pollutants in proportion to overall GDP, which results in reduced pollution locally. A positive indirect effect is the reduction of Hungary's negative contribution to climate change.

All this is true for units of GDP, or rather the decline in carbon intensity is certainly a move in the direction of sustainable value

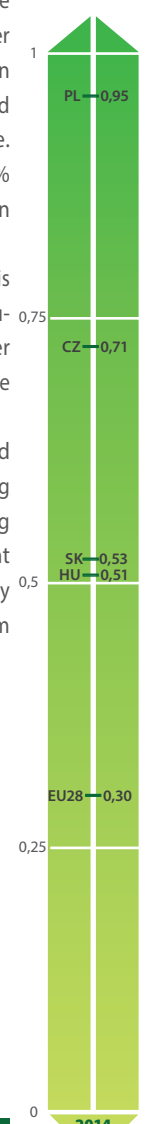


Source: HCSO, HMS

creation, but at the same time total GHG emissions must also decline to avoid the rebound effect and allow the country to contribute to combating climate change in a carbon-positive manner. After a period of decline in the carbon intensity indicator, it is now on the rise again. Therefore, it is imperative to deal with the rebound effect, to decrease it, or completely eliminate it, if possible. According to data from the *Good State Opinion Survey* only 53% of the population is satisfied with the government's steps taken towards decreasing pollution.

The capabilities of the government can be compared on the basis of the goals and strategies of the EU and Hungary, and the documents containing the nationally defined terms formulated under the aegis of the United Nations Framework Convention on Climate Change and the Paris Agreement.

To further improve carbon intensity indicators and to avoid the rebound effect, government initiatives propose the following solutions: subsidising lower carbon-intensity solutions, creating incentives in the economic sector for GHG/GDP improvement technologies. Further possibilities include higher taxation on energy production that is harmful to the environment, and using a system of fines in the interest of lowering carbon intensity.



GHG intensity is continuously falling across the economy as a whole, in the energy production in particular while, in parallel with this, reducing all carbon emissions remains an important task.

kg/gross value added for EUR 1 at 2010 prices
Source: Eurostat

S.2.1. Biocapacity

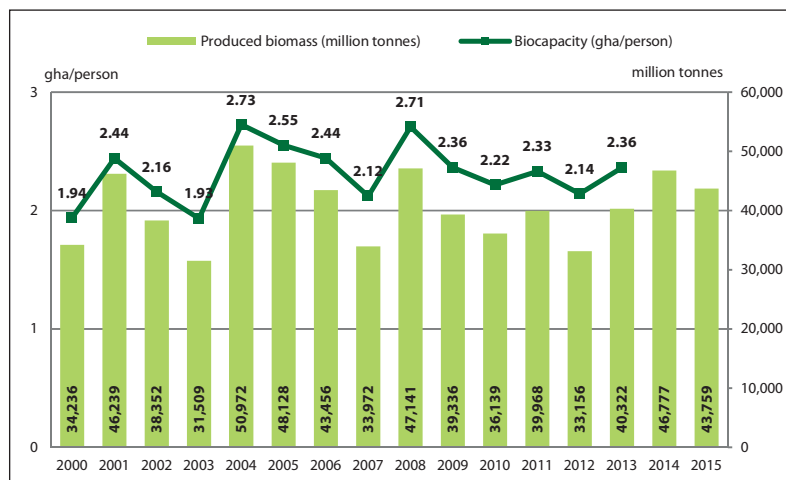
There are many ways to define sustainability. The simplest is to say that sustainability means: Living well within the boundaries set by nature. The *boundaries set by nature* are defined by biological capacity.

The biocapacity of an ecosystem is an estimate of its yearly production of biomass compared to the average global productivity, measured in global hectares. The biomass generated in one year roughly equals 12 billion hectares of biologically productive land and water on the planet. According to the Central Statistical Office, 79% of Hungary's land is cultivable, of which close to three-fourths is agricultural territory, with more than 4.3 million hectares used as cropland. Hungary's forest coverage has grown to 21% (1.9 million hectares) in recent years.

Similar to its neighbours, Hungary has favourable natural assets. However, whether the value of an area's biocapacity is enough or not depends on the size of the ecological footprint. In this respect, the trend in Hungary is unfavourable.

Hungary's biocapacity per person is 2.20 gha, which is poor compared to the European average (3.24 gha), but better than the global average (1.71 gha). Hungary's Ecological Footprint compared to the global average shows a 1.1 gha deficit, and our footprint is 0.8 gha more than our biocapacity, so we are deficient in every respect.

The Ecological Footprint measures the ecological assets that a given population requires to produce the natural resources it consumes. What is considered *available* or *useful* depends on how developed and how rich in natural capital the given area is.



Source: GFN, HCSO

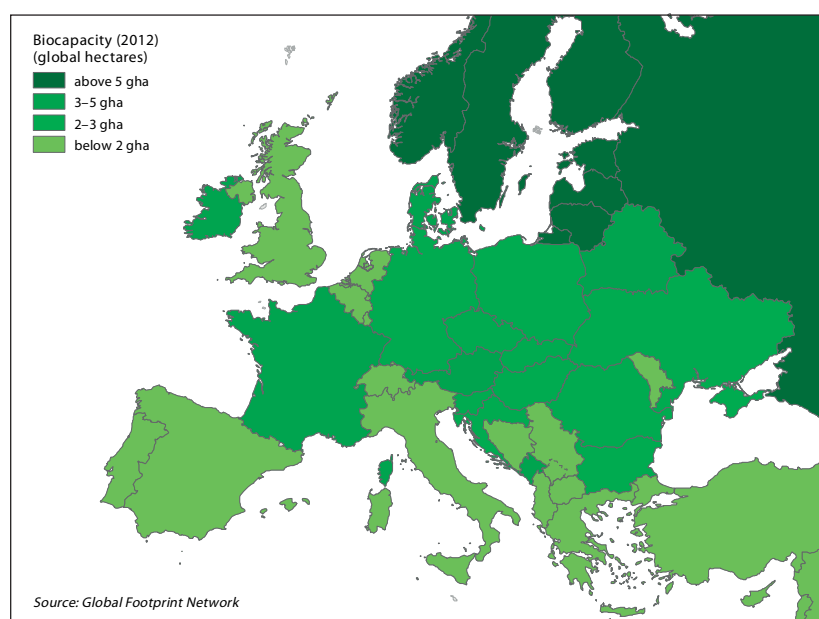
The consumption of natural resources brought about the man-made problem of waste (harmful pollutants) and its management.

A sustainable economy is possible when the Ecological Footprint of a population does not exceed the biocapacity of the area available to that population (see the *Environmental burdens* dimension). In this case, the area's ecosystem not only allows for renewal but is also able to store resources.

As the above chart shows, biocapacity rates fluctuate, partially due to economic trends, but mostly due to meteorological influences.

Unfortunately, improving efficiency and eliminating waste does not increase biocapacity. It can only be increased by providing more cropland and producing more biomass. By reducing the quantities of natural resources consumed, biomass production and ecological sources would be able to support economic demand. A long-term ecological deficit, however, will lead to a depleted and collapsed economy.

For our government, this means taking steps to support adaptive sustainable agricultural methods. On top of this, it is very important to improve communication and attitudes on reducing the burden on the environment and increasing our biocapacity.



Biocapacity is also affected by outside influences. In the long-term, creating agricultural methods that adapt to climate change can improve sustainability.

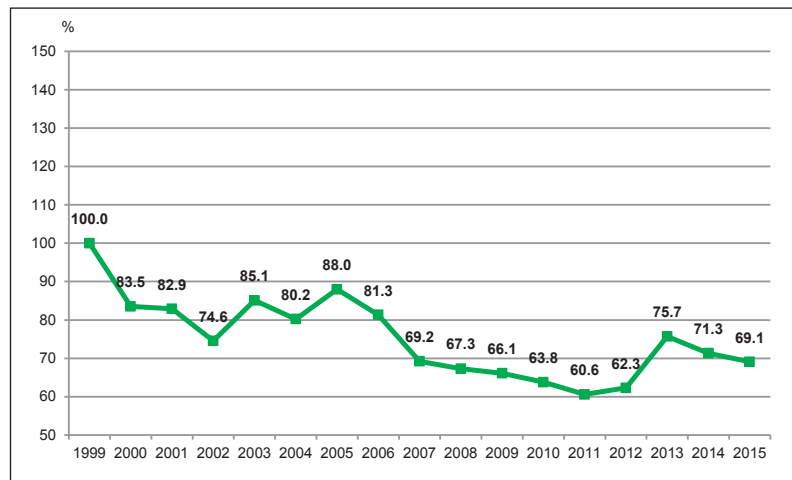
S.2.2. The change in the populations of bird species associated with agricultural habitats

Since their physiological and biological characteristics and their places in the food chain are so well known, birds are excellent indicators of ecological change. Changes in their populations provide information on the state of an ecosystem. Drops in bird populations are not only a problem in and of themselves, but also indicate trends in an ecosystem. In recent decades, this method has been used to assess the status of our ecosystems here in Hungary and across Europe, and the results are troubling.

Globally, the area covered by temperate forests and grasslands has decreased by 60% due to conversion for human use (source: Millenium Ecosystem Assessment, 2005). Bird species native to grasslands have adapted moderately to this change. With the advent of industrial agriculture, however, there has been a drastic fall in their populations. There are two well-known reasons for this.

Firstly, undesirable conditions were created by changes in land parcel sizes and the disappearance of shelterbelts and shelter woods. Even in the early 20th century, farming still took place on smaller land parcels and traditional animal husbandry was still prevalent, which meant more meadows and pastures and in turn left a much smaller ecological footprint. However, the industrialisation of crop farming and animal husbandry resulted in an increase in the average size of land parcels, and the shelterbelts and protective trees contributing to biodiversity disappeared. The hedges and trees bordering pastures were also uprooted to create bigger planting fields. These *shelter* areas and natural habitats for birds were all lost.

The second detrimental change was brought about by the growing use of insecticides in farming. Currently almost every crop produced in Hungary (potatoes, sugar beets, rapeseed, cereal grains, corn and sunflowers) is sprayed with insecticides at least once a year. This not only kills harmful insects, but also non-target, useful species, which leaves local birds without a food supply.



Source: BLH

Without our interference with the natural balance of their ecosystem, a swallow or tit family would eat up to one million insects a year. Unfortunately, insecticides and modified farmlands have resulted in an imbalanced ecosystem and a dying bird population. This deterioration is plain to see on the chart.

Studying the data reveals that farming practices in Hungary began to mirror the industrialisation in the west and have become more widespread since the regime change, in turn depleting natural habitats for birds. This has resulted in a decline of more than 30% since the 1990s. Surveys across the EU report similar declines. For example, a 2002 study conducted in Poland revealed that the population density of skylarks was inversely proportional to the intensity of farming on a given area of land.

Legislators have only indirect means to change this situation. Further research would help find the optimum balance, where farming still produces a high enough yield, yet keeps the burden on the environment to a minimum. This requires manifold agricultural policies and rural strategies in which an ecological approach to farming is favoured over industrialised methods. The same motives drive Europe's bird protection agencies, who would like to exert an influence on agricultural policy.

After many years of decline and a brief recovery period, the trend is once again deteriorating.

S.2.3. The percentage of agricultural land used for organic farming

It is very useful to look at how evolved a country's approach to agriculture is and how much emphasis is placed on supporting ecologically sustainable agricultural policy when assessing how committed a given country is to environmental protection. Ecological farming areas are hand-weeded or planted with living mulch to suppress weeds, while chemical fertilizers are not allowed and chemical fungus or pest control can only be used in limited quantities. The sale values for organic farm crops and livestock are high, so establishing suitable markets to sell these products can amply compensate for higher labour costs and risk factors.

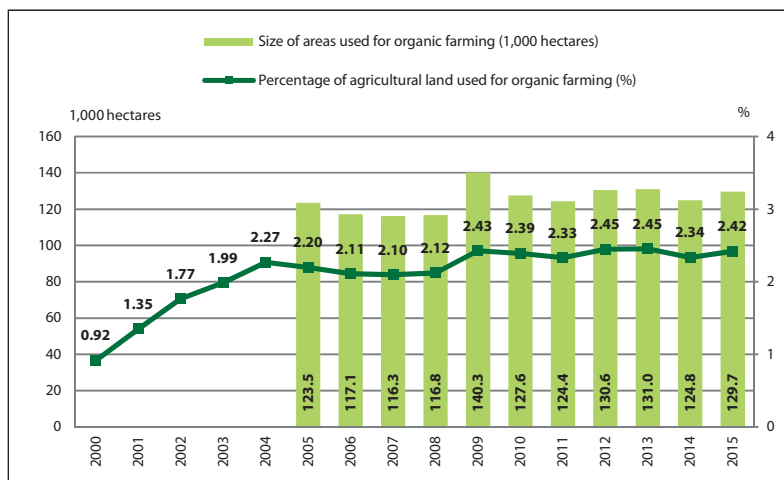
Compared to the EU (6.2%) and neighbouring countries, Hungary is well behind the average of land used for ecological farming. This is despite the fact that every five years, within the framework of agri-environmental and ecological farming schemes, government aid packages are offered, yet there have been no changes in regional data within those five years. This means that farmers are requesting aid for the same area repeatedly; some headway was made after the 2002 and 2003 open tender, as well as a small surge in 2009 (Hungarian Chamber of Agriculture 2015).

When looking at different types of farming, it is plain to see that in organic farming, just as in industrialised farming, planting fields and pastures (see explanation below) are used in much greater proportion to fruit orchards. It must be said that EU countries using larger areas for organic farming are mainly mountainous, e.g. Austria (20.3%), Slovakia (9.4%) and the Czech Republic (13.6%). By contrast, countries using predominantly modern farming methods barely reach 10% of land use for organic farming: Germany (6.4%), Great Britain (2.9% and declining!), the Netherlands (2.7%) and

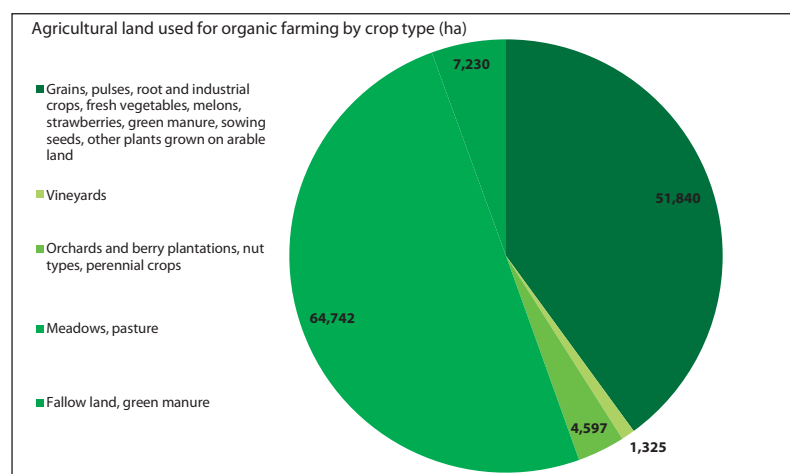
Denmark (6.3%). Organic farming in mountainous regions is substantially easier due to the abundance of pasture and meadows.

Within the framework of organic farming, legislators could make improvements by supporting land development in hillier areas, making it more appealing by creating the possibility of having more pastures and meadows. Furthermore, creating a viable market for organic produce and benefiting from agri-environmental and ecological farming programs – not just every five years – may spur entrepreneurship in organic farming.

However, as seen with examples of foreign policy, even with well-developed, well-supported goals, development plans do not always hit the mark. In many EU countries, for example in Germany or the Netherlands, ambitious plans were approved for enlarging the areas allocated to organic farming during the early 2000s. By 2010, Germany's growth was 20% and that of the Netherlands was 10%. However, neither country reached its goal, with Germany showing only 6.35% growth and Holland achieving 2.67%.

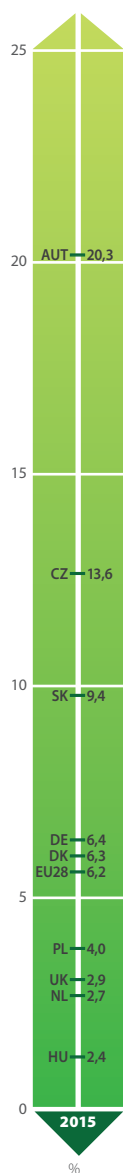


Source: HCSO



Source: HCSO

The indicator shows an initial dynamic surge in growth followed by a stalling period, which can be considered an unfavourable development.



Source: Eurostat

S.2.4. The size of areas of national importance protected by their own local laws

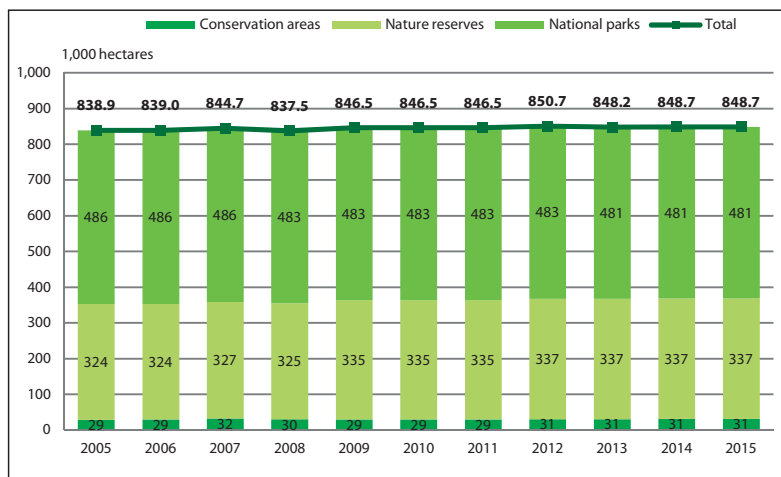
Legislation in Hungary defines three types of protected areas: national parks, conservation areas and nature reserves. National parks preserve Hungary's characteristic natural resources, while conservation areas and nature reserves are provided to protect one or two important species specifically on geographical areas of varying sizes. According to articles 4 b), c) and d) of Act LIII of 1996 on the Protection of Nature, all areas shall be considered natural areas that are characterised by being in or close to a natural state. Protection of natural areas of national importance is established by decree or individual legislation. Hungary's first protected area dates back to 1939. The Natura 2000 areas are established by the EU as designated to be of international (or communal) significance.

Included as areas of international classification are wetland habitats of international importance (Ramsar sites), the European Diploma sites, biosphere reservations, geoparks, World Heritage sites and the dark sky preserves.

Hungary is part of the Natura 2000 network of protection areas established by the EU as a connected Europe-wide ecological network where protection is provided to natural habitats of significance to the community and animal and plant species living in the wild, resulting in the preservation of ecological diversity. The network's existence is a guarantee that these protected territories will be preserved well into the future.

Looking at the data series, we can conclude that there has not been any noticeable change since Hungary acceded to the EU: close to 10% of land in Hungary is designated as protected, 21% is Natura 2000 territory. Taking overlaps into account, a total of 22% of land is designated for protection. When Hungary became an EU member, the Pannonia region, an area of the Carpathian basin predominantly located within Hungary, was added to the existing six biogeographical regions in accordance with the Natura 2000 directives designating protection areas for birds and for natural habitats.

Ensuring biodiversity, protecting and monitoring species and habitats that are already under protection in the EU but not here



Source: MA

in Hungary (because for now their populations have not dropped below critical or there is enough area coverage for a given ecosystem), is imperative. Hungary's environmental protection authorities and their agents are currently coping well with the responsibilities. Some economic activity is permitted within the Natura 2000 guidelines. Agricultural activities performed in these areas must be monitored closely to ensure minimum interference in these protected areas.

It is important to reinforce the already existing cooperation of experts in the field as there is a need for environmental protection and agricultural policy that manages both protected and unprotected territories and strives for sustainable biodiversity. This means giving preference to the type of agricultural innovation that uses *mosaic* landscaping, diverse farming, and agroforestry techniques to increase the adaptability and ecological quality of a territory, including cultural landscapes; because shelterbelts provide ecological *niches* for a variety of species, and these innovations lead to decreases in the use of chemicals and an increase in biodiversity.

It is inevitable that environmental protection legislation and agricultural policy are intertwined, so if we were to try and separate them, especially with regard to human interference, it would be impossible to create a coherent vision for the future.

The size of protected areas in Hungary has not changed since the accession to the EU. Further measures need to be taken to improve the situation.

S.2.5. The percentage of waste that is recycled

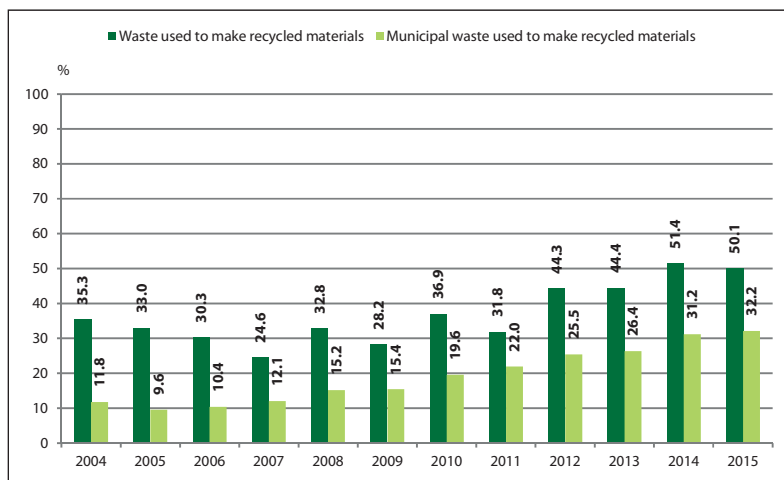
More and more areas globally are being affected by the severe accumulation of plastic waste and its appearance in the food chain. If this trend continues, some studies estimate that by 2050 "there could be more plastics than fish in the ocean (by weight)". (Ellen MacArthur Foundation Report, 2016).

To avoid such an unmanageable volume of waste accumulation, it is imperative to establish effective recycling. We now know that many plastics and the feedstock used to make them contain carcinogens or allergens. Developing biodegradable plastics with short lifespans could eliminate the use of harmful chemicals in manufacturing.

In Hungary's case, recycled materials used to manufacture various products accounts for half of the economic metabolism (50.1%) and this trend is growing. This trend, as well as the percentage figure, is encouraging. The same is true for residential waste recycling (32.2%), which shows a consistent growth rate, but there is still room for a great deal of improvement in comparison with the average of the EU28 and other developed economies.

The EU28's average of 45% comfortably exceeds Hungary's level of recycling. Within the EU, countries with well-developed economies are showing outstanding achievement with rates over 50%, with Germany at 66.1% and the Netherlands reaching 51%, for example.

The map of Hungary shows that the largest ratio of recycling correlates to urbanised areas and the areas showing the most under-performance in recycling are small, rural territories. Based on this, it can be concluded that waste created by an urban population is recycled at an above average rate and underdeveloped, rural areas recycle waste at a below average rate. It is worthwhile to highlight



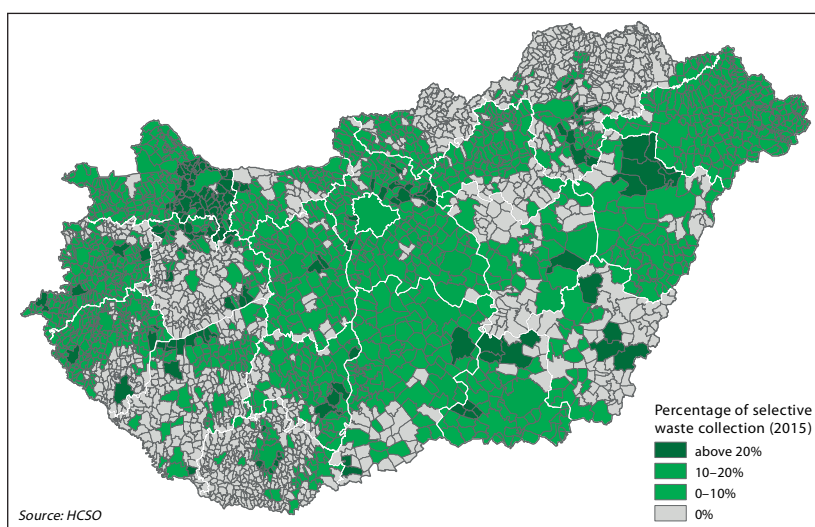
Source: MA, HCSO

a bad practice that is spreading in Hungary's poorest regions where waste, mainly plastic, is used to heat individual homes. This is the most likely cause of increased air pollution in these areas.

Legislation must explore all the possibilities of waste recycling, pursue innovation and engage industry pundits.

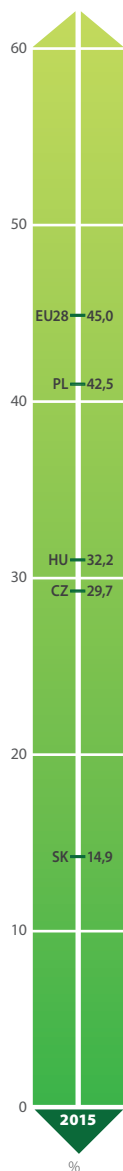
There are various innovations that potentially make it possible to convert what is now considered toxic waste into valuable soil nutrients for use in agriculture.

Hungary must support economic operators who seek to reduce waste, or completely eliminate it in the process as a whole, and those who apply the cradle to cradle design approach. Positive incentives must be used to influence the population, as well as the large, industrial polluters, to convince them to reduce their waste production. Best practices that reduce waste residentially (composting, buying less packaged products) and economically (eliminating waste in manufacturing) should be assigned preference.



Source: HCSO

Hungary's recycling rate continues to show a positive trend, but is still well below the EU average.



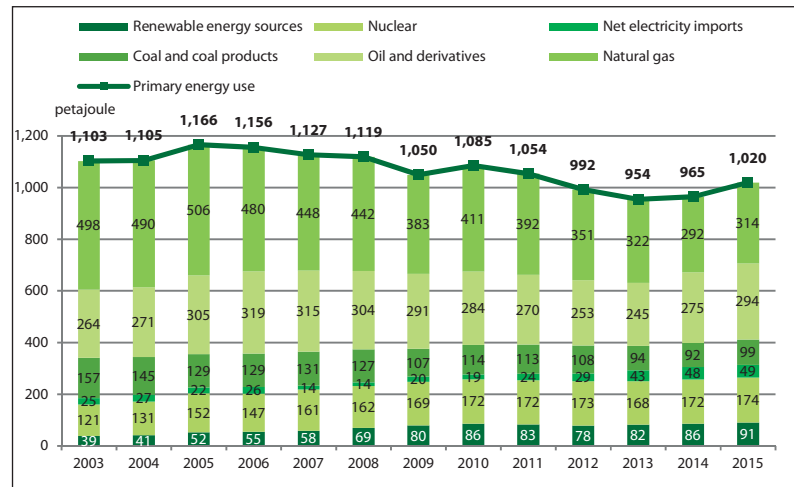
Source: Eurostat

S.3.1. The total volume of primary energy consumption

Several trends emerge when analysing the data on Hungarian primary energy consumption from the last ten years. It is important to note that, while primary energy use had been falling, the last year has seen an increase, while there are also other unfavourable processes unfolding: the amount of imported electricity has risen and there has been no significant increase in the use of renewable energy sources since 2010.

Due to the relatively low global price of natural gas and petroleum in the period prior to 2008 – and partly as a result of the colder winters – natural gas usage was high. After 2008, there was a significant increase in shale gas production in the United States, which saw the price of gas on the American continent fall to the level of prior to the 2008 price explosion. However, the price of natural gas in Europe has remained high and is currently approximately twice that of the price in the US. There has been a more than 30% reduction in natural gas usage in comparison with 2004 levels, one cause of which is the milder winters: since 2010, most winters were no colder than the long-term average, while the winters of 2014 and 2015 were 2°C to 3°C warmer than the average. However, another limiting factor in natural gas usage is the constant high prices in the European gas price market, resulting in an increase in the level of imported electricity, as it is more expensive to produce natural gas-based power in Hungary than in the power plants of neighbouring countries (due to their competitiveness in cheap and outdated carbon-based energy production in case of Ukraine and Poland, and atomic energy in the Czech Republic), meaning the operating time of Hungarian domestic natural gas-fired plants has fallen significantly. Based on the prevailing opinion of industry experts, this situation presents a serious risk to the security of supply, as part of the imported electricity originates from a politically unstable region (Ukraine), while these imports are also delaying the closure of outdated power plants outside of Hungary. This has meant that the energy intensity in the exporting countries has remained high, while Hungary has combined cycle gas power plants standing idly which are capable of attaining an energy efficiency of 50% yet are not economical to operate.

In terms of oil, the effects of the 2008 price explosion can be felt in consumption levels, with 2015 oil use still 7% lower than the 2007 peak. Though international developments have led to a sink in the price of oil and the price of petrol and diesel is once again approaching HUF 300 per litre, consumption is once again on the rise after six years of falling levels.



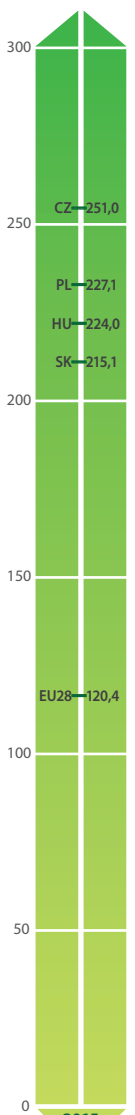
Source: HEPR

In general, it can be said that national economic growth increases in parallel with energy usage, and this can clearly be seen in the market for petroleum products, as the correlation between GDP and oil consumption remains strong in developed countries; there has only been limited success in separating GDP growth from increased energy consumption.

There has been no significant change in the proportion of nuclear energy used, with the same four Paks nuclear power plant blocks having been in use for decades, with prime energy usage fluctuating around 1,000 PJ. It has been slightly lower in periods of economic downturns, such as between 2008 and 2010, and slightly higher in periods of economic expansion such as the present.

Unfortunately, there has been no notable growth in domestic renewable energy production since 2010, which means that, with the exception of some larger investments (such as the Pécs solar panel park), there have been no significant developments in this area, even though the cost of installing solar panels has fallen by a third in this period.

In international comparison, Hungary's energy intensity, calculated as units of energy per unit of GDP, saw high figures characteristic of post-Soviet regions in the 1990s and closer to the data of the seriously Russian-gas-dependent Lithuania and Latvia than Germany, for instance (Hungary's figure was 2.5 times higher). Today, Hungary's indicator has been significantly reduced, yet with improving energy efficiency one of the EU's primary objectives, Hungary has still fallen further in relation to the EU28 average during this period. At the same time, the improvement made in Hungary is higher than the average in the EU28: Hungary's figure is now only twice as high as Germany's. It should however be noted that energy intensity reduction is exponential, so it is easier to achieve notable improvements if you are starting from a higher figure.



kg of oil equivalent/€1,000
Source: Eurostat

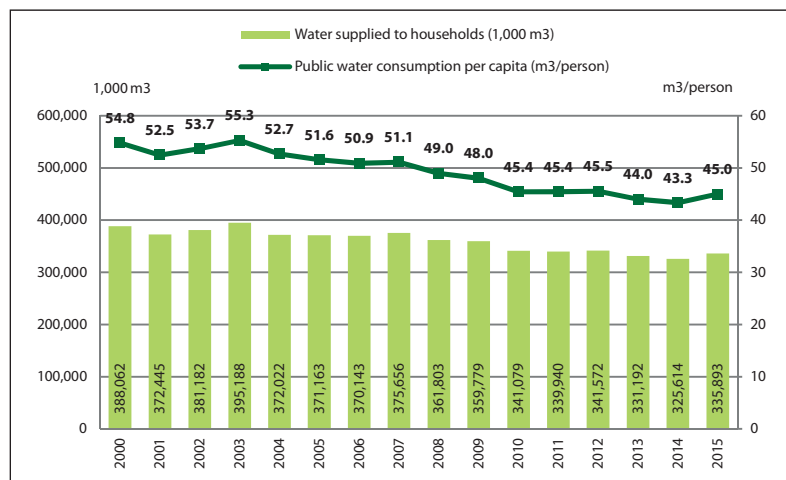
Energy use is once again on the increase, but there has unfortunately been no reduction in the use of fossil fuels or the proportion of imported electricity.

S.3.2. Public water consumption per capita

Hungary is often referred to as a great water power, so the availability of freshwater resources is rarely a matter for significant debate. At the same time, the problem of illegal wells – particularly in the Great Plain region – the low water pressure experienced in some settlements in the summer and the intensive irrigation as a result of increasingly common heatwaves have drawn an increased focus on the limitations of Hungary's water resources.

The available data shows a consistent downward trend in the quantity of household water use and water consumption per capita until 2015, but unfortunately the figures have started to grow once more since that time. Though water consumption per capita does not significantly deviate from the average figure of 40 m³/person/year of the countries in the Visegrád region, there are some countries in the EU which have been able to decrease consumption to a third of this figure, with Belgium leading the way.

A small fraction of household water consumption is used for drinking water. In Hungary, there is a high level of bottled mineral water consumption, which is a notable environmental burden from a separate perspective (PET bottles), though the quality of water is in most cases no better than that of tap water. In sustainability terms, it would be a significant step if more people chose to substitute bottled water with environmentally friendly drinking water from the tap. Hungarian people primarily use water for flushing the toilet and washing purposes. In Hungary, most new tap systems are fitted with a perlator (aerator), which allows air to enter the water so that the effects of the water remain but consumption is reduced. A wider-scale introduction of such perlators would enable a saving of at least 25% of the population's total water consumption. This

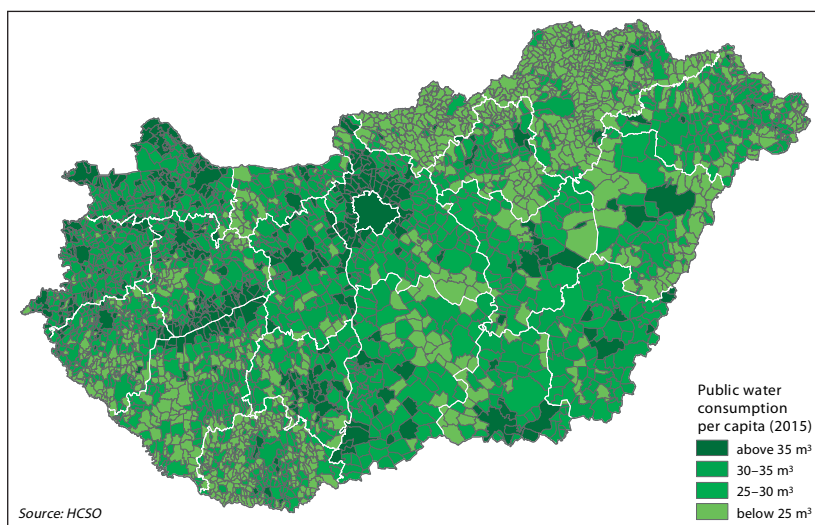


Source: HCSO

would also help reduce the need for hot water use with a subsequent reduction of the energy needed to provide hot water. Awareness plays a very important role in this area. While numerous campaigns have focused on the opportunities for energy savings, until now there has been little attention given to conserving water. The spread of drought tolerant grass varieties would also make it easier to water English-style lawns, which require heavy watering in the summer, while the propagation of rainwater collection for watering purposes would also help save high-quality drinking water.

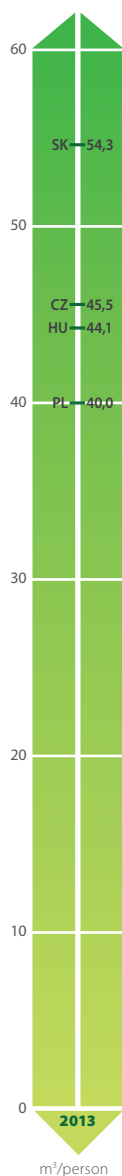
Regional data supports the assumption that the population's water consumption is significantly higher in more urban and touristic areas (consumption by visitors does play a part, but the calculation only pays attention to local residents) than in more underdeveloped, rural areas. This could be due to lifestyle and economic reasons, as in a rural area, where people are struggling with a variety of issues related to everyday survival, they are more likely to use their water economically in order to reduce costs.

In terms of policymaking and the business policies of the companies handling water utilities, tiered pricing could be introduced, with a reduction in utility rate costs, with those people who save the most water getting the greatest price support. It should be recalled that the goal of reducing utility rates is for the government to reduce the burdens of household consumption, and it would be a further positive objective if this measure could also lead to a reduction in consumption. This means that there is a need for subtler purchasing policies and procedures that take the issue of sustainability into account.



Source: HCSO

The increase in water consumption is a warning sign! Though there are no current issues with supply in Hungary, water efficiency merits greater attention.



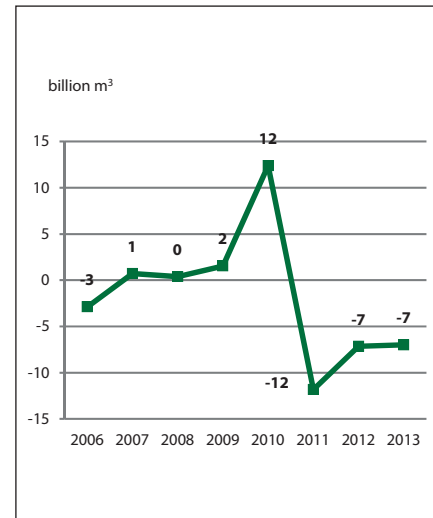
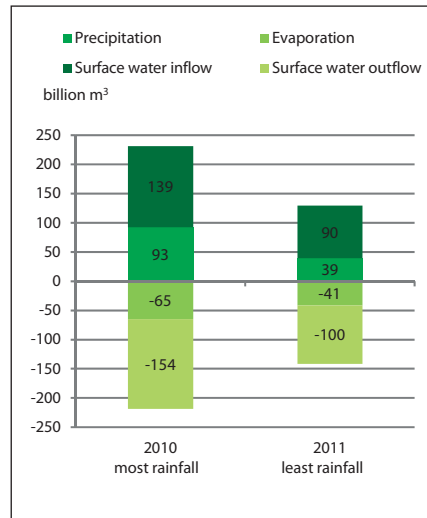
Source: Eurostat

S.3.3. Renewable surface water supply

Surface water supply is increased in the territory of Hungary through the quantities of water arriving in the form of precipitation and river flow, while it is reduced through evaporation and outflow. In terms of water balance, precipitation and outflow are measured, while evaporation is calculated on the basis of the physical formula of the energy needed for evaporation. Because this assessment is problematic, the quantity of energy is usually estimated on the basis of temperature. Of course, if there is not enough water in a given area for potential evaporation, then the given quantity of water in the formula cannot evaporate, and in this case the area will suffer from drought.

By observing the series of data regarding water supply, it can be seen that, with regard to the period between 2006 and 2013, 2006 was a year of excessive flooding, the years 2007 to 2009 were close to average in terms of precipitation, 2010 was a wet year, while the years from 2011 to 2013 were dry. It is clear that there was no water deficiency in the country between 2007 and 2010, while the record precipitation in 2010 meant that there was a significant water surplus that year. However, this failed to help during the period of lack of precipitation in the following year. In fact, it can be asserted from the data regarding water inflows and outflows that essentially nothing remained from the 2010 inflow of water. Since then, the national water balance has shown a water deficiency each year.

Based on the data available, 2011, which saw severe droughts, saw the introduction of around 10 billion m³ of water, yet there was still a water deficiency of six billion m³ in 2012. In Hungary, the primary goal of the plan for water supply and water efficiency is to achieve the quickest possible flow of water in order to reduce inland water hazards. This concept assumes a steady supply of water. In those places where there is a plentiful distribution in space and time of precipitation, this solution fits perfectly with the natural conditions. However, if we are discussing the goal of sustainable water efficiency, then a question arises: if precipitation fails to cover the loss of water through evaporation, and if the chances of having dry periods is very



Source: GDWM

high – or are in fact increasing due to the climate change – then why has there not been a water system plan developed which fits the conditions of the last few decades? This would be a concept which, with the use of reservoir and storage systems for the plentiful supply of water in the spring periods, enable the retention of surface water arriving in Hungary in order to improve the supply of water to lands in periods when there is a lack of water – either artificially from reservoirs or through natural water retention systems.

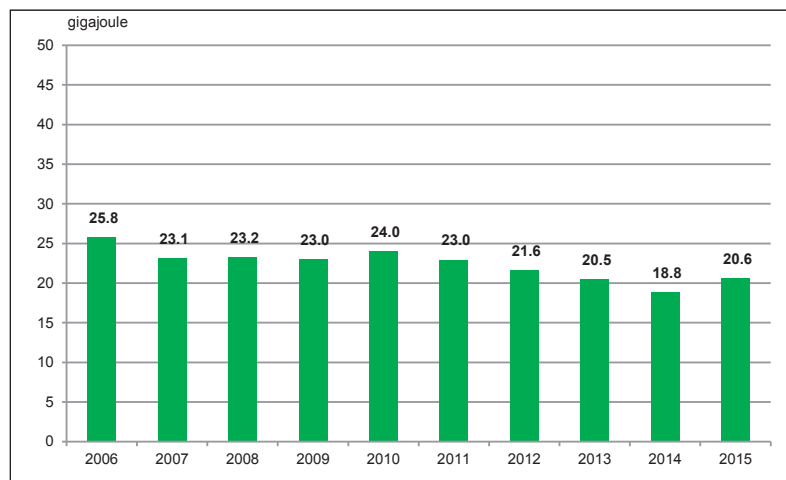
The series of data also show us that we can expect more frequent periods where there is a great quantity of precipitation in Hungary as a consequence of the climate change, and that it is possible that there will occur dry periods even in the following year that cause significant harm due to droughts. This is why it is important to formulate a multi-faceted, flexible landscape management system capable of storing excess precipitation and retaining and storing high river water yields in the spring. This would be aided by an agricultural system which utilises the permanent covering of the surface (with live plants or mulch) to preserve moisture, or not ploughing the soil so that the vegetation roots are capable of draining larger quantities of rainwater to deeper layers and storing it there. Retaining the high water yields of rivers can be helped through the development of floodplain systems capable of spring storage of more than 10 mm of precipitation and summer water supply in the form of smaller water flows and evaporation.

S.3.4. Household final energy consumption

Alongside the country's energy policy and energy supply system, the status of the economy also has a significant impact on household energy usage. Generally speaking, when there is consumer demand and available energy, consumption will increase. In terms of household consumption, since the end of 2013, it seems that GDP has mirrored both overall prime energy consumption and the increase in household demand.

One negative sign is the fact that there has been no increase in renewable energy production in Hungary, so that this growth in household consumption has been met through the use of conventional energy sources with, for example, an increase in demand for electricity and petroleum derivatives. Household energy efficiency, increasing the popularity of the use of renewable energy and support for incentives for renewable energy projects are all good opportunities to make a change in this area, but experience so far has shown that results can only be achieved with a much larger inflow of capital in the sector, which would lead to a more significant reduction in consumption.

Energy saving campaigns concerned with household energy consumption and passive and active investments carried out in the most energy-intensive sectors have the potential to achieve the most significant energy savings, with energy-intensive heating and hot water production the most pressing concern. There is a range of possibilities available (setting the heating lower, insulation, changing windows and doors, more efficient boilers, heat pumps, etc.), which can be recommended for the fact that they will quickly provide a return, while they also make sense in investment terms. The second important point is the energy demand as a result of transport use by the general population, which can also be reduced



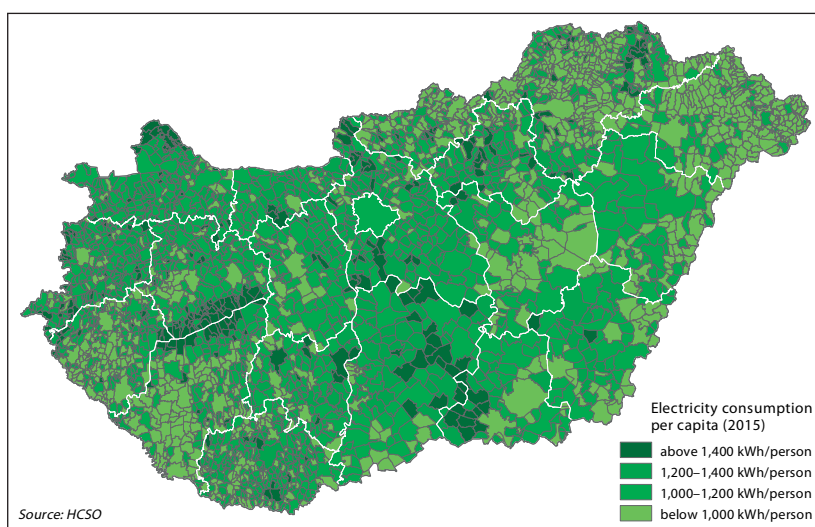
Source: HEPPA

with improvements to public transport, the popularisation of carpooling and potentially financial incentives. The third point is the opportunity to reduce household electricity consumption, where the dissemination of knowledge and recognition of passive (energy-saving investments) and active (solar panel systems) options are equally important.

In terms of individual household consumption, a reduction of 20%–30% in energy demand could be achieved through simple steps and small investments. The dependence on fossil fuels and imported energy is high in these two areas (it is only higher in the transport).

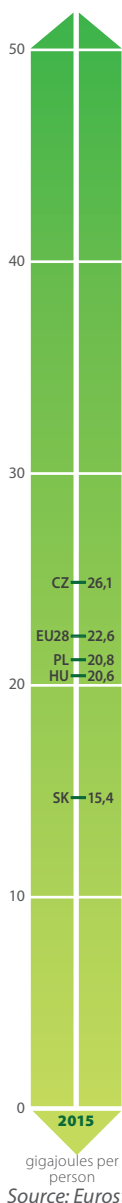
There are opportunities for policy makers to make household energy consumption more efficient. Increasing the amount of information available to people on opportunities to make energy savings would help, by preparing talks, leaflets and targeted information materials to ensure citizens have as much access to the relevant information as possible.

In terms of household energy grants, it would be a good idea to support households by making a database available which ranks the available investments according to expected savings, dependence on fossil fuel energy imports and CO₂ emissions, and which then recommends the most relevant available grant.



Source: HCSO

In order to reverse the upward trend, it is necessary to increase in knowledge and optimize the use of grant funding.



S.3.5. Energy intensity

Energy intensity is gross energy use divided by GDP. This indicator helps to determine the gross level of energy used for the production of a unit of added value. A fall in the value of the indicator indicates a move towards sustainability.

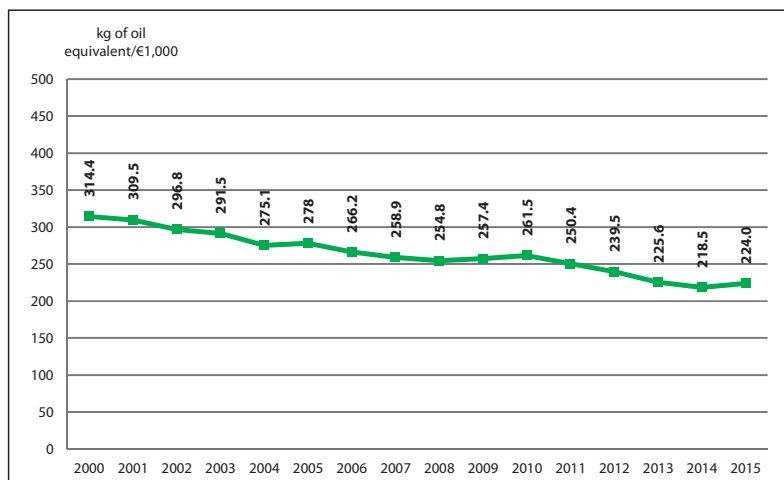
In Europe, the value for this indicator is given in kilograms of oil equivalent/EUR 1,000. Between 2000 and 2015, energy intensity in Hungary has fallen by 28.7% overall, from 314.4 to 224.0. This falling trend has been broken from time to time with smaller increases in some years (in 2005, 2009 and 2015). One reason for this is found in the economic structure, and whether a steady reduction in the amount of energy added per unit of added value is prioritised (or not) as a target.

In comparison with the rest of Europe, it can be seen that Hungary had a similar figure to Poland, Slovakia and Romania in 2015, while the Czech Republic's figure was slightly higher. Energy intensity in Bulgaria is twice that of Hungary. At the same time, energy intensity in Western Europe is much lower: In Denmark and Ireland in 2015, the figure was a quarter of Hungary's, while it was half that of Hungary in Germany, France, Spain, Austria and Italy. Further development in this area in Hungary is essential, and this improving trend must be further reinforced.

It is a good idea to learn from the energy efficiency improvement initiatives of the countries which have lower energy intensity.

There are recommended practices for aiding the improvement of the energy intensity indicator on a governmental level: improving energy efficiency in case of existing economic activities, as well as supporting and encouraging those sectors of the economy which are less energy intensive. From the representative data taken from the *2017 Good State Opinion Survey*, it was found that 55% of the population is satisfied with energy saving initiatives by the state, while 83% agreed that the state should provide financial incentives for those companies which implement the most up-to-date solutions from the point of view of environmental protection.

Government initiatives have a direct impact on achieving lower energy consumption per unit of GDP, which paves the way for greater sustainability. An indirect effect of this is better economic performance as it leads to greater efficiency and the production of the same value with lower unit costs.



Source: HCSO

It is worth bearing in mind that Hungarian energy intensity per household is one of the highest in the EU, and that this could be reduced through the modernisation of residential buildings. From this point of view, the opinion survey produces somewhat misleading results, as most people are satisfied with the condition of the building in which they live and its insulation (77% and 73% from a sample of 2,500 people), indicating a lack of relevant knowledge. This would appear to suggest that the general public is unaware of the amount of energy savings that can be attained through modernisation.

At the same time, the funds made available for this purpose have led to increased interest in modernisation. Unfortunately, the utility rate cuts have not favoured these processes, as they have caused a distortion in estimations of actual energy usage. It is important to raise awareness of the fact that modernisation and energy efficiency is not only important from a financial perspective, but that in the long term it would also reduce vulnerability to change.

The overall improvement in energy intensity indicates the spread of more energy efficient activities. At the same time, this process is not continuous – there have been both greater and lesser backward steps. In the EU, Western European countries have much more favourable energy intensity indicators. Development in this area is essential, with the goal being the further reduction of this indicator, as this would mean an improvement in energy efficiency.



The increase in this figure after a period of reduction is an unfavourable trend.

kg of oil equivalent/€1,000
Source: Eurostat

S.4.1. Waste intensity

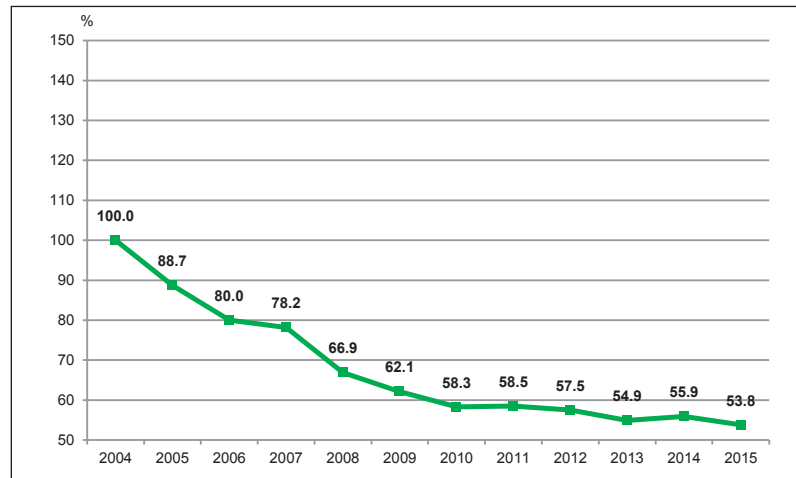
Waste intensity is the ratio of waste produced for each unit of the gross domestic product. The indicator helps establish the volume of waste produced in relation to economic growth. A fall in the index indicates a reduction in waste intensity, which signifies economic growth with less burden on the environment.

Waste intensity fell by 46.2% in Hungary between 2002 and 2015, which is very positive. This means that our activities that created value, counted as units of GDP, generate nearly half the amount of waste compared to ten years previously.

Alongside the waste intensity indicator, it is also worth assessing the absolute values of waste produced in order to get a picture of any potential rebound effect. The rebound effect refers to when efficiency indicators improve simultaneously with economic growth, but the environmental impact indicators containing absolute figures for emissions either get worse or do not change, meaning there is no reduction made in terms of overall environmental impact.

International data is available for the period between 2004 and 2014. In this period, Hungary was able to reduce its waste intensity by 38.6%, while there was an overall reduction across the EU28 member states of just 10.6%. The EU figure is so low as there was an increase in some countries, with the indicator rising by 2.5 times in Greece.

In 2014, the figure for the waste intensity indicator as an average for the EU28 member states stood at 189 tonnes/EUR 1,000 (calculated according to the 2010 GDP). Hungary's figure for 2014 was 159, Slovakia's was 121, the Czech Republic's 145, Poland's 443, Romania



Source: HCSO, MA

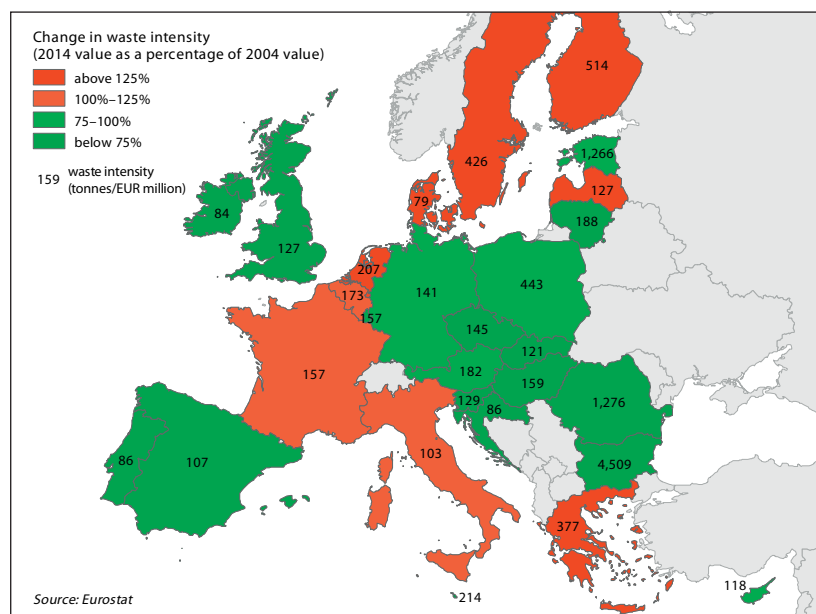
1,276 and Bulgaria's was extremely high at 4,509. At the positive end of the scale stand the countries with the lowest waste intensity: Denmark (79), Ireland (84), Croatia (86), Portugal (84) and Italy (103). Hungary's figure is similar to the average of the Western European countries.

The government can exert a favourable indirect effect on the development of the waste intensity indicator through measures to reduce waste production. One important governmental objective is the use of incentives and support to help with the increased use of cleaner production methods in companies.

These measures can effectively reduce the environmental impact of each individual production unit and improve economic performance. Costs related to economic activity are reduced, which is a more effective use of resources, while production unit costs are also reduced, which would also lead to a reduction in waste management costs.

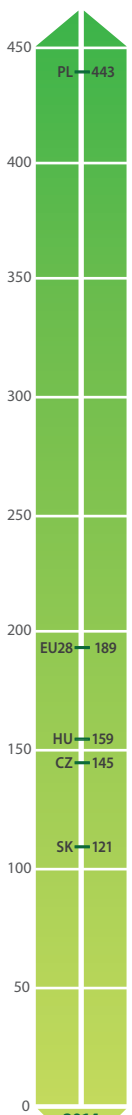
Within the EU 2020 programme, incentives for efficient use of resources are extremely emphasized, and one of its most important consequences would be a reduction in waste intensity. Looking to the future, Hungary can analyse the measures taken by those countries which have lower waste intensity indicators and those which have been able to achieve a notable improvement in terms of reducing waste intensity in recent years.

Maintaining this trend of reduced waste intensity is desirable in terms of both the economy and sustainability.



Source: Eurostat

Maintaining this falling trend is a desirable process from both an economic and sustainability perspective.

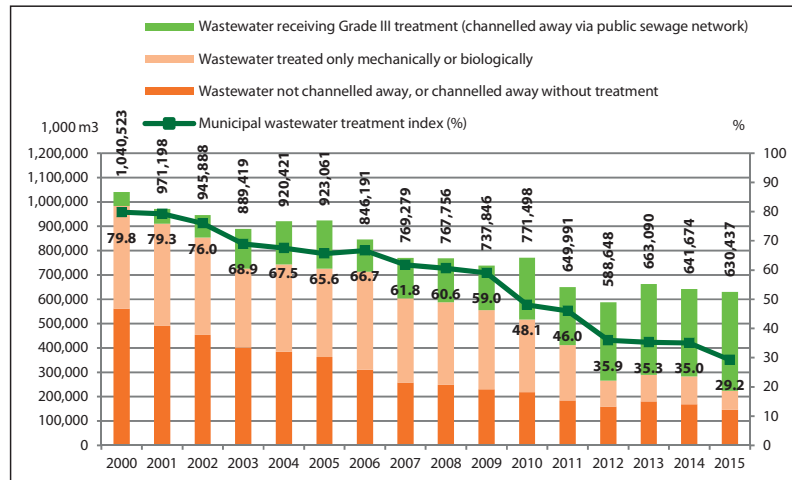


tonnes/€ million
Source: Eurostat

S.4.2. Municipal wastewater treatment index

While industry is using more and more water, water use has been decreasing thanks to the wide variety of technological developments available to households. However, the spread of water-saving solutions could also be implemented more quickly. And if we examine global processes, it is clear that in many locations there is a drastically increased demand for water. On the one hand, there is still a problem of water shortages in Africa and India due to the population explosion, while on the other hand there is also an increasing number of developing countries where a wealthier class is developing, leading to a growing demand for agricultural and industrial water use and a greater burden in terms of global water consumption as a result.

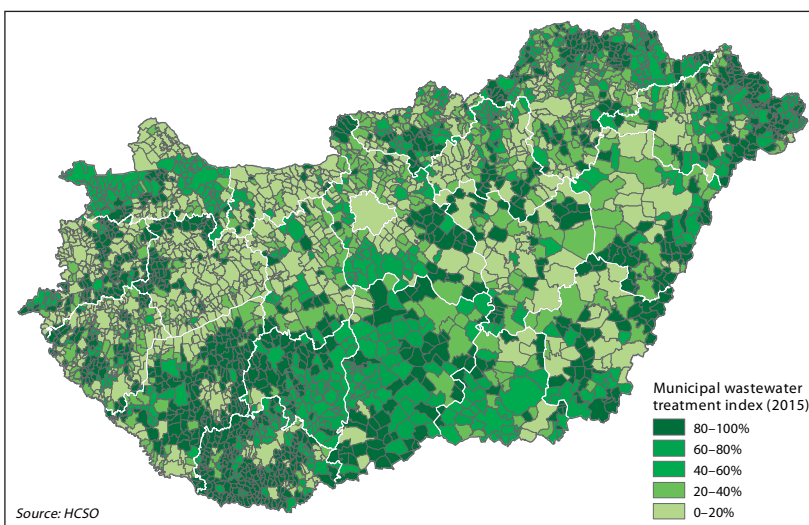
In some developed countries, consumption has either stagnated or gradually fallen, while the quantity of wastewater generated in Hungary has fallen by more than 30% in the past 15 years. While annual household wastewater discharge was slightly higher than 1 billion m³ in 2000, it was 630 million m³ in 2015. There are increasingly fewer locations where there is either no or incomplete wastewater treatment, and there has also been an increase in amount of Grade III wastewater treatment. This means that nutrients – primarily phosphorus and nitrogen – which remain in mechanically and biologically treated wastewater, are removed so that the clean water returned for general water use doesn't upset the relevant proportions, which would lead to a loss of balance and eutrophication (an abnormal growth of algae). It is natural, and in terms of environmental protection almost commonplace, that there are not just advantageous consequences to this. While Grade III treatment requires chemicals (iron or aluminium salts), the amount of surplus sludge is exacerbated during the cleaning process. Disposing of this sludge causes further



Source: HCSO

problems because it cannot be directly returned to nature due to its high aluminium or iron content, although it should also be noted that there are some chemicals which enable the bound phosphorous to be utilised in the soil without causing wastage. At the same time, this also makes the process more expensive. The locations where there is no or minimal wastewater treatment are unevenly distributed across Hungary. Wastewater treatment was quickest to spread in conurbations with greater water use, typically larger cities and regions with higher tourism. Underdeveloped rural areas such as Somogy county and Baranya county do not usually have drainage systems and local governments are waiting for outside help.

There are two possible methods to quickly reduce the value of this indicator. One is to install wastewater treatment systems in small village regions where some of the treated material can be reused in agriculture. Several smaller settlements can be connected if distances and terrain allow. The second solution would be to incentivise households to reduce their water use.



While there is a positive trend, Hungary's rural areas have fallen behind in terms of drainage and wastewater treatment.

S.4.3. The risk to the population of air pollution (atmospheric particulate matter and ozone depletion)

Ozone contamination mostly occurs as a result of secondary pollution i.e. other primary atmospheric pollutants. Contrary to the high atmospheric ozone layer, which has a beneficial effect due to its well-known UV filtering ability, the effect of ozone produced near the ground is toxic as it can be breathed in directly.

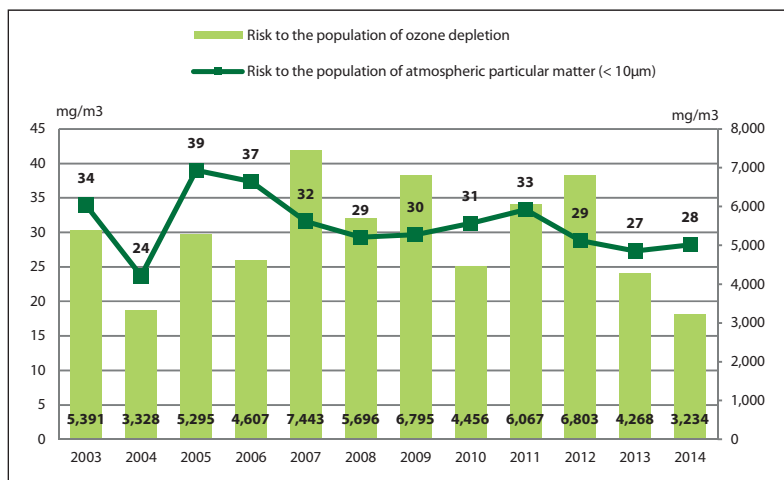
During combustion processes, the decomposition of emerging nitrogen oxides is formed through sunlight when free oxygen atoms break free from nitrogen oxide molecules and form ozone molecules in the air (O_3). In strong sunlight, urban smog can be a significant source of ozone, meaning that people who live in cities have a higher degree of exposure. The groups which are most at risk are children, people who suffer breathing difficulties and those who carry out heavy manual labour outside, such as road builders and workers in the construction industry.

The data display on the chart shows that – notwithstanding some statistical deviations – the values of the indicators have essentially remained unchanged in recent years, though the figures for vehicle emissions have improved with a slight but not significant reduction.

In relation to international data, ozone emissions in Hungary are similar to the EU average, meaning that it belongs in the midrange, while, of the neighbouring countries, Slovakia is an outlier with figures below the average.

Of course, it is also true that there is a smaller danger for people living in the countryside in Hungary, while the risk is greater for those living in urban areas, meaning that the average figures actually contain less information than would be needed to draw any far-reaching conclusions. Secondary decomposition of ground-level high ozone concentration also produces allergens and carcinogens, so it would definitely be advisable to moderate the quantity and effects of the concentration of smog as a result of urban traffic and fires. Appropriate measures include the protection of residential areas and inner cities, refraining from the use of cars, traffic reduction and the reduction of combustion in high-density residential areas and its replacement with more heating through other, clean energy sources.

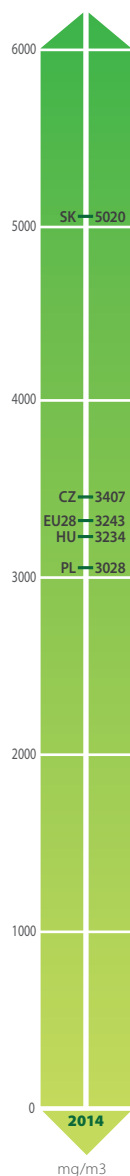
There has been a slow improvement in terms of **atmospheric particulate matter**, thanks to the regulation of high dust emitting waste incinerators, combustions plants, etc.



Source: EEA

The emission values of large emitters (industrial factories, plants) are governed by a separate ministerial decree, which is the best option for policy-making interventions in the future. Hungary is party to all international emission conventions which focus on reducing emissions. One of the most important aspects of regulation is the application of the best available technology (BAT). In Hungary, sufficient quantity and quality data is accessible through the Air Pollution Measurement Network, and information about the population is positive.

Finding alternatives to fossil fuels and oil-based transport is not only important because of the need to reduce greenhouse gas emissions, but also to reduce fuel ash emissions from fuel gases. For this purpose, clean sources of energy and liquefied natural gas can be used for the transition period, as the dust emissions are much lower than fuel produced from natural gas, and essentially only carbon dioxide and water vapour are produced, while in the place where combustion takes place (e.g. in engines) the amount of dust released during the combustion process is only a fraction of the emission for petrol or diesel. Hungary has rich carbon assets, some of which can be used on a temporary basis as clean coal technology to produce synthetic fuel which is essentially free of dust emissions. In the interest of balance, it must be stated that this approach would still result in fossil fuel-based CO_2 entering the atmosphere, and that this coal is of medium quality in energy terms.



Reducing dependence on fossil fuels has a positive influence on the development of air pollution data.

Source: Eurostat

S.4.4. Nitrogen balance

Before the Industrial Revolution and the population explosion, the natural nitrogen cycle was not greatly affected by mankind. The natural cycle involved the binding of bacteria with the soil, creating nitrates and nitrites and making them available for plant life, while their degeneration was characterised by the release of ammonia and nitrogen oxide into the atmosphere.

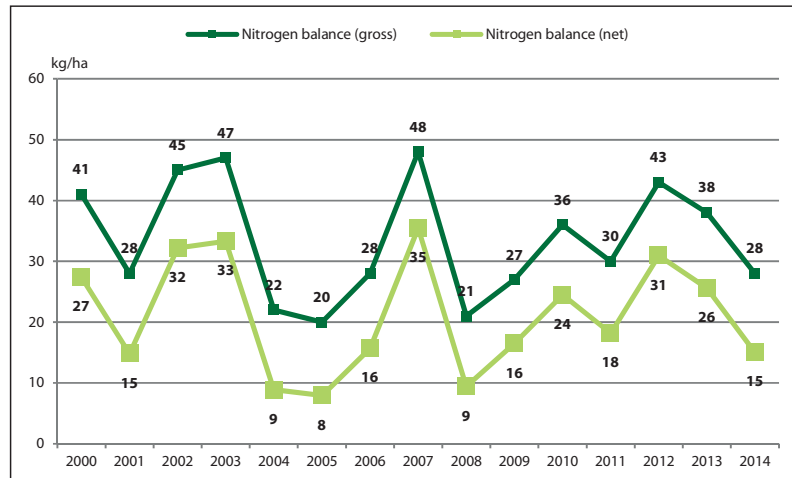
However, due to the spread of nitrogen fertilisers and the Green Revolution, the scales have turned, and the supply of human nitrogen now exceeds the amount of naturally circulating nitrogen. A large part of artificially introduced nitrogen ends up in groundwater and the atmosphere. Based on international scientific studies, the concentration in the atmosphere of nitrogen oxide from the decomposition of chemical fertilisers has grown by approximately 50% compared to the levels seen prior to the Industrial Revolution. In terms of the eutrophication of natural water, the nitrogen intake is too high, resulting in leaching. This means that it is extremely important to examine the nitrogen balance, as in the short term this shows us the fertility of the soil (whether plant life replaces the lost nitrogen), while in the long term this reflects the unfavourable impact it has on the atmosphere, the soil and groundwater (in the event of saturation). The data provided here does not reveal what will happen to the net surplus left in the soil, meaning that it is not possible to see whether the amount of nitrogen in the soil has worsened, improved or stagnated. In general, we can say that when the net intake amount reaches 16–20 kg per hectare, then there should be balance, meaning a greater or lesser amount of nitrogen outflow and intake through plant life. However, because the production average is different from year to year, this can only be determined at a later date.

For Hungary, the net intake amount is approximately half of the European Union average, at 51 kg/ha (2013), with a significant excess remaining in the soil, which, however, drains into the subsoil during the winter and then enters into the groundwater. On the other hand, because the soil is generally rotated several times, sooner or later it will enter into the atmosphere in the form of nitrous oxide, and so although it may be expected that it will have a surplus of yield, the effect on both groundwater and the atmosphere is unfavourable. In Hungary, there is a widespread mistaken belief that the application

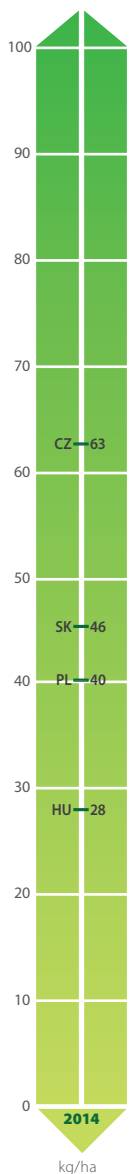
of more fertilisers will increase yield. But the fertiliser which is not absorbed by the plant does not wait around for the following year, but instead enters into groundwater and the atmosphere. In addition, the humus content of the soil, which is known only if the soil has been subjected to soil testing, is also worthy of note. Higher humus content means that there is a higher supply of nitrogen, so in humus-rich lands the majority of the fertiliser used is lost.

A long-term improvement regarding the nitrogen balance data would be possible if the natural nitrogen cycle dominated the agricultural process, instead of nitrogen originating from human activity. Scientific studies have demonstrated that the covering of soil with secondary crops does prevent absorbable nitrogen from draining, and keeps it in the undersoil. Not rotating the soil and the use of second-hand mulching plants is also important, as this not only prevents nitrogen from entering the atmosphere, but it also allows the weeds to bind atmospheric nitrogen, which can reduce the use of artificial nitrogen sources.

The most important elements of regulation would be the continuous monitoring of the management of nitrate sensitive areas, more frequent monitoring of the amount of active substances applied and requirements for soil testing and the transfer of expertise through the rural network. If an improvement is achieved in this indicator by nutrients finding their way into the soil by extracting atmospheric nitrogen, and the nitrogen introduced does end up in the groundwater and atmosphere, then greenhouse gas emissions from agriculture and agricultural eutrophication in natural waters will be reduced.



Source: HCSO



Source: Eurostat

It can be regarded as positive that the quantity of anthropogenic nitrogen found in the soil in Hungary is not as high as the EU average.

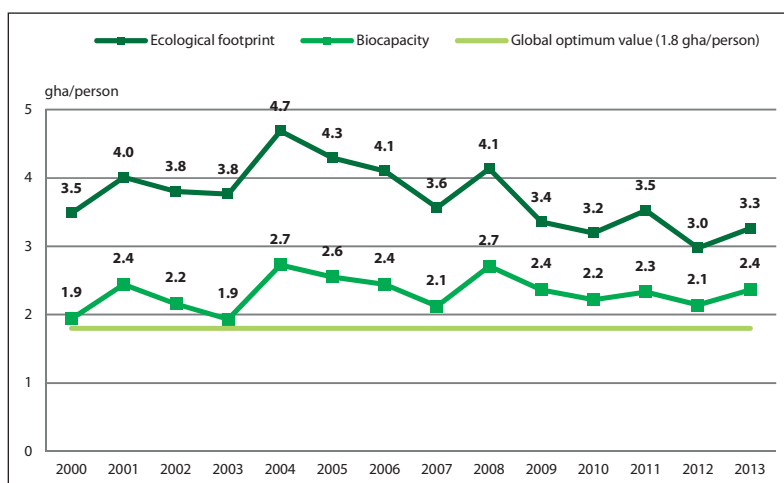
S.4.5. Ecological footprint

The ecological footprint, based on a full lifecycle approach, demonstrates the extent of a human civilisation's demand for natural resources to meet its way of life (in order for the economy to operate). With the production, distribution and consumption of products (and services), surplus waste and raw materials, a large amount of energy (mainly fossil fuels) and water is also consumed. The source of all these goods and *experiences* is natural capital, and in more favourable cases, a return on this capital.

A return on this natural capital (or biological capacity) would occur if we respected the renewable capabilities of the ecosystem in the interest of protecting it. Currently, in both annual and global terms, we use more resources than we produce, meaning that our overall ecological footprint is larger than the overall biological capacity. This is known as overshoot. Since the 1970s, overshoot has been an accelerating process. At this moment globally, we would need a planet more than one and a half times the size of the Earth in order for our use of resources to be sustainable.

On average, people living in Hungary use approximately twice as many resources than the global ranking, while Hungary has an overshoot of 40% in relation to its national bio-capacity. This figure worsened in 2013 in comparison with 2012. If we look at the average consumption habits in the EU, then we would need as many as three different planets.

A large part of our ecological footprint (more than 60%!) comes from an excess of CO₂ emissions through the use of fossil fuels. This means that if it were possible to eliminate this, it would solve



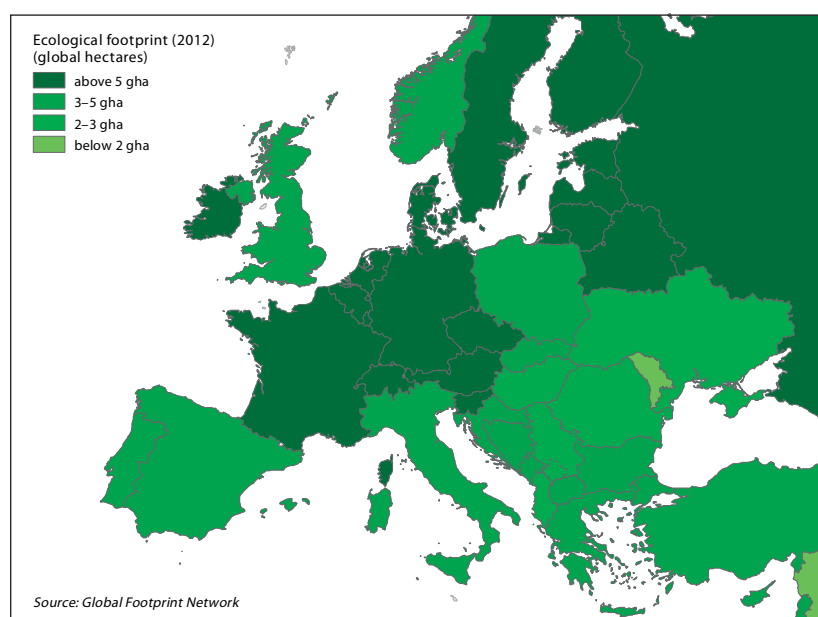
Source: GFN

the problem of overshoot. This is exactly the goal of the Paris (and earlier) climate agreement.

It is important to note that when dealing with *overuse*, we have to confront the problem that these systems are complex and that it is not possible to estimate in a linear fashion the individual events or consequences of these complex systems. In other words, the consequences may be felt in unexpected places and to an unexpected degree. The extinction of some individual species could put the entire ecosystem into terminal decline.

Finally, the use of natural capital should serve the objective of enabling the general population to have a good quality of life. Though it may not be an easy task, the Happy Planet Index measures exactly that: what level of resource use is needed to reach a given (objective and subjective) quality of life.

The role of the government is also important in this area. The two most important objectives are the minimisation of the use of natural resources and the reduction of fossil fuel-based energy production. Fortunately, both of these goals are reflected in international and EU efforts (the Circular Economy and the Paris Climate Agreement). It would be fantastic to finally see that Hungary is not lagging behind international goals and trends (or that we are wasting our easily gained advantages) and that we are taking genuine steps forward, and perhaps taking a leading role in a holistic approach to sustainable development.



After the improvements made as a response to the economic crisis, the figure measuring Hungary's use of natural capital has unfortunately fallen once again.

S.5.1. Dependency rate

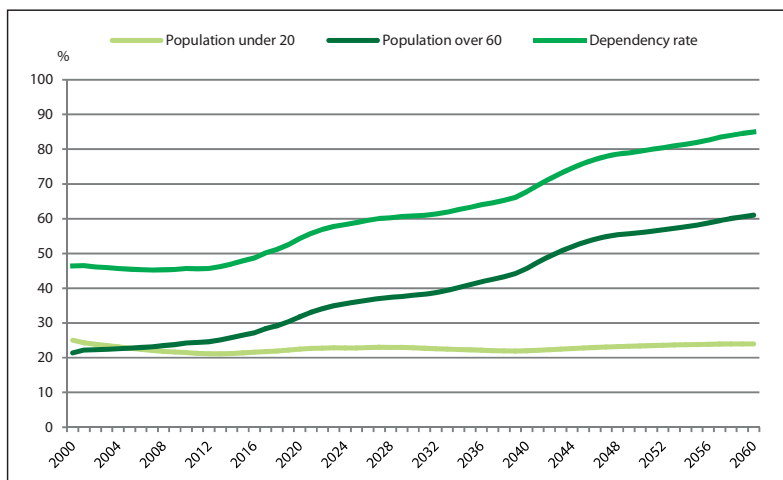
The number of people residing in Hungary is in constant decline, so the population in 2016 stood at 9,830,485 people, approximately 250,000 fewer than ten years previously, and a number equivalent to the population of Debrecen. Naturally, the composition of the population shows a diverse picture nationally, with some areas (particularly cities) seeing an increase in their population.

Alongside the changes in the population and from an economic perspective, the dependency rate is also extremely important as it refers to the proportion of the population of active age. The smaller the number of people of active age relative to the population as a whole, the greater the burden they have to bear (i.e. in terms of tax and contributions). While there is generally a greater burden on the younger generation in the developing countries as older people are in the majority in wealthier societies. The shape of the age distribution curve also shows us the expected future trends, as the horizontal columns decrease in size as they move upwards over time.

Based on the age distribution graph, we can identify three different kinds of population:

- a pyramid or cone: a growing population composed of young people
- an onion or urn shape: a dwindling population composed of older people
- a bell shape: a stable population with few changes in the number of people of each age

As with many European nations, the number of children in Hungary is low, which places further strain on the situation by increasing the inactive age group of the adult population. While other coun-



Source: HCSO, HDRI

tries have embraced immigration as a strategy for addressing this demographic challenge, Hungary has not. Without looking at how a pension system functions in an economy, the reversal of the proportion of dependent young and elderly people (in 2005) began a process that is very difficult to correct. It is enough to remember that the effects of measures to create a *wave of newborns* will in the best case scenario only have an effect on the dependency rate 18 to 20 years down the line.

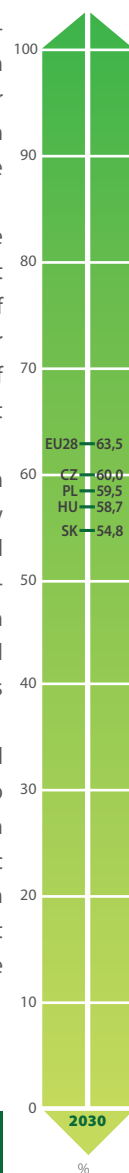
While state income funds come from the population of active age, there must be caution that any state measure ensure that a disproportionately large burden does not fall on that section of the population with a declining rate and that there is no further growth in the desire to emigrate from the country. Instead of increasing this burden, it would be better to concentrate on the best possible use of the taxes and contributions received.

The success of any state intervention can only bring results in the long term, and increasing the desire to have children is only one side of the coin. If it is not accompanied by – among other things – educational development and improving the cohesive strength of the economy, then new generations will not necessarily become wage-earning citizens when they reach adult age.

Overpopulation has often been mentioned as one of the problems for sustainability, so a dwindling population may appear to be an advantage. However, as certain socio-economic aspects of having a sustainable population can only be interpreted locally, a marginal but favourable process from a global perspective can result in tragedy on a local level.



Source: HCSO



Source: Eurostat

The decline in the dependency rate is both an economic and sustainability issue, the damaging consequences of which are increasingly serious in the long term.

S.5.2. Students studying in eco-schools

A positive new report has stated that the government has allocated significantly more funds to education.¹ This could begin to make up for many years of neglect. Education is such a long-term investment that it is hard to manage on a market basis. On the basis of Eurostat data, only Latvia and Slovakia of the EU countries spend less on education than Hungary, though there is a trend of increased expenditure in case of Slovakia.

At the same time, levels of spending on education can be misleading, as quality is not just a question of funding. Much depends on effective use of that funding. In terms of implementing sustainable development, the size of the role allocated within education to an environmental and sustainability approach and related skills is of particular importance. Indeed, the purpose of education should be to help individuals and communities to reduce risks, increase resilience and encourage sustainable practices.

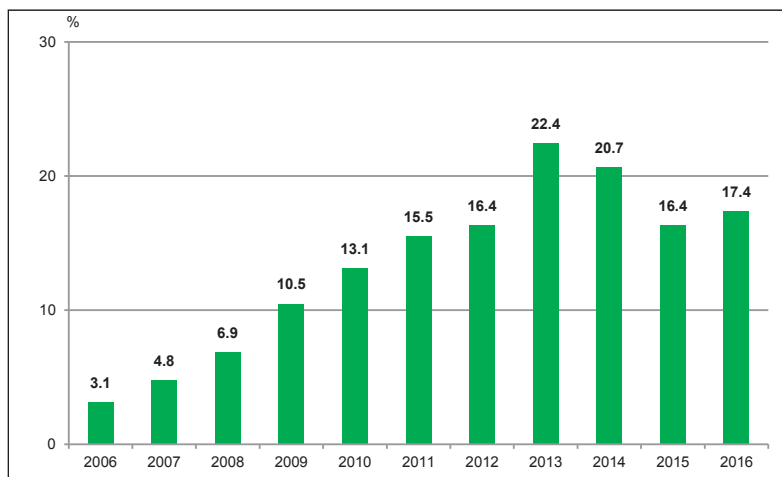
In 2004, the ministries responsible for education and environmental protection jointly created the *eco-school* title, and education institutions have been able to attain this title through an annual application process since 2005. The programme's goal is to increase the quality of environmental education with the aim of transforming young people's attitudes in terms of environmental behaviour.

One criterion for earning this title is that the institution should intelligently, systematically and in everyday practice address environmental issues and provide education on sustainability, environment and health. Owing to their volunteer activities, eco-schools are also an ideal example of how students and teachers within an institution can develop and execute sustainable programmes.

Hungary possesses the legal framework to ensure that each public education institute provides education on sustainability on a volunteer basis. The eco-school initiative has helped make domestic and international knowledge and practices available, which can be applied by institutions of an entrepreneurial spirit.

In pre-school and elementary school education, there is a significant emphasis on the formation of an environmental outlook. Unfortunately, in secondary education these traditions are not continued to a sufficient degree. This means that when students begin their higher education studies, though the basics remain, the outlook of students is often very far from what it should be.

With regard to students who study in eco-schools, an initial upturn has been followed by a deteriorating trend. The growth that was once again seen in 2016 could well be an important turning point. At the same time, and in the absence of further support and funding, further deterioration can be expected.



Source: HIERD

The most important element of the activities of the eco-schools is not the transfer of learning materials, but rather the creation of appropriately flexible frameworks to allow creative ideas to develop. This allows individual institutions to provide such skills to students (and teachers) in their own way by participating in a programme that develops the basic skills that are proven to lay the basic foundations for employees of the future. A comprehensive attitude and problem-centred approach is essential – as is empathy and cooperation, yet these are not available in conventional curriculum-based education.

*"The goal of the green-kindergarten, eco-school programmes (HIERD) SH/4/5 is to reinforce the environmental awareness of children and students and to raise the quality of environmental education activities within the public education system. With this in mind, a national environmental education funding-centre network and educational assistance and training are being created for the teaching of sustainability."*²

On an international level, the best-known comparable movement is the international Eco Schools initiative, which involves 49,000 schools from 64 different countries. Unfortunately, no Hungarian school has yet joined this initiative. The approach is very similar, as in order to be successful it is essential to have the support of the school's management, as well as the active participation and commitment of both teachers and students. Another important element is the involvement of students in the decision-making process. The programme has three structural elements:

- the Seven Steps Framework (as an example of the management system)
- themed programmes (from climate change to water)
- assessment – the Green Flag³

¹ www.parlament.hu/irom40/15381/15381.pdf

² <http://ofi.hu/informaciok-5>

³ www.ecoschools.global

Support for the eco-schools initiative is a secure investment in the future. It would be desirable to promote the continuation of the initial improvement in this indicator.

S.5.3. The combined percentage of the population that is overweight or obese

According to the WHO definition, someone is overweight or obese if they have abnormal or excessive fat accumulation which may impair their health. Though this calculation has its deficiencies, the Body Mass Index (BMI) is generally used to measure if someone is overweight. BMI = This means that if an adult is 180 cm tall and weighs 75 kg, then their BMI is: $75/(1.8)^2 = 23.25$.

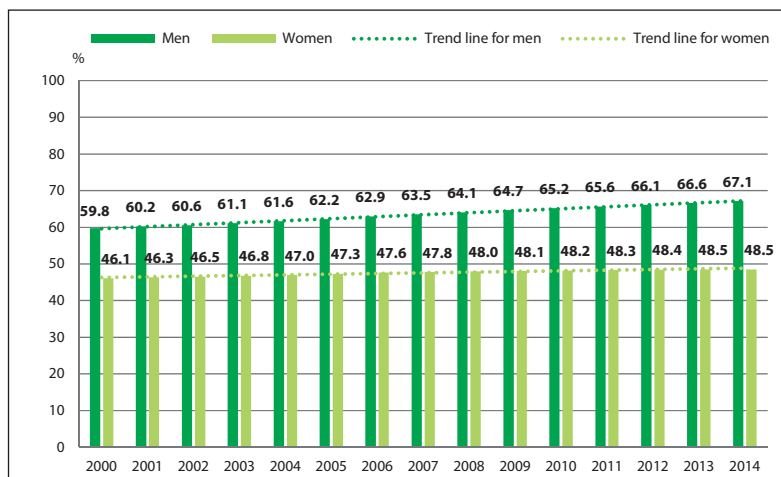
For adults, the WHO boundary values are as follows:

- overweight: BMI ≥ 25
- obesity: BMI ≥ 30

Being overweight is an avoidable health risk factor. It is a shocking fact that a large proportion of the world's population lives in countries where being overweight and obesity kills more people than malnutrition. While 11.3% (805 million people) of the world's population do not receive sufficient nutrition (2,100 calories a day), 1.9 billion adults and 41 million children aged five and under were either overweight or obese in 2014.

Analysis of steps taken have shown that the Hungarian population in general does not pursue an active lifestyle, though the average calorie intake of adults provides enough energy for an active lifestyle. It is also known that more than 60% of Hungarian adults are either overweight or obese (67% of men and 48% of women). The frequency of both being overweight and obesity increases with age.¹¹

A sedentary lifestyle (five to six hours of sitting a day) and unhealthy eating habits (particularly animal-based fats, insufficient



Source: WHO

wholemeal grains, low fruit and vegetable consumption) both contribute to the significant amount of overweight people in Hungary.² The biggest problem of being overweight is the increase in health risks. There is a positive correlation between mortality and a BMI of 25 and above. An increase of five in the BMI index leads to 30% growth in general mortality, while a 40% increase is linked to circulatory disorders, and a 60% to 120% increase in deaths is linked to diabetes and kidney disease.³

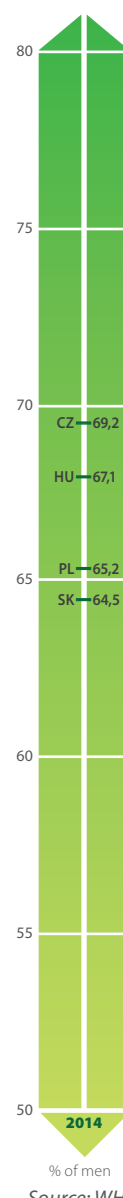
Like other diseases and conditions, being overweight also has an economic cost. This applies equally to treatment and prevention. According to calculations based on concrete financial data, public expenditure in 2012 linked to being overweight/obesity constituted 15% to 18% of public health expenditure (Health Fund), which is approximately 1% of GDP. As a proportion of individual expenditure in terms of overall public spending, the figure is estimated at 15%.⁴

A comprehensive government initiative is also necessary as the 2007 Szonda Ipsos health-care segmentation research clearly showed that the main cause of long-term weight gain is not lack of information. Among men of high socio-economic status, there were more overweight persons than those with a low BMI. For women, the opposite was true.

² <http://nber.org/reporter/2013number4/cawley.html>

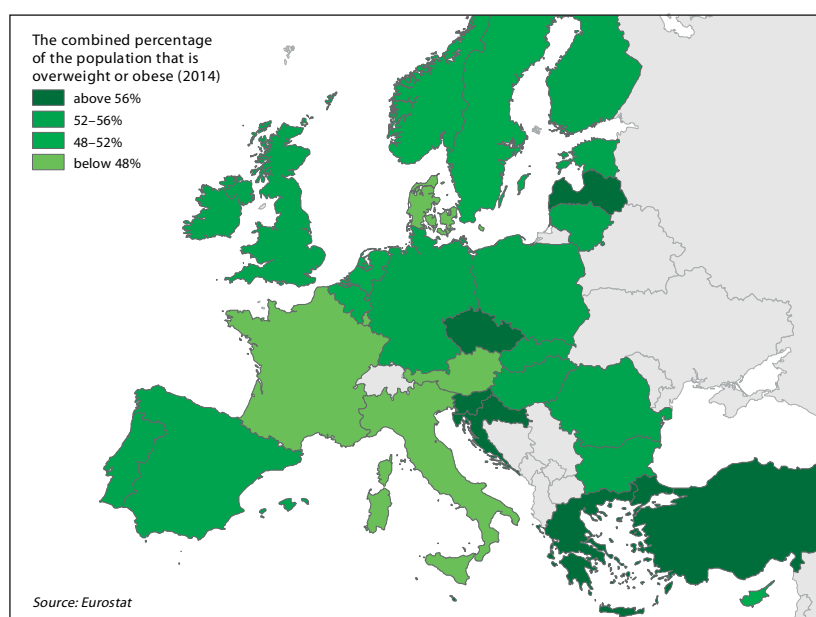
³ Tóth Emese – Nagy Bence: Az elhízás egészséggazdasági megközelítése. [Obesity from the Perspective of Health Economics.] *Egészségügyi Gazdasági Szemle*, 2009, 47 (4), 41–48.

⁴ Iski Gabriella – Rurik Imre: Becslések a túlsúly és az elhízás hazai gazdasági terheiről. [Estimates of the Economic Burdens Associated with Obesity in Hungary.] *Orvosi Hetilap*, 2014, 155 (35), 1406–1412.



% of men
Source: WHO

¹ https://www.ogyei.gov.hu/otap_2014/



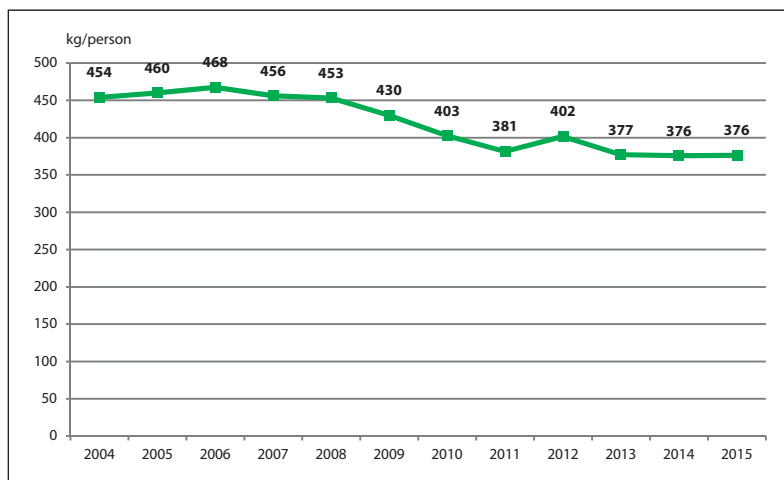
Being overweight carries significant health and economic risks and the deteriorating trend requires urgent and effective intervention.

S.5.4. Municipal waste per capita

Generally speaking, any reduction in household waste is dependent on changes to people's habits. This is why the quantity of municipal waste per capita is an important indicator, as it largely depends on consumers. At the same time, product packaging creates a situation based on necessity: the consumer purchases the product and therefore creates waste, or doesn't buy it because of the packaging. It is notable that the data regarding the quantity of waste can vary significantly depending on the source. One reason for this is that there are various different forms of waste that can reappear in commerce, and it is therefore difficult to trace the actual quantity.

There are an increasingly large number of initiatives in Hungary that promote a *no-waste* lifestyle as a desirable and achievable goal (such as the Hummus Association 'No-Waste' initiative). On governmental level, in addition to the development of a general approach, it is also important to support and reward those initiatives that minimise and/or remove typical but unnecessary types of waste (such as packaging). It would also be the government's responsibility to implement complete green procurement. It is very important to highlight the issue of recycling and reuse. According to the EU circular economy model, waste should be considered a valuable secondary raw material. But for that purpose, its design and the choice of raw materials used should focus on the lifecycle of the product. The role of policy regulation is also important in this area, as even with the effects of education, 99% of the population will not stop using over-packaged products.

The quantity of waste generally has a strong correlation with consumption, meaning that the reduction in waste after 2008 is largely



Source: MA, HCSO

a consequence of the economic crisis, as opposed to a significant improvement in awareness regarding waste.

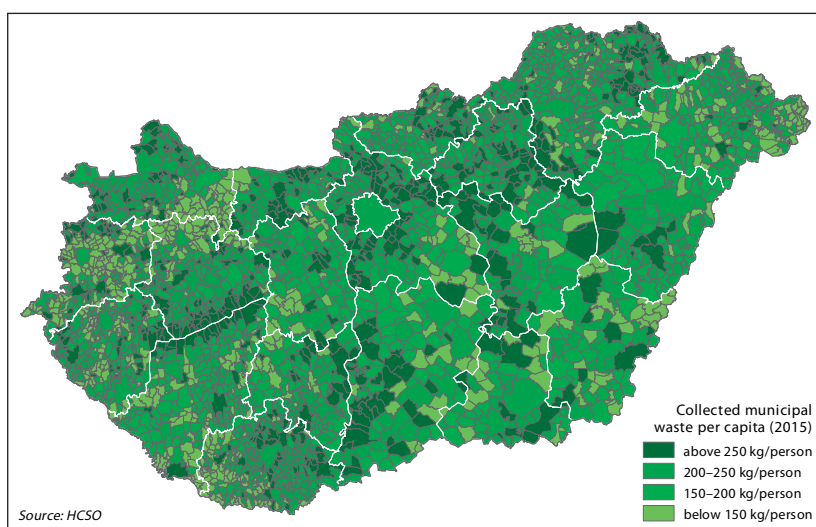
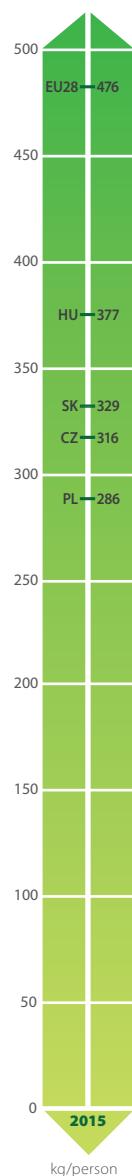
It is worth focusing on regional differences in Hungary. Though data refers only to the quantity of transported waste, there is a clear pattern for larger settlements and tourist areas. The unfavourable data can also be attributed here to consumption habits.

At the same time, it is important to mention the development of a system of selective waste collection which was begun two years ago in Budapest as the result of a KEOP project. Though the level of waste in Hungary (377 kg) is less than the EU average (475 kg) in terms of the quantity of municipal waste per capita, the stagnation experienced in recent years is not a reassuring sign.

The most important task would be to map systematic constraints. This entails the analysis of supply, consumption and regulation and the developmental opportunities present, as well as how these can have an effect on the other elements.

It is difficult for regulation to keep up with waste management methods in terms of technologically dynamic development.

It can be said that the only good waste is the waste that is never created. In the end, our concept of waste must change and it must be redefined as a secondary raw material.



Source: HCSO

In light of the stagnation of the last three years, government measures are essential for further improvement to be achieved.

Source: Eurostat

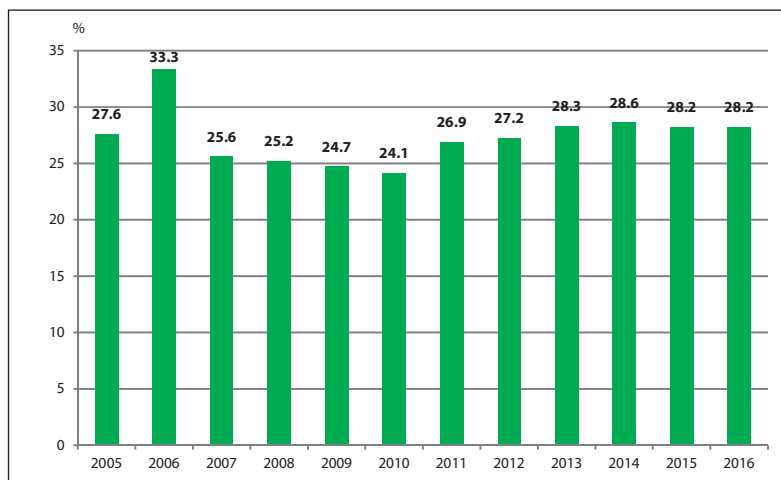
S.5.5. Income distribution (Gini coefficient)

The Gini coefficient is an economic measurement of the inequality of statistical distributions of income and wealth. The value of the Gini coefficient lies between 0 and 1 (100%), where 0 is the perfectly equally distributed income and 1 represents complete inequality. The greater the value, the greater the inequality. The income distribution index does not provide information on the country's general economic state and well-being. In terms of social sustainability, reducing the value of this indicator is an extremely important goal.

Between 2005 and 2016, Hungary saw a movement towards a more imbalanced income distribution (increasing from 27.6% to 28.2%) according to the Gini coefficient overall. The value of this indicator is currently stable. Within the country, it can be established from looking at regional differences that the Gini index is highest in Central Hungary (29.2%), followed by South-East Hungary (28.1%). The smallest level of income inequality is in South-West Hungary: the value for the indicator here stands at 23.9%.

In relation to the rest of Europe, Hungary had a mid-level ranking in 2015, with a favourable level of income distribution compared to the EU28 average (31.0%). Income inequality is particularly high in Lithuania (37.9%), Romania (37.4%) and Bulgaria (37%). Many Western European countries have less favourable income distribution than Hungary (Germany, Spain, Italy and Portugal). At the same time, inequality is significantly lower in Slovakia, Slovenia, the Czech Republic, Sweden and Finland.

According to the 1,250-person sample of the *Good State Opinion Survey*, 27% of the Hungarian population believes that the quality of life of the current young generation will be better than the quality of



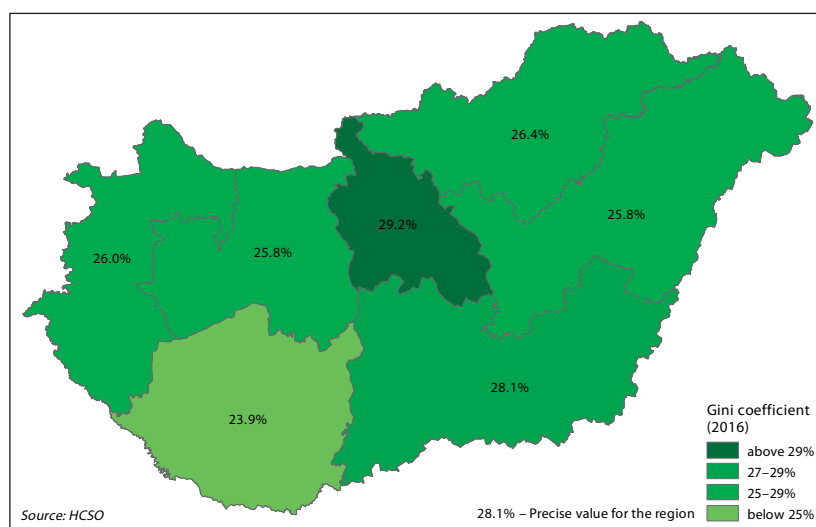
Source: HCSO

life currently experienced in Hungary. 31% of the respondents think that the quality of life of their own children will be better than their own when they are the same age as the respondent.

The income distribution indicator, the changes to it and the opinions of the population all show that government capabilities must be utilised if we want to reduce income inequality. Appropriate employment policies and measures to help underdeveloped regions and disadvantaged social groups, progressive taxation which favours less wealthy classes and the indirect (or direct) support of the poorest levels of society can all exercise a favourable effect on this indicator, as well as help reduce the social strains caused by differences in income. It is worth analysing the social policy initiatives of those countries which have a lower level of income inequality than Hungary.



Source: Eurostat



Source: HCSO

28.1% – Precise value for the region

Gini coefficient (2016)

- above 29%
- 27–29%
- 25–29%
- below 25%

From a social perspective – as well as in light of the stagnation of the indicator – it is important to further reduce income inequality, and this requires appropriate governmental measures.

DEMOCRACY

SUMMARY¹

One of the fundamental preconditions for the modern exercise of authority based on democratic foundations is the existence of the fair political competition between individual political alternatives, organisations and programmes. Measuring political competition is on the one hand one of the central areas of study in the political sciences, and a fundamental and recurring element of democracy audits on the other.² According to Pokol (1988), politics is one of the major subsystems of society, the binary code of which is the dichotomy of *governing and being in opposition*.³

For this reason, an election is what primarily⁴ determines the balance of the dichotomy in the social subsystem of politics, and thus the outcome of political contest itself. Consequently, within the political contest, it is the election itself and the parties (the election's primary actors) that will be the main focus of our examination.

As far as the dimensions are concerned, it can generally be stated that, in the interest of ensuring continuity, they have not fundamentally changed from those in the report of the previous year. The workgroup, however, made several changes within individual dimensions. One of the main changes was that we did not highlight a main indicator within individual dimensions, and several indicators were moved to new locations.

The other important change is that in case of the *Ensuring political competition* dimension, instead of using the number of parties that attained 1% at the elections as an indicator, this year we examined the number of parties that compiled national lists for the parliamentary elections. The reason for the change is that the ability to submit a national list and thereby enter the political contest signifies a form of gateway to entry. In the workgroup's view, this is the starting point, origin or minimum requirement, which if completed, allows a party to enter the political contest, so we considered this to be absolutely justified.

The government capability associated with the *Promoting political participation* dimension can be defined as the government's ability to assure or promote one of the fundamental conditions for the democratic functioning of public life: the realisation of participation in the management and influencing of public matters and political decision-making. This government capability is realised primarily through the establishment and regulation of the legal and procedural framework of elections and referenda.

In addition to the competition itself, political participation in determining public good, managing public affairs and participation in community decision-making is one of the fundamental elements

that define democracy. Although we consider participation to be necessary, it is in and of itself insufficient as a defining concept of democracy, although it is assigned a role in some form in the majority of surveys of democracy. We note that political participation is bound tightly to the previous dimension, *Political competition*: the greater the participation, the greater the competition.

The theatres of political participation are of the same order of magnitude as political competition, so an analysis of parliamentary elections, municipal elections and referenda is also deemed to be necessary, but our analysis should not be limited to them. A new feature of the *Political participation* dimension is that the workgroup included exercising the right of assembly, which in addition to elections and referenda is the most typical form of political participation: the indicator shows the number of gatherings. With respect to the indicator's theoretical foundation, it is important that we make clear that the right of assembly as a basic right is considered to be first generational, and a basic right held by the constitutional law profession to be political in nature.

Elections and referenda are therefore particularly important theatres of political participation, and it can thus be declared that participation at these has immediate stakes and governing consequences. In case of elections, these are measured by mandates (seats) for representatives, in case of referenda, by a binding decision on the legislating authority (or the opposite might be true when the people leave the decision on the given issue to parliament). At the same time, gathering peacefully, which equates to exercising the right of assembly, does not have the same direct authoritative or legal consequences mentioned above, although numerous historical or recent examples can attest to how social unrest and subsequent waves of protests are capable of removing governments or entire regimes, thereby imposing direct authoritative and legal consequences. We can consider the right of assembly as a constant and everyday tool of politics and political participation, since it is not tied to election cycles or to a lengthy referendum procedure. At the same time, it is undeniably capable of generating political activity on the part of parties, and is therefore a very important tool for articulating political opinions mid-cycle. Based on all this, the workgroup considered it justifiable for exercising the right of assembly to be featured in the *Political participation* dimension.

The *Promotion of social dialogue* dimension was this year renamed to *Promotion of social relations* dimension, with special consideration for the fact that the indicators used for the dimension are more inclined to provide input-type data about the state of the infrastructure of civil society. Although the numerical data of the various organisations cannot provide conclusions in itself in terms of the actual impact on society, it is nonetheless exceptionally important that voting citizens have their voices heard through more and more organisations from the perspective of political pluralism, as well as to ensure freedom of expression, thereby embedding the desires of the community into political decision-making. Within the framework of the *Promotion of social relations* dimension,

¹ The authors of this chapter are Csaba Cservák, PhD (workgroup leader), János Rimaszécsi, Dr. jur. and György Tamás Farkas, Dr. jur.

² For the most part, the indicators used by Freedom House in the form linked to *political pluralism* are similar to Polity IV's indicator system, the World Bank DPI and the Polyarchy Dataset.

³ For more details on the topic, see Pokol Béla: A társadalom rendszerei. A szociológiai rendszerelmélet kategóriái. [The Systems of Society. The Classifications of Sociological System Theory.] *Szociológia*, 1988, 4, 343–360.

⁴ The term *primarily* refers here to the fact that other considerations can also influence positioning on the dichotomy in certain cases. One such example is the coalition forming negotiations between political actors following the elections.

the government capability shows to what extent the opinions and professional recommendations of social subsystems and interest groups operating in organised forms – among them non-governmental organisations (NGOs) – can be articulated and presented to the public during the political decision-making process, thereby becoming involved in public policy and political decisions at various levels of the political system. The dimension does not include a new indicator, so the opportunity arose to compare changing trends in detail with last year's results, and to place those into a wider context.

The indicator entitled *Faith in representative democracy*, which is based on the Eurobarometer survey, was renamed by the workgroup to *Assessments of taking part in the public affairs* indicator, since the question examines the respondent's subjective impression of how much their voice counts in the country.

The workgroup continued to use the *Ensuring democratic exercise of rights* dimension in 2017. The government capability characteristic of this appears in the upholding of democratic rights in defence of the democratic exercise of rights that appears as an element of the rule of law, which is ensured through the operations of domestic institutions and tools that guarantee the requirement for equal treatment is met. Democracy and the resulting democratic functioning of the government are the theoretical framework that binds government sciences on a fundamental level. The principle of democracy and its realisation in practice fundamentally influence the competitiveness and effectiveness of the market and public sectors, such as through the realisation of the constitutional fundamental law of the right to property. A further component of democracy is the realisation of political pluralism, which is the primary tool for expressing the will of the people. The will of the people manifests itself directly through elections, and exercises authority over the entire state apparatus via elected representatives. Naturally, this can also fulfil a controlling function in opposition to the executive authority, but it can also validate its effectiveness. A condition for the creation of the democratic exercise of authority is the development of the system of checks and balances. One of the possible tools for this is increasing the weight, scope and authority of the Constitutional Court and the National Assembly's external oversight organs (such as the State Audit Office). A sense of civic rights can be measured through these bodies, as the number of complaints and citizen initiatives submitted can provide a measure of the citizens' awareness of their rights.

This impact area study provides proposals for measuring the features and expectations described above through a system of indicators that cover certain areas related to democracy and the democratic rule of law. Among the indicators, in addition to validated statistical indicators and official institutional data, we also used surveys by international NGOs. In terms of the latter, we note that the measuring systems developed by these organisations frequently served as reference points, and are used by international organisations, risk assessment companies and media players. At the same time, the fundamentally subjective nature of the measurements (manifested through citizen opinion surveys and reports from select experts) must be kept in mind during their analyses, as this has a defining significance not only

from a conceptual but also a methodological perspective. An introduction of the NGOs' democracy and rule of law indexes and their analysis will be provided in a supplementary volume of studies.

The starting point of the impact study was the *minimalist* concept of democracy, which means, that the researchers, from the different dimensions, determine primarily their *concepts of democracy* in *sine qua non* registers, like political competition and political participation and complement them with the elements of the *moderate* (liberal) concept of democracy.

On the basis of the concept of liberal democracy, respect and accountability for individual and minority rights, as well as the requirement for actual institutional functions, are complemented by social relations, the democratic exercise of the law, as well as freedom of the press and speech components.

Here we would like to emphasise that the concept of democracy always carries with it the requirement of effective rule of law, since the rule of law and democracy are concepts that cannot be separated as democratic exercise of the law establishes limits for itself through adherence to or upholding of the rule of law.⁵

At the same time, the impact area study does not go as far as to examine the issues typical of the *maximum/expanded* democratic approach (such as social equality, economic development, quality of life, and the *good governance* that results in widespread satisfaction).

The press and the democratic requirement for press freedom have an unavoidably important role in forming the will of the people, which we examine within the framework of the *Freedom of the press and freedom of speech* dimension. On the one hand, this can be achieved through the realisation of press pluralism, or rather through access to press materials of various political ideologies, on the other hand, it is achieved through the requirement for balanced, objective information. In the interest of defending these democratic freedoms, it is necessary to rule democratically, for these freedoms cannot be defended with anti-democratic tools, as this would raise issues that call into question the entire political system.

⁵ The Fundamental Law of Hungary, Article B, Paragraph 1.

D.1.1. The output indicators of political competition

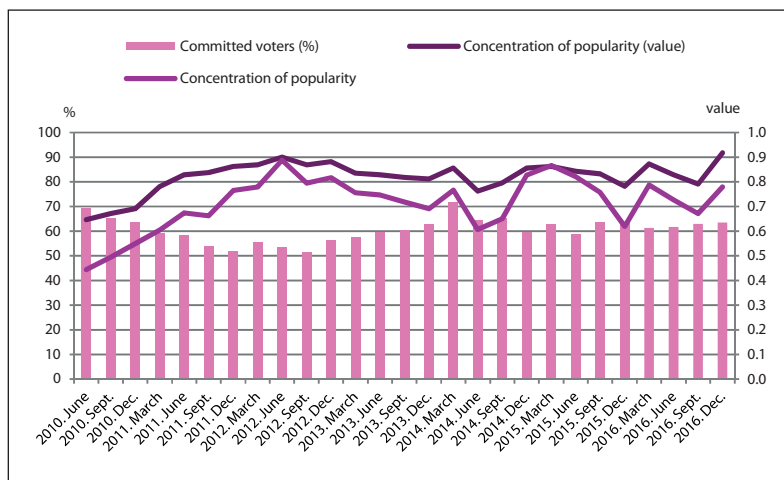
The rivalry between parties is characterised by three indicators and based on the average of public opinion polls conducted by the four major research institutes of public opinion (Ipsos/Závecz Research, TÁRKI, Nézőpont and Medián). The indicators show the proportion of voters committed to a party, the concentration of the parties' popularity and the *advantage* enjoyed by the most popular party. For the calculation of the latter two indicators, we have considered voters who are committed to a party, therefore those who are certain to vote and have a clear party preference.

The percentage of committed voters expresses to what extent overall the democratic parties are successful in their efforts to attract voter support. The higher the value, the greater proportion of mobilised voters with solidified party preferences among those eligible to vote. According to our hypothesis, the higher the proportion of committed voters with party preferences, the greater the number of voters who feel that there is a party capable of representing them.

We use the normalised Herfindahl–Hirschman Index (HHI) to describe the concentration of party popularity. According to the theoretical assumption, the greater the number of parties successfully earning votes and the more equal the distribution of voters between the parties, the greater the political competition. The index shows values between 0 and 1, such that in the event that a single party possesses 100% of the possible votes, the indicator's value is 0, i.e. there is no political competition.

The most popular party's *advantage* is the difference in popularity between the first and second most popular parties as shown with a number between 0 and 1. This indicator is the difference between the proportion of votes gained by the first two parties as a fraction of the two parties' combined total proportion of the votes, which is deducted from the maximum value of 1.

To understand the indicators, it is important for us to emphasise that they are all *output*-type indicators, that is they do not concern themselves with the competition's nature, or its social, legal or media environment. The latter two indicators are also derived from popularity measured by the polling researchers, so these also do not concern themselves with aspects such as how popularity transforms into votes, or how a vote is translated into a parliamentary seat.



Source: kozvelemenynykutatok.hu

It is important to emphasise that the current indicators were developed by the workgroup in cooperation with the Measurement and Methodology Office of the National University of Public Service's Institute for Research and Development on State and Governance, which were first presented in the 2016 Good State and Governance Report. The indicator's methodology did not change from the previous year. At the same time, the indicator was placed first within the *Political competition* dimension in the 2017 report to emphasise its significance.

Following the 2010 elections, the number of voters committed to a party was exceptionally high, but this number steadily fell between the two elections, before growing once again as the 2014 election approached, indicating that the political parties successfully mobilised eligible voters. Following the 2014 elections, this fall between cycles did not occur, with the number of eligible voters committed to a party stabilising at a higher number by the end of 2016.

Popularity concentration peaked in June 2012, following which it settled at a nominally lower level, increasing slightly only during the 2014 elections and at the end of 2016. The trend nonetheless shows competition to be strong, since the concentration has varied between 0.7 and 0.9, and remained at this high level.

Party competition based on the most popular party's advantage steadily grew from the 2010 election to mid-2012, after which it nominally weakened but remained in the 0.6 to 0.8 range. The periods of increase (the 2014 elections and the first half of 2015) are in this range and followed by troughs, but the fundamental trend up to the end of 2016 was an increase in the strength of political competition.

Based on the analysis of the three output indicators, political competition increased in 2016. The greatest contributor to this was the stabilisation at a high level of the proportion of voters committed to a party by the middle of the cycle.

D.1.2. State support for parties and party foundations

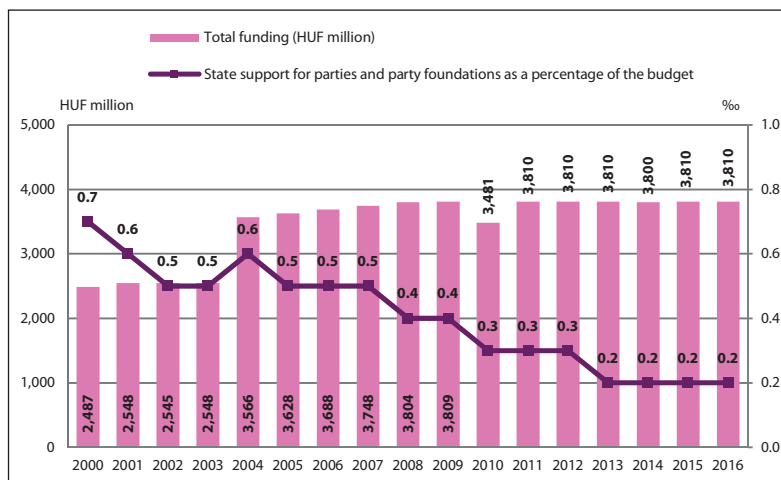
This indicator shows state support for the parties and party foundations as a percentage of total budgetary expenditures for the given year, broken down by year.

With respect to the indicator, it is important to note that, while we only presented the amount of support denominated in Hungarian forints in the 2015 report, the 2016 report – developing the indicator further – examines total support as a proportion of all budgetary expenditures. This better expresses and measures the importance of this area in relation to total expenditures. We have not changed this indicator or its methodology this year.

The principle basis for the indicator's importance and its inclusion in the report are provided by the following factors. State support for political parties is a solution to the financing requirements of political organisations in modern democracies that attempts to limit the advantage that parties with a dominant position (e.g. large membership and membership dues, wealthy donor circles etc.) enjoy in the political contest. For this reason, this factor is absolutely worth mentioning when discussing the measurement of political competition as a factor that exerts an equalising force and helps maintain political competition.

On the basis of all of this, budgetary support for parties and party foundations, as well as the government proposal submitted in regard to this during the process of preparing the Budget Law, is a government tool with which the state can apply an equalising force with respect to the financial foundations of democracy. This can counterbalance the potentially undesirable distorting effects of the political activities of financial or other interest groups. It is also capable of promoting plurality and diversity in political life, thereby allowing democracy to flourish and the greater realisation of a fair(er) political competition.

When examining this impact area, we considered it exceptionally important – beyond the totals denominated in forints – to present the data in proportion to total budgetary expenses. Through this,



Source: Budget implementation acts, 2016: Budget Act

the order of magnitude of the supports provided to the parties and their foundations by the state can be shown as a percentage. This reveals the scale of state budgetary expenses for this state-sponsored financial balancing and assistance to democracy as a percentage of total budgetary expenditures, as well as how this proportion changes in the longer term.

By examining the change in the subsidy, we can state that this amount jumped significantly from HUF 2.5 billion to HUF 3.5 billion from 2003. From 2004 to 2010, a slow increase can be observed, as a result of which the HUF 3.5 billion subsidy grew to HUF 3.8 billion. After 2011, the value of subsidies granted has remained steady at approximately HUF 3.8 billion.

By looking at the change in the percentage of total budgetary expenses dedicated to supporting parties and party foundations, we can state that the proportion of the support, when compared to the years around the turn of the millennium, has generally fallen, while it has stagnated in recent years. Compared to the 2015 budgetary data listed in the 2016 report, there is no significant deviation. Furthermore, the nominal total of expenditures is the same, while the proportion measured to the total budgetary expenditure is almost identical to the 2016 data used in this year's report.

For the past few years, state support for the parties and party foundations has stagnated, while the amount of state support provided to the parties is smaller as a percentage, since total budgetary expenses have grown.

D.1.3. Distribution of parliamentary interpellations between the opposition and governing parties

This indicator wishes to measure the expression of political competition in parliament through interpellations. During the development of the indicator, the workgroup, taking the National Assembly's practice as its basis, counted interpellations by independent members of parliament as belonging to the opposition.

We wish to make clear that the theoretical foundation of the indicator is that interpellations are a tool of the opposition, while they can also be used by the government. Interpellations are a means for the representative legislative authority to oversee executive authority, so, in the context of democracy, their quantity gives us a picture of the ability of a legislative authority to oversee an executive authority (the government).

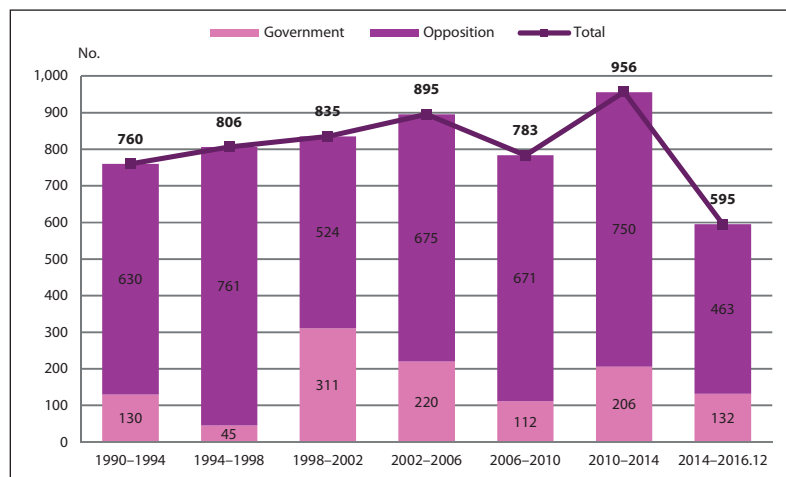
Based on this measurement, the use of this indicator is justified if we take into consideration, on the one hand, the total number of interpellations, and, on the other, the ratio of government and opposition interpellations.

Hungary has a parliamentary form of government. Consequently, in the constitutional sense, the central driver of the public law apparatus is the relationship between parliament (the legislative authority) and the government (the executive authority). Parliamentary systems, as the name of this type of government suggests, must be founded on a form of dominance by the legislative authority function.

All this is manifested in Hungary's legal structure, such as the elections of the Prime Minister, the President, the Members and President of the Constitutional Court, as well as the President of the Curia (Supreme Court), who are all under the authority of the National Assembly.

The primacy of the legislative authority is also manifested through legislation in Hungary within the scope of the drafting of the constitution. At the same time, the primacy of parliament is manifested most significantly by the government's accountability before it. It is important to emphasise that the driver of parliamentary forms of government is the legal relationship between the legislative and executive authorities, which manifests itself through the accountability before parliament mentioned above.

We can firmly establish that one of the essential conditions for the exercising executive authority is winning a parliamentary



Source: parlament.hu

majority, for without this the executive authority (the government) cannot function. We can say this even though cases of minority governments are widely known, such as when the government does not enjoy the support of a majority of parliamentary seats. In such cases, the government achieves a majority before each individual legislative or other parliamentary decision through negotiations, one at a time and individually, and perhaps through compromises. The government's accountability to parliament ensures that the parliament does not withdraw its confidence in the government, in addition to lending its support to the government's policies.

The most important coordinate point regarding the government's accountability to parliament is perhaps the beginning and end of its mandate (through a constructive vote of no confidence), as well as parliament's oversight of the government and the government's ability to be overseen, of which the most important manifestation before the plenum is the legal institution of interpellation.

Taking the total number of interpellations into consideration, we can observe a fundamentally increasing trend. During the second cycle from 1994–1998, the number of interpellations by the government fell to an abnormally low amount, while the cycle from 1998–2002 featured the most by governing parties. Following this, the number consistently fell until 2010, at which time it once again began to increase. The number of interpellations by the opposition grew in the first two cycles, followed by a fall during the 1998–2002 cycle. The number of interpellations by the opposition has steadily increased to the present day.

Parliament is increasingly active in exercising its oversight function towards the government. The number of opposition interpellations is increasing, and the proportionally adjusted data from the current cycle also shows a positive trend.

D.1.4 Trust in political parties

This indicator presents the results of the Eurobarometer's standard, representative questionnaire-based survey, which is prepared annually in the European Union's 28 member states, surveying 1,000 members of the population over the age of 15.

This indicator is therefore available in a time series and for international comparison, so the impact area analysis also takes the results of the other Visegrád countries (the Czech Republic, Poland and Slovakia) into account alongside Hungary's.

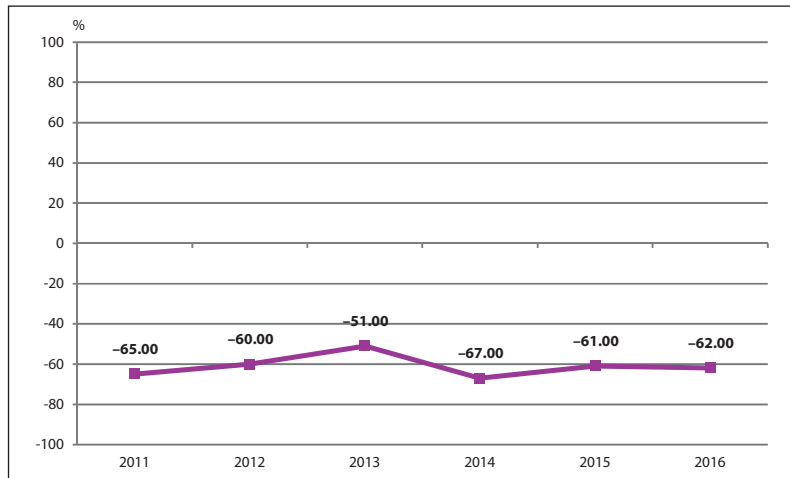
During the survey, Eurobarometer asks the respondent how much they trust various state institutions, among them public administration, parliament, the government, the European Union, as well as print media, the internet and online social networks.

Of the issues addressed in the public opinion survey, the question relevant to our topic is as follows:

"I would like to ask you a question about how much trust you have in certain institutions. For each of the following institutions, please tell me if you tend to trust it or tend not to trust it. Political parties? (%)." (Question QA8.5, Standard Eurobarometer 85 Spring 2016).

Trust in the parties is not a negligible aspect of the *Political competition* dimension, since this can serve as a form of qualitative scale for the main participants of the political contest, the parties. The parties play an intermediary role between society and the state; they present the interests and desires of citizens, provide them with the opportunities and motivation to participate in public life, as well as serving as the most important channel for selecting and appointing political officials.

Today's modern democracy, which at the highest level is embodied in the parliament elected by the people, is unequivocally a party-based system, which defines the democratic social will and society itself on the basis of political cleavage lines. For this reason, trust in the parties is an unavoidable part of our topic as the key flagship of the political subsystem. Potentially inappropriate or dysfunctional operations and related subsequent



Source: Eurobarometer (Standard Eurobarometer 85 Spring 2016)

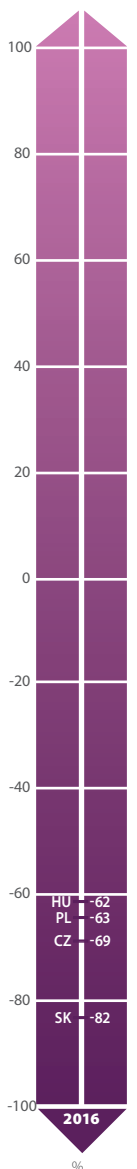
loss of trust in parties among voters can undermine the state's democratic operations, and with it political competition, which is the foundational motif of democracy today.

The balance indicator used during the survey expresses the difference between positive and negative responses. Negative values therefore mean that negative responses were in the majority, and the extent to which they are below zero expresses the extent of this.

By examining the results of the survey, it can be determined that a resoundingly improving trend was seen in Hungary from 2011–2013, which amounted to a 14% improvement in terms of trust in the parties. From 2013–2014, a larger 4% drop was observed, which was followed by a slow improvement up to 2015. Compared to the final data from the 2016 report, the most recent data show a small 1% drop. All this did not change the fundamental trend of increasing trust in the parties since 2011.

Overall, we can state that a minimal improvement can be observed in recent years.

Turning our attention to the Visegrád countries, international comparison shows that trust in parties is of similar magnitude to that measured in the Czech Republic and Poland, while the population is significantly less trusting towards the parties in Slovakia.



Trust in the political parties has improved marginally in Hungary. Of the V4 countries, Hungary performed similarly to the Czech Republic and Poland, while Slovakia fared significantly worse.

Source:
Eurobarometer

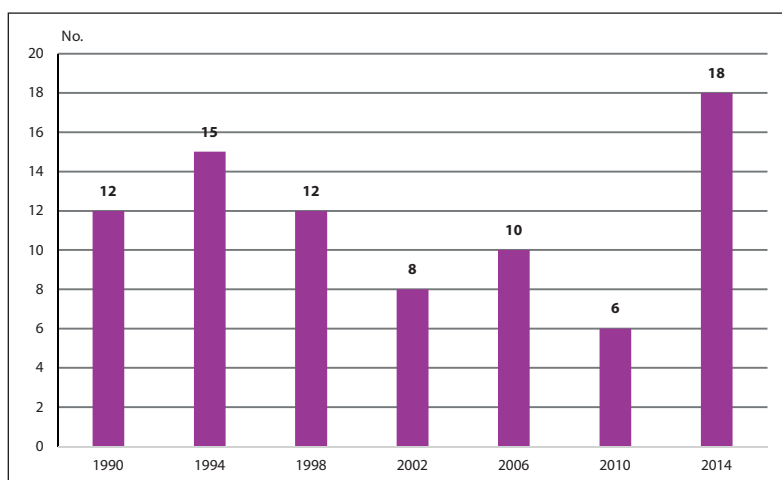
D.1.5. The number of political parties submitting national lists for elections

Political parties are actors of key importance in modern democratic states. As with the D.1.4. indicator, it is also important to firmly establish that the parties play an important intermediary role between society and the state; they present the interests and desires of citizens and provide them with the opportunity and motivation to participate in public life, as well as representing the most important channel for selecting and appointing political officials. The freedom to form parties is a qualitative criterion for democracies, and the minimum condition for political competition. At the same time, it is worth noting that this important channel of democracy, the political party, can only truly be considered a part of the political contest if its presence can be measured at the societal level and if it can actually reach the voters with its values. The most authentic measure for this societal presence in political contests is participation in the parliamentary elections organised every four years, as well as the ability to participate.

While retaining its foundational structure and logic, the electoral system was significantly restructured by the legislative body for the 2014 elections. As this impacted the conditions for assembling a national list, the workgroup considered it appropriate to use this indicator for this year's report in place of that from last year, which counted the number of parties reaching 1% at the elections.

The *ability* to assemble a national list is, in the opinion of the workgroup, the point of origin and a minimal requirement, the achievement of which allows a party to enter the political contest.

In the previous system used for 20 years, which also included regional-county (or capital city) lists, a party was required to add seven territory lists to the national list. In order to assemble the regional list in a given county (or the capital city), the party had to launch a candidate for an individual seat in a quarter of constituencies, or in at least two constituencies. In order for a candidate to stand for an individual mandate (seat), they had to collect 750 *endorsement slips* from voters. It is worth noting that, on the basis of the previous rules, the minimum number of recommendations necessary to assemble a list could not be determined as precisely as they can under the current system. For example, according to the old rules, of the 32 individual districts in Budapest, a candidate had to stand in a quarter of them, which necessitated the collection of a minimum of 6,000 endorsement slips, while in Nógrád county, which has four individual constituencies, it was enough to acquire the necessary 750 endorsement slips in two constituencies for a total of 1,500 endorsements needed to assemble a regional list. If we take



Source: NEO

as our basis, 20,250 endorsement slips are necessary for the seven regional lists with the most individual constituencies, while only 11,250 endorsements were necessary to assemble a national list in case of the seven regional lists with the smallest number of individual constituencies. If we take the average of the two extreme examples, then 15,750 endorsements were necessary to compile a national list on average.

According to the electoral laws currently in effect, a party can compile a national list if they can put forward candidates in nine counties and 27 individual constituencies in the capital city. Endorsements from 500 voters are needed to put forward a candidate for an individual mandate in a given constituency. Therefore, in order to compile a national list at the national level a party, in addition to an adequate regional spread, needs the signatures of 13,500 voters.

It is also important that while an eligible voter only previously received one endorsement slip, thereby only being able to endorse a single party, under the current system, an eligible voter can endorse candidates from multiple parties with his/her signature, thereby also making it easier to collect the necessary number of signatures.

With respect to the number of parties assembling national lists under the previous system, 1994 was the peak, when 15 parties compiled national lists, while the nadir was 2010, when only six parties achieved this. From 1994–2010 an unequivocally decreasing trend can be observed, while a significant increase was observed following the introduction of the current electoral law, as more parties than ever before were able to assemble national lists in 2014. We can state that the legislative body made the requirements for entry into the national political contest easier, and political diversity and competition grew as a result.

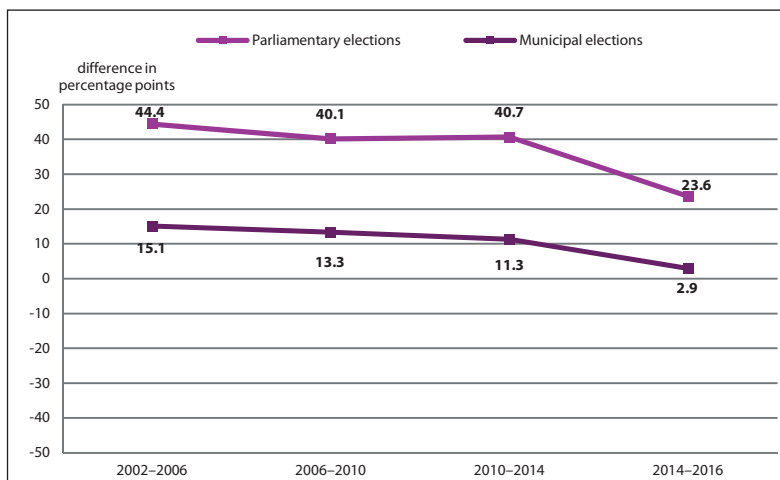
The number of parties compiling national lists was the greatest in 2014 as a result of changes to the regulations on putting forward candidates and compiling lists. This transformation made competition more open, and allowed more parties to enter the race.

D.2.1. Participation in by-elections

The main scene for political competition is parliamentary and municipal elections. Politics is characteristically cyclical in nature, so we placed emphasis on the intermediate periods in this year's research, which the current indicator attempts to measure.

This indicator shows the difference in voter participation between regular and mid-term elections in conurbations with populations greater than 10,000 for parliamentary and municipal elections. The method for calculating the data was to select those constituencies where a mid-term parliamentary or municipal election was held in a given cycle, count the voter participation rate in every constituency, then take the participation rate weighted with the average of those eligible to vote. Finally, we take the average participation rate for the same constituency calculated similarly and subtract the value of the mid-term election to show the normal relative value of political participation between regular elections. The methodology has changed from last year's since in certain electoral districts there are differences in the number of eligible voters, and the participation rates were weighted with the numbers from previous elections, therefore the values for the earlier cycles have changed from last year's report.

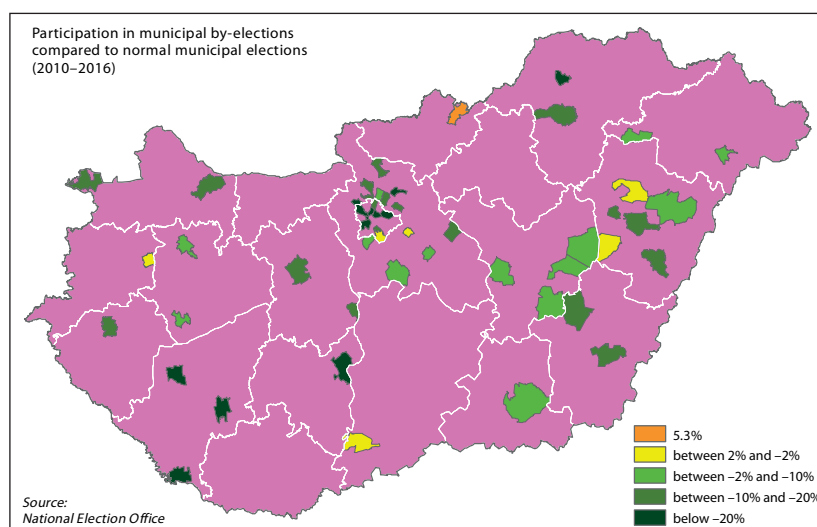
On the graph, a positive value indicates that regular elections mobilise voters more. On this basis, it can be said that regular elections, compared to mid-term elections, draw larger crowds for both parliamentary and municipal elections. The intensity of the voters' political participation is cyclical, in that it reaches its maximum every four years during parliamentary elections, and is then lower until the following elections. On the other hand, the difference in the participation rate for municipal elections is smaller when compared to the parliamentary elections.



Source: NEO

By examining the differences in participation rates for municipal elections, it can be determined that while the difference was 10% to 15% in the previous three cycles (2002-2006, 2006-2010, 2010-2014) when compared to the regular elections, for the current cycle it has been less than 3% so far. For parliamentary elections, the difference has also decreased with respect to participation rates for regular and mid-term elections. During the previous three cycles, participation was 40% greater during regular elections, while during the current cycle it has only been 23%. Based on all this, we can arrive at the conclusion that mid-term elections held during the current cycle are mobilising more voters than previously, so mid-cycle political participation from this perspective has become more intense.

Examining the regional nature of municipal elections, it can be concluded that there are no significant differences across the country. What should be pointed out, however, is that mid-term participation rates are significantly behind in Budapest when compared to regular elections.



In the current cycle, mid-term parliamentary and municipal elections have attracted more voters than in previous cycles, so mid-cycle political participation is more intense.

D.2.2. Opinions of the way democracy works

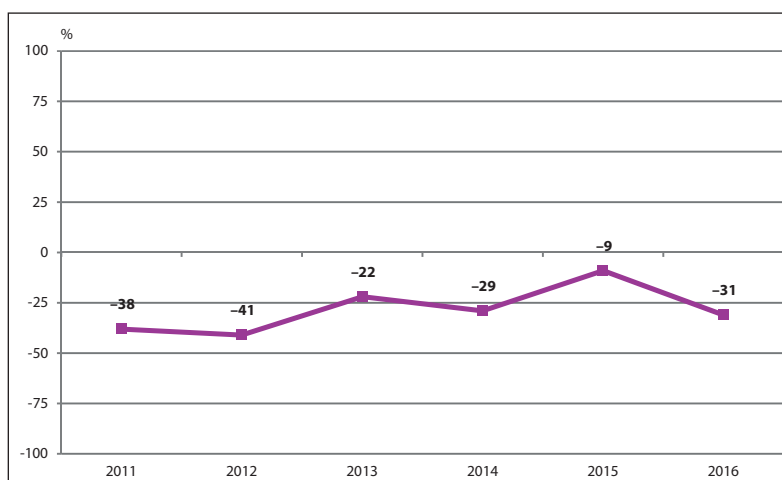
This indicator reveals the results of the Eurobarometer's standard, representative questionnaire-based survey, which is performed annually in the European Union's 28 member states, surveying 1,000 members of the population 15 years of age or older. The question presented in the survey is the following: "On the whole, are you very satisfied, fairly satisfied, not very satisfied or not at all satisfied with the way democracy works in (OUR COUNTRY)?" (Question QA18a, Standard Eurobarometer 85, Spring 2016).

In the view of this workgroup, this indicator is an important aspect of the *Political participation* dimension, since it is a type of quality measure for democracy, which, on the basis of the authority-organisational principle (rule by the people), is based on the people's political participation. Naturally, the establishment of the democratic framework for the state's institutional system is also important, the structure and leadership nomination regulatory system fundamentally determines the judgement of how democratic systems work. The importance of the indicator therefore is that it can be used to understand at the societal level how the democratic decision-making and institutional system works in a given country. In the opinion of this workgroup, this indicator sufficiently complements the dimension's other, objective indicators based on hard data.

In regard to the question asked during the public opinion survey, it is important that we make clear that democracy in the modern sense is based on the participation and decisions of the people. It is based on the principle that those in power derive their authority from the people, who exercise it indirectly through the elected legislative authority or directly through referenda. It is quite important therefore, with respect to the concept of democracy, that an essential element of democracy is participation. Based on all this, the functioning of democracy and its appraisal is not a negligible factor with regard to political participation.

The balance indicator expresses the difference between positive and negative responses. The negative values therefore mean that negative responses were in the majority, and the distance from zero shows the extent to which this is the case.

On the basis of the survey, it can be said that an improving trend could be observed in Hungary in terms of how the functioning of

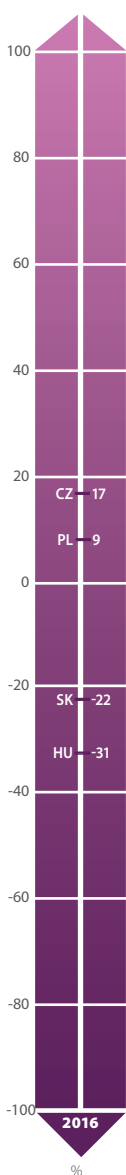


Source: Eurobarometer (Standard Eurobarometer 85, Spring 2016)

democracy was judged from 2011 to 2015. Starting from the minus 38 percentage point value in 2011, the measurement's result was just minus 9 percentage points by 2015. The most recent value for 2016 showed a significant downturn, falling to minus 31 percentage points. Essentially, the strongly improving tendency up to 2015 nearly fell back to 2011's minus 38 percentage starting point value. Therefore, taking the entire data series into account, we can only speak of a 7 percentage point increase.

In comparison with the other Visegrád countries (the Czech Republic, Poland and Slovakia), it can also be established that those polled in our region considered the functioning of democracy better than in Hungary. Poland and the Czech Republic are worth highlighting, where the balance indicators are positive: 9 percentage points in Poland, while 17 percentage points were measured in the Czech Republic. At the same time, examining international data and trends of the last two years, it can be noted that while Poland fell to 9 percentage points from 31 percentage points in 2015, the Czech Republic went from the neutral 0 percentage point up to 17 percentage points, while Slovakia saw a small improvement of 7 percentage points. Taking the two together, it can be stated that, while in 2015 Hungary was significantly ahead of Slovakia, Hungary's significant drop and Slovakia's small improvement means that Slovakia was ahead of Hungary by 9 percentage points in 2016, on the basis of the survey.

In Hungary, the functioning of democracy has nominally been rated more positively in recent years, but witnessed a significant drop in 2016. When compared to the Visegrád countries Hungary also fell behind.



Source: Eurobarometer

D.2.3. Exercising the right of assembly

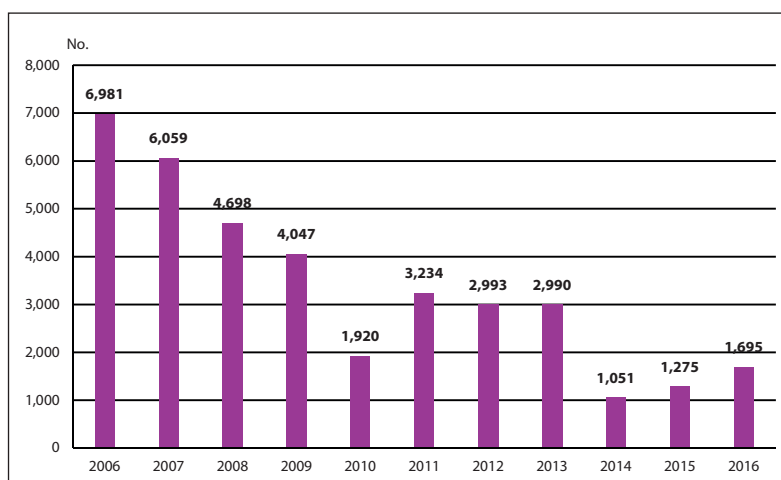
This indicator, on the basis of the law on the right of assembly, measures the number of reported peaceful gatherings, marches and protests (hereafter: events) in a given year, in which participants were free to express their opinions. It is worth highlighting that since the types of events that make up the basis of the analysis are those that fall within the conceptual framework of the law on assembly, the indicator does not include gatherings associated with the election of parliamentary or municipal representatives, meetings of representative and council members, religious services, events and religious marches organised by legally recognised churches and religious denominations on their property, cultural and sporting events, as well as family events.

With respect to the indicator's theoretical foundation, it is important that we make clear that the right of assembly as a basic right is considered to be first-generational, and a basic right considered to be of political nature by the constitutional law profession. An authority's source of power is the people who, in principle, exercise their power indirectly through the elected national assembly, and furthermore exceptionally directly through referenda.

Both elections and referenda are exceptionally important areas of political participation, and it can be stated that participation in these have direct stakes and immediate consequences for power. In case of elections, it is mandates for representatives, in case of referenda it appears as a binding decision on the legislative authority (or in the opposite case, where the people on the given issue leave the decision with parliament).

Gathering peacefully, which is exercising the right of assembly, does not have the same direct authoritative or legal consequences mentioned above, although numerous historical or recent examples can be mentioned of how social unrest and the subsequent wave of protests were capable of removing governments or entire regimes, thereby exerting direct authoritative and legal consequences. We can consider the right of assembly as a constant and everyday tool of politics and political participation, since it is not tied to election cycles or a lengthy referendum procedure.

The government capability with respect to this indicator is that the authority in power must provide appropriate conditions



Source: HNPH

for citizens, through the right of assembly, to be able to exercise their fundamental constitutional right to free expression in a safe environment.

The right of assembly crystallises most clearly in the periods between elections, since exercising the right of assembly in this situation is one of the most important tools for expression. This statement is apparently underscored by the fact that the number of events in 2010 and 2014 significantly dropped. An exception to this trend was the year 2006, for of the period examined, most of the events could be placed in this year. The reason for this was the leaking of the so-called Balatonőszöd secret speech, as well as the politically-charged events related to it.

It is important to highlight that this indicator does not contain data for election gatherings, which is why figures are lower in election years. Furthermore, it does not account for the type of event or the number of participants. It does contain, however, pro-government protests, so the indicator does not exclusively count opposition events.

In the process of analysing the indicator, we noticed that the number of events has significantly dropped since 2006, from a magnitude of 6,000 events all the way down to 2,000. At the same time, 21% growth could be observed in the indicator in 2015 compared to 2014, and this trend continued in 2016, when there was a 33% increase as compared to the 2015 data. So over recent years overall, the trend has been one of growth.

Citizens exercising their right of assembly has seen a sharp rise over the last two years following several years when a downward trend was observed.

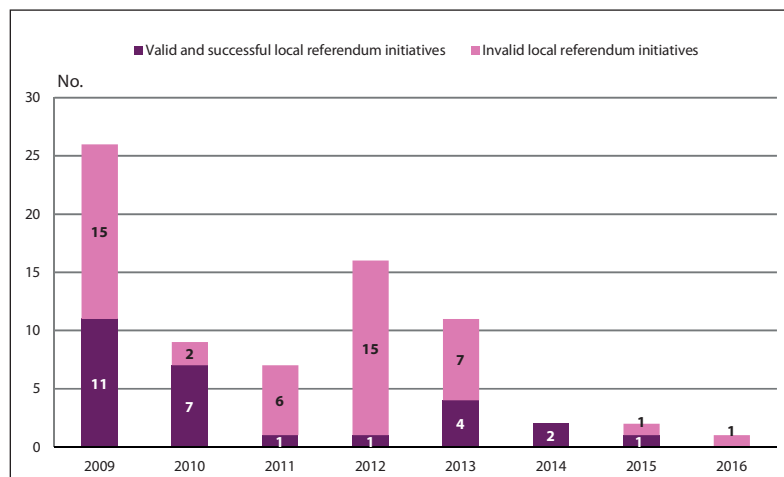
D.2.4. Local referendum initiatives

This figure shows the number of certified local referendum initiatives, and within this those that were valid and effective, as well as the number of invalid referenda.

Local referenda are one form whereby the people directly practice their sovereignty, which serves a supplementary role in modern representative democracy in addition to the indirect exercise of authority through elected representatives. At the same time, it is absolutely justified to measure it as a form of political participation, since this is the other political participation tool aside from elections that can be used for direct legal effect.

We can separate several stages for initiating referenda. The first point where referendum activity can be measured is the number of initiatives submitted. From this data series, we can infer the strength of the desire for referenda among voters, for example whether they frequently wish to express their ability to directly exercise authority on many issues. At the same time, a drawback is that it does not show actual participatory data, for a relatively small circle is capable of submitting referendum initiatives. Furthermore, absurd and entirely provocative or flippant issues may also appear during this stage, on the availability of free beer, for example. Such questions obviously do not have political or public relevance.

The second stage of referenda initiatives identified by the workgroup that can be measured is the number of accepted initiatives by local election committees. By this point, the local election committee has filtered out the possibly flippant or legally inadequate initiatives, which in a given case may be unsuitable or fail to adhere to electoral or legislative requirements for clarity. We can identify as a problem, however, that it still cannot be certified at this point if actual political will and participation will assemble behind the initiative. The third possible measurement point identified by the workgroup is the number of referenda announced, for which we will consider the initiatives that not only passed the local election committee controls, but for which the petitioners also managed to collect the necessary number of signatures (for those occasions



Source: NEO

when we refer to referenda initiated by voters), indicating actual political will, intent and participation behind the initiative.

Among those listed above, the workgroup, similarly to last year's *Good State and Governance Report*, decided to measure the number of referenda that went to a vote. On the one hand for reasons of continuity, and on the other because, as we wrote above, these are the referenda that can be considered legally adequate and serious, and they presume the type of voter activity relevant from the perspective of political participation.

For the period examined, there was fundamentally a falling trend. Following the starting year of 2009, when 26 local referenda were held, there was a drastic drop. This was followed in 2012 by a significant increase (that year, as we can see, 16 local elections), but by 2014 the number had dropped to a fraction of the original figure, since only two local referenda were held that year. While analysing the indicator, we noticed that while there was an equal number of valid and effective or invalid referenda up to 2009, invalid referenda significantly outnumbered valid ones among the number of decreasing referenda after this and up until 2013. Following this, both of the local referenda held were valid in 2014, while there was one valid and effective and one invalid local referendum in 2015. The year 2016 saw the decreasing tendency continue, since only one referendum was held, which was invalid.

The number of local referenda shows a decreasing tendency, and within this the proportion of invalid referenda is greater.

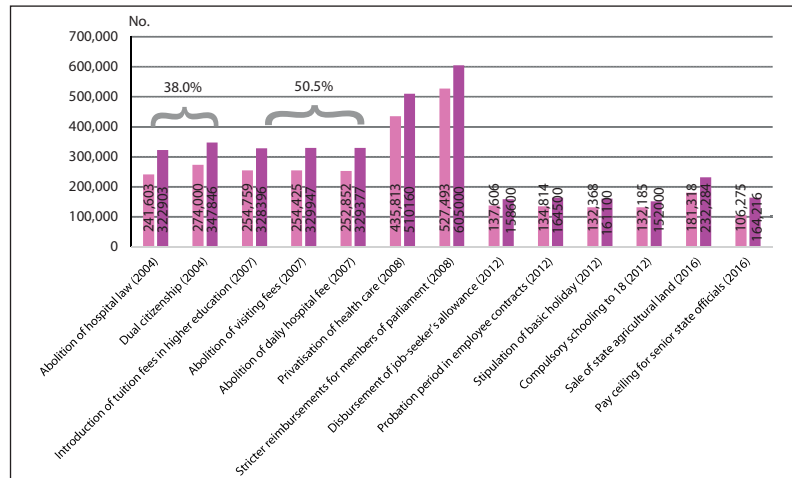
D.2.5. Citizen support for national referendum initiatives

Similarly to the D.2.4. indicator, national referenda are among the direct methods for exercising democracy and the sovereignty of the people. They are direct tools for generating the law and directly show the intensity of voter participation.

Citizen support for and the intensity of referendum initiatives can be measured in several ways. From among these, however, we must exclude such opportunities as the number of submitted initiatives or those certified by the National Election Committee. On the one hand, the number of inappropriate initiatives is problematic. Additionally, according to § 8 of Act CCXXXVIII of 2013, at least 20 signatures are required for an initiative, a proportion that is quite small compared to the 8.3 million eligible voters. On the other hand, the National Election Office filters out the legally inappropriate or flippant initiatives. Legally inadequate initiatives are those that are either forbidden topics or do not meet electoral or legislative requirements regarding clarity. Decisions to certify questions are procedural and of a legal nature, and do not measure political activity.

Voter activity is revealed through the number and proportion of signatures collected for the referendum initiative, the number and proportion of successful or unsuccessful signature drives, as well as voter turnout. Here we consider those initiatives that have passed through the National Election Committee's filter and where the adequately organised sponsors of the initiative collected the necessary number of signatures within the collection period of 120 days (taking into consideration that eligible voters can only exercise their constitutionally fundamental right if valid and complete data is provided to verify the signatures). For this reason, the number of valid signatures of support captures and makes presentable eligible voter activity with several related and interactive (legal, procedural, organisational, thematic and mobilisation) perspectives.

Between 1990 and 2016, 24 national referendum initiatives were processed, of which 18 were successful and six were not. We consider an initiative successful where at least 100,000 valid signatures were collected. We considered those unsuccessful where the petitioners failed to submit the signature forms (on time), or where they failed to collect 100,000 valid signatures. Of the 18 successful referendum initiatives, five occurred between 1990 and 1997, but in these cases we do not possess certified data regarding the precise number of signatures, only that they were successful. For this reason, we will focus on the remaining 13, of which the first was in 2004.



Source: NEO

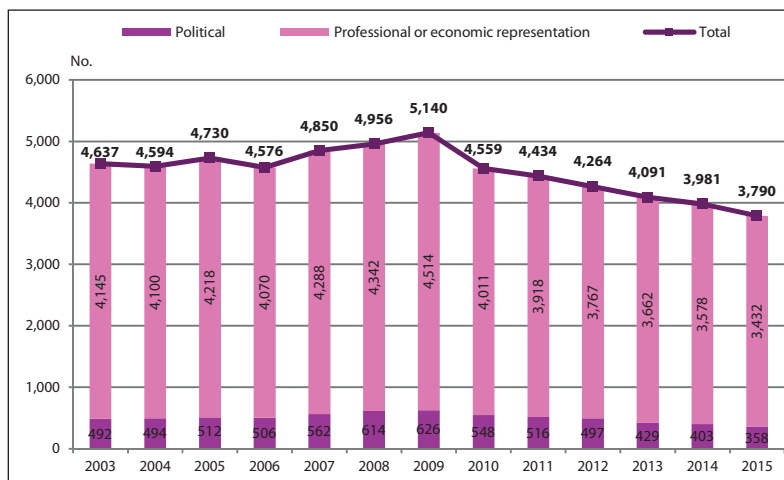
Of the 13 successful initiatives, in 11 cases the signature collectors were parties, party politicians or an association, and only in two cases private individuals. The number of signatures initially was above the minimum required, which in 2008 grew to double or two-and-a-half times, after which it fell to the range where the National Assembly can decide whether or not to declare the referendum. The exceptional data from 2008 are represented by the signatures collected by two private individuals, which can be explained by the topics of the referendum questions, as well as the protest mood against the government. On the graph, we highlight the certified number of signatures. The potential signature base grew when Hungarians living beyond the country's borders were granted the franchise, therefore we counted 8,061,101 eligible voters in 2004 and 8,272,625 in 2016. As such, citizen support for the referenda was between 1.3% and 6.6%, with the average value being 2.9%. In case of 2004 and 2007, we also provided the turnout percentage for the referenda held in 2004 and 2008. The Momentum Movement's 2017 initiative intended to be a local referendum, but its 151,239 valid signatures were 10.9% of the 1,385,262 eligible voters in Budapest. Had Momentum launched a national initiative, of the 8,253,413 eligible voters, 901,084 would have supported the initiative. The Momentum's collection was significant from the perspective of voter activity, since compared to the two unsuccessful signature collection drives of 2016, they collected the necessary signatures in Budapest in a quarter of the time than other initiatives that made full use of the 120 days for collection nationally.

Citizen support for national referenda initiatives is of varying intensity, occasionally not reaching the level necessary for referenda, while in other cases citizen participation is exceptional.

D.3.1. The number of non-profit organisations engaged in political, professional or economic activity or advocacy

The indicator reveals to what extent we can talk about a living, organised and reflexive relationship between components of the political subsystem, such as political institutions involved in legislation (the National Assembly, municipal governments, the government, etc.), as well as interest groups operating as institutionalised organisations within society. Societal relationships and the government's ability to create infrastructure for information flow is revealed by the extent to which the affected societal subsystems and relevant organised interest groups (NGOs) are able to make themselves heard during the decision-making process. Naturally, it is important to note that a large number of these non-profit organisations is not a sufficient guarantee for the effectiveness of representation, but, understood together with the other indicators, it can provide a certain base.

In our analysis, based on the HCSO's non-profit organisation classification system, we examine the number of non-profit organisations in a given year categorised as political, professional and economic interest groups. Their number in Hungary has steadily grown since 2004 up until 2009 (with 2006 being the exception). Between 2009–2010 there was a significant drop in numbers, with 4,559 organisations in operation against 5,140 in the previous year. From 2010, this number has decreased each year. Between 2009 and 2013, the number of non-profit organisations decreased by more than a thousand to a fifth of the total. This decreasing tendency appears to be related to stricter legal regulations regarding the public interest of NGOs. Within this framework, every NGO had to modify its founding charter to bring it into line with the Civil Code established in Act V of 2013. The other significant change was in the provisions of Act CLXXV of 2011 (Civil Law) on the right of association, public benefit status,



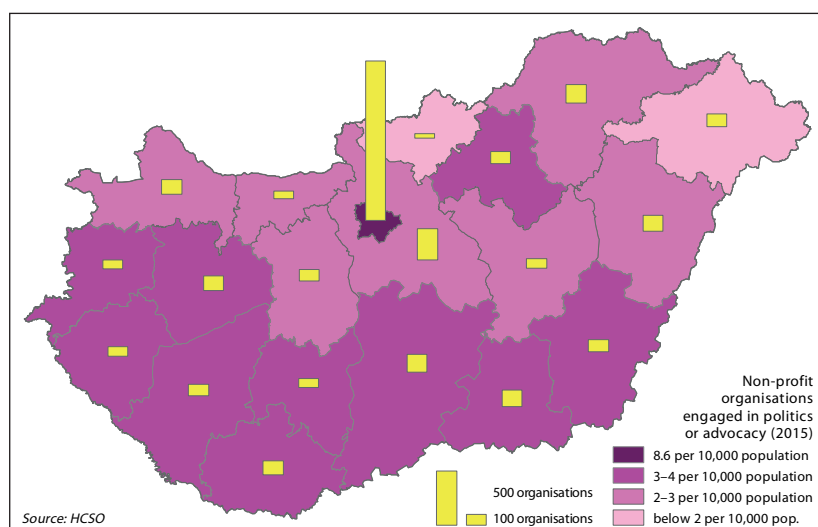
Source: HCSO

as well as the operations of NGOs, which, among other things, did not allow for the direct foundation of public benefit and specifically public benefit organisations, since the requirements for registering public benefit status can only be proven by companies that have annual business reports for two years.

The majority (85–90%) of organisations examined focus on professional and economic advocacy, with only a smaller proportion listing political advocacy as their main activity. The total number of organisations decreased by 2.7% between 2013 and 2014, while the decreasing tendency continued further from 2013 to 2015, falling by a further 4.8%. Of the 3,790 non-profit organisations in 2015, 3,432 were engaged in economic and professional advocacy, while only 358 with representing political interests. What this means is that only 9.4% are engaged in political advocacy.

The territorial distribution reveals that the overwhelming majority of advocacy organisations operate in Budapest, where there are 8.6 organisations for every 10,000 of the population.

We can expect the steadily decreasing trend since 2009 to continue in the coming years.



Source: HCSO

In 2015, the number of non-profit organisations engaged in representing political, economic and professional interests decreased by 4.8%, thereby continuing the trend that began in 2009.

D.3.2. The number of people performing volunteer work at non-profit organisations engaged in political, professional and economic activity or advocacy

Democracy can wholly fulfil its role only if citizens participate in shaping political events and actively express their opinions on the activities of politicians. There are multiple ways for an individual to express a political opinion. The citizen expresses their political intent primarily by voting in municipal and primary elections, although there are other opportunities between elections. They can also participate in a variety of demonstrations, independent of whether they are pro or anti-government, as well as participating in NGOs that aim to represent political or economic interests. Through their activities, citizens who perform volunteer work may significantly influence the formation of political decisions and can actively participate in their development. The extent of volunteer activities performed for non-profit organisations engaged in political, professional and economic advocacy is important data that shows the population's willingness to participate in the democratic system and its level of activism.

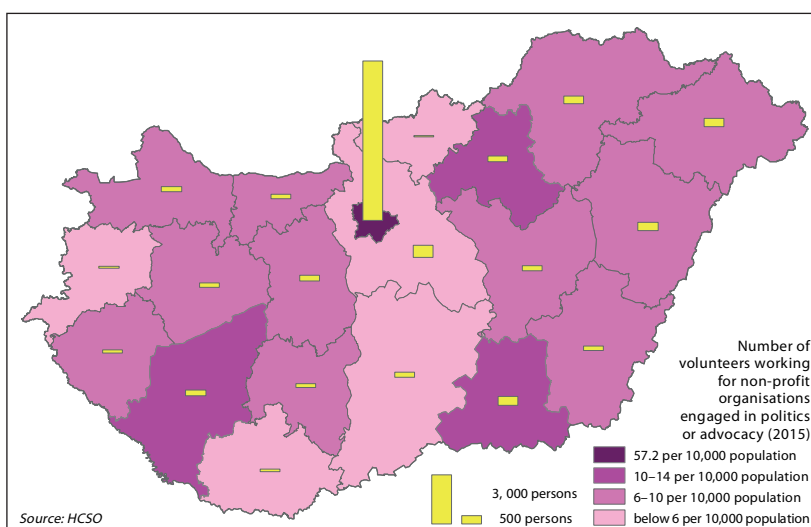
In our analysis, based on the HCSO's non-profit organisation classification system, we study the number of people performing volunteer work in a given year for non-profit organisations categorised as political, professional and economic interest groups. The majority of volunteers (around 80%) perform their activities at economic or professional interest non-profit organisations. Between 2007 and 2010, the number of volunteers decreased despite an increase in the number of non-profit organisations from 2007 to 2009. From 2010, the number of non-profit organisations decreased, although the number of volunteers increased. In other words, fewer organisations employed more volunteers. Between 2013 and 2014,

the number of volunteers fell drastically by 11,900. From 2014 to 2015, no significant change was observed, as the number of volunteers in the examined organisations fell from 16,202 to 16,062. The internal distribution of those working with professional, economic or political advocacy organisations also did not see significant change in the last two years of the data series, which shows that the level of advocacy activity in society appears to have stabilised following the major slump in 2014. Of the 16,062 people performing volunteer work in 2015, 13,190 worked in professional and economic advocacy, while those working in political advocacy numbered 2,872.

In the territorial distribution, similar tendencies can be observed. Volunteer activity is greatest in Budapest, where there are 57.2 volunteers for every 10,000 residents. On the county level, Heves, Csongrád and Somogy stood out, with 10 to 14 volunteers for every 10,000 residents. On the basis of regional figures, there were 6 volunteers for every 10,000 residents in the less active counties.



Source: HCSO



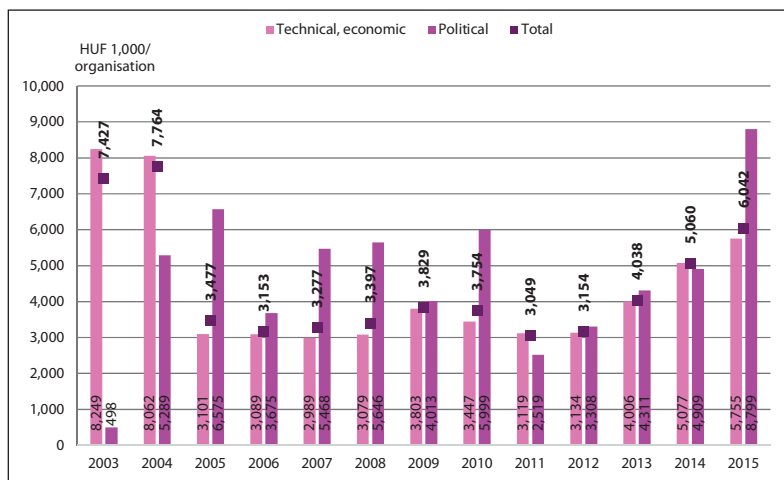
Source: HCSO

In 2015, the number of people performing volunteer work at non-profit organisations engaged in political, professional or economic activity or advocacy did not move from the level seen after the sudden slump in 2014.

D.3.3. Average state support for non-profit organisations engaged in political, professional or economic activity or advocacy

Political, professional or economic advocacy activities are inconceivable without the inclusion of financial sources. Attracting funding and winning state grants, as well as the characteristic membership fees of economic advocacy organisations, ensures the conditions for its volunteers to be able to work. The use of state subsidies is of substantial importance to their financial resources. Legal regulations for the use of state subsidies have become stricter. It is the workgroup's belief that this is what in part led to a reduction in the number of non-profit organisations. The result of the stricter laws was that organisations that are non-profit in name only and performed no activities no longer had access to state funds. The actual operations of interest advocacy organisations would be even more difficult without sustained state subsidies. This directly contributes to the operation of the organisations, and thereby indirectly facilitates social dialogue, which is one of the basic elements of democratic political systems. The larger the number of genuine advocacy organisations that can have their voices heard in the civil sphere, the greater the actual chance of finding compromise solutions in political matters that arouse interest in society, thereby increasing the societal legitimacy of political decisions.

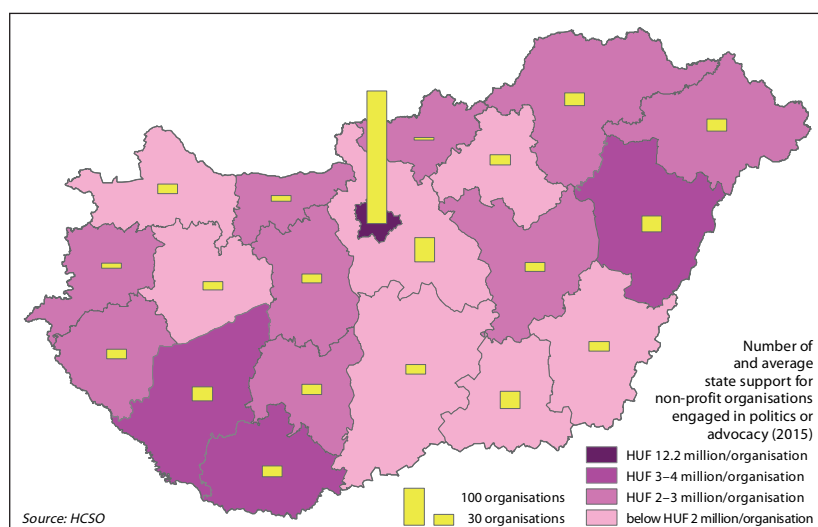
In our analysis and on the basis of the HCSO's rating system for non-profit organisations, we examined the total state subsidies received by political, professional or economic advocacy organisations in a given year, and within this how much support an organisation receives on average. To understand the indicator, it is important to know that the distribution of support is not equal among political, professional and economic advocacy non-profit organisations; the indicator only shows the average. While HUF 3



Source: HCSO

million was the average budgetary support for an organisation in 2011, this value rose to HUF 6 million in 2015, an increase of 100%. The internal distribution of the subsidies changed over time. While HUF 3.1 million in subsidies were for professional and economic advocacy organisations in 2011, HUF 2.5 million were for political organisations. In 2015, the former organisations received HUF 5.8 million, while the latter received HUF 8.8 million. From this, we can clearly see that political advocacy organisations received proportionally more money from subsidies in 2015 than 2011. The observable trend since 2012 suggests that average state subsidies for advocacy organisations will continue to grow, which is generally a positive result in the interest of promoting political pluralism.

A similar tendency was observed to the previous indicator in terms of territorial distribution, that is state subsidies per person were the highest in the capital.



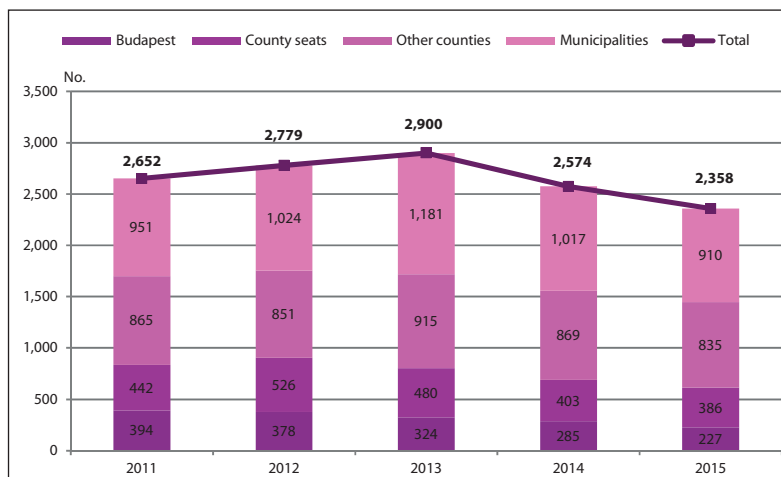
In 2015, support for the types of non-profit organisations mentioned again increased by 20%. Support for political organisations is three-and-a-half times the 2011 total, while that for professional and economic organisations has increased by 50%.

D.3.4. The number of non-profit organisations actively participating in the policy analysis work of local (county or metropolitan) municipalities

Interest advocacy activities are not limited to the national political level; they also play an especially important role in the decision-making process of local governments. Non-profit organisations actively participating in the policy analysis work of local governments are a cornerstone of the promotion of social relations at the local level. Generally speaking, citizens and NGOs tend to be more easily mobilised and in larger proportions in local affairs than in national matters. Despite this, and on the basis of data from the National Election Office, it can be determined that the participation rate is higher at parliamentary elections than in municipal ones.

The HCSO data that we used show the number of non-profit organisations that occasionally or regularly participate in the policy analysis work of local (county or metropolitan) municipalities. This indicator clearly shows that the number of active local non-profit organisations grew continuously between 2011 and 2013, before falling. While a total of 2,652 NGOs of this type operated in 2011, by 2014 only 2,574 advocacy organisations remained, a decreasing trend that continued in 2015, the result of which was that the total number of non-profit organisations actively participating in policy analysis work fell to 2,358.

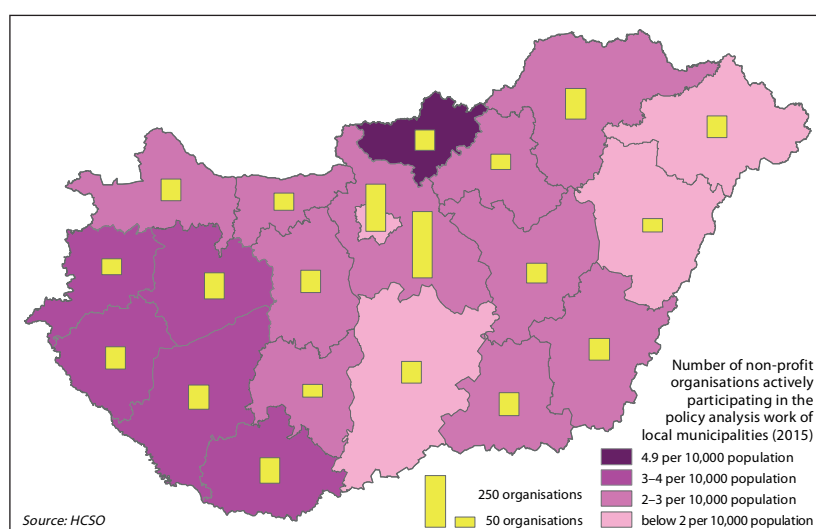
The territorial distribution of local advocacy organisations shows a contradictory tendency with respect to the distribution of state subsidies, as well as the number of volunteer workers. This can largely be traced back to the situation mentioned earlier, where the voters are easier to activate in local issues. Most such active organisations can be found in rural areas, with the second greatest number in the towns. There were fewer organisations that participated in municipal policymaking in Budapest and the county seats. Of the advocacy organisations taking part in policymaking



Source: HCSO

in 2011, there were 394 in Budapest, 442 in the county seats, 865 in the cities, and 951 in towns. Compared to the previous indicators, this reveals a reversed result, since the majority of the organisations operated outside the capital, despite the largest subsidies going to Budapest.

Despite the decreasing trend regarding the total number, there was no significant change in terms of the territorial distribution, or rather the smallest towns continue to dominate in this area. From the total number of 2,358, the number of social organisations participating in policy formation were 227 in Budapest, 386 in the county seats, 835 in the cities and 910 in towns. It is important to note that civil participation in policy formation will not produce results simply on the basis of a greater number of organisations participating. At the same time and in the interest of political and societal pluralism and diversity, it is clearly desirable for every relevant perspective to be presented, and that the opposing perspectives are channelled into local decision-making.



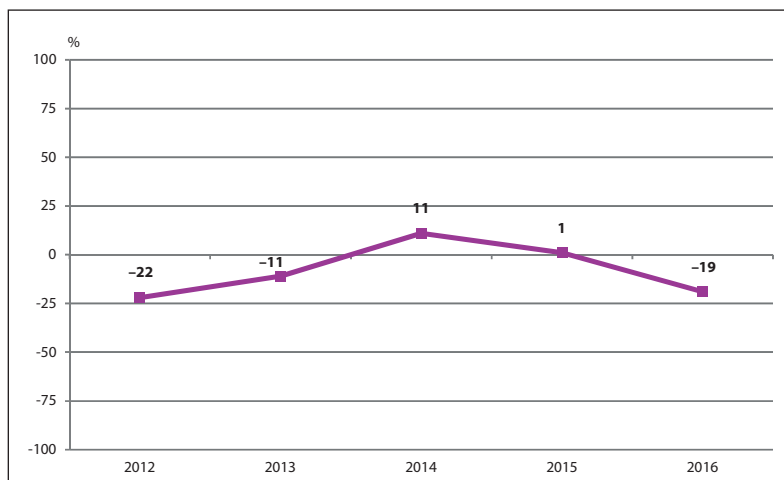
In 2015, the number of non-profit organisations actively participating in the policy analysis work of local (county or metropolitan) municipalities decreased again. Most organisations continue to operate in towns.

D.3.5. Opinions on having a say in public affairs

The *Opinions on having a say in public affairs* indicator is a renamed version of the *Faith in representative democracy* indicator. In the view of the workgroup, the question "Please tell me to what extent you agree or disagree with each of the following statements. My voice counts in (OUR COUNTRY)." posed as part of the Eurobarometer survey is related to the opportunity to actively shape public affairs, not so much for measuring faith in representative democracy. It is also important to highlight that this is a subjective indicator, or rather that the indicator does not measure the actual level of say in public affairs, but the subjective view of the population, such as the extent to which the opinions of citizens and their expression impact the formation of public affairs. The Eurobarometer survey regularly assesses to what extent the citizens of certain member states feel that they are being heard ('my voice counts') in their own country. The survey therefore does not measure the quality of representative democracy, but how citizens see their impact on public affairs through expression of their political opinions. The illustrated balance indicator shows the difference between positive and negative answers. Negative values therefore mean that negative responses, or those who feel that their voice does not count, are in the majority.

It can be seen that those who expressed disappointment with respect to their say in public affairs were in the majority in Hungary by 22 percentage points in 2012. Of those polled, 38% believed that their opinion can actually impact national public affairs, while 60% believed that their voice did not count. In total, 2% of the respondents were undecided. In 2013, the proportion of those with a negative outlook fell, but the balance indicator reversed in the parliamentary election year of 2014, as a majority came to an optimistic view about the impact of expressing their opinion. In 2014, 54% of those polled responded positively to the question, while 43% remained pessimistic, and 3% were undecided. In 2015, the responses were balanced, with 49% responding positively and 48% responding negatively. A further 3% stated they were undecided and cannot answer the question. In 2016, those with pessimistic attitudes once again were in the majority. Those who felt their voices did not count in the country outnumbered those who did by 19%.

Taking the years the survey was conducted into account, it can be said in general terms that only 1% to 3% of the respondents said that they could not determine to what extent their voice mattered.



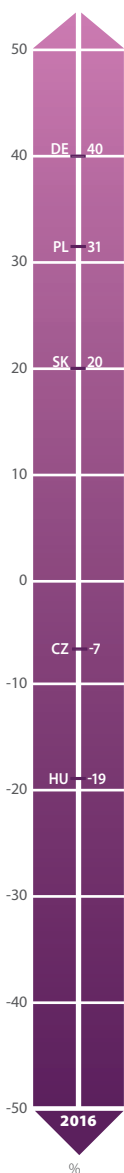
Source: Eurobarometer (Standard Eurobarometer 85, Spring 2016)

In comparison with the other Visegrád countries and Germany, we can state the following: compared to 2015 our position in the world has significantly deteriorated. While a majority by 1 percentage point of Hungarians were more positive than negative in 2015, this compared to a 32 percentage point favourable balance in Poland, 19 percentage points in Slovakia and 55 percentage points in Germany, while a majority of 5 percentage points believed that their voices do not count in the Czech Republic.

In 2016, a 19 percentage point majority of Hungarian respondents reported that their voices do not count in national policy. In contrast to this, a 31 percentage point majority of Poles responded positively to the question, along with a 21 percentage point majority in Slovakia and a 40 percentage point majority in Germany. Only the Czechs provided a negative response alongside the Hungarians, with a 7 percentage point majority believing that their voices do not count. On the basis of the 2016 survey, it can be said that, when compared to the neighbouring Visegrád countries and Germany, Hungarians are the most pessimistic when it comes to whether their voices count in their country or not.

By analysing several years, a negative trend can be observed since 2014. With a drop of 10 percentage points in 2015, the positive responses only had a 1 percentage point majority, and the balance indicator dropped by 30 percentage points over two years, which can be considered an exceptionally negative result. It could be cause for further study as to why this subjective indicator dropped 30 percentage points over two years, and why Hungarians responded negatively to whether their voices count in their country.

Compared to the previous year, the proportion of those who believe that their voices count in Hungary dropped by 20 percentage points in 2016.



Source: Eurobarometer

D.4.1. The number of constitutional complaints submitted to the Constitutional Court

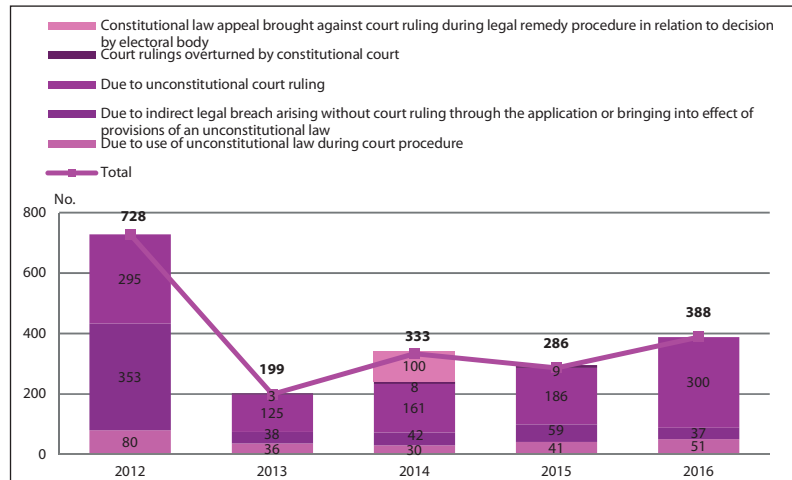
With the entry into effect of the Fundamental Law and Act CLI of 2011 on the Constitutional Court adopted in relation to it, the opportunity arose to submit so-called *genuine constitutional complaints*. As a result of a constitutional complaint, the Constitutional Court can oversee the activities of the judiciary from the perspective of their constitutionality. The Constitutional Court, as a result of the *genuine constitutional complaint* institution, can examine the constitutionality of individual judicial decisions, and in cases where they are in violation of the Fundamental Law, overrule them as invalid.

This competency pushes the institution of the Constitutional Court toward the judicial branch within the classical triad of powers.

This indicator is especially important because the justice system has a great role to play in the defence of democracy, and the Constitutional Court's changed role fundamentally affects the operations of democratic institutions. The indicator can show the justice system's constitutionality, which logically portrays a relationship with the democratic exercise of the law, or rather the prevention of possible judicial tyranny, since a law enforcement activity can only be democratic insofar as it meets the requirements of the constitutional fundamental rights benchmark. Since the members of the Constitutional Court are elected by a two-thirds majority of the National Assembly, political value systems are also formulated in the composition of the body. This is particularly important with respect to the jurisdictional powers of the Constitutional Court, since it can also be examined from the perspective of the separation of powers, and how a professional body elected by politicians can annul decisions by an independent court, thereby becoming a quasi-nullification seat.

The workgroup examined all of the constitutional law complaints submitted against decisions for which the reasoning was the use of unconstitutional laws, the use of unconstitutional laws or its direct realisation as a result of an absence of a judge, unconstitutional judicial decisions, decisions delivered in a legal remedy procedure in relation to the selection body, and in electoral decisions.

The anomalous data from 2012 is most likely the result of the lack of a fully developed procedure for the use of this new legal institution.



Source: CCH

In 2012, the greatest number of complaints arrived in relation to the application of the provisions of the law on unconstitutionality, or during the period in which the law was entering into effect. In the following years, however, initiatives of this sort drastically fell. From 2014 to 2015, the number of submitted complaints fell by 47 in total, a large proportion of which can be explained by a lack of complaints submitted against the electoral procedure.

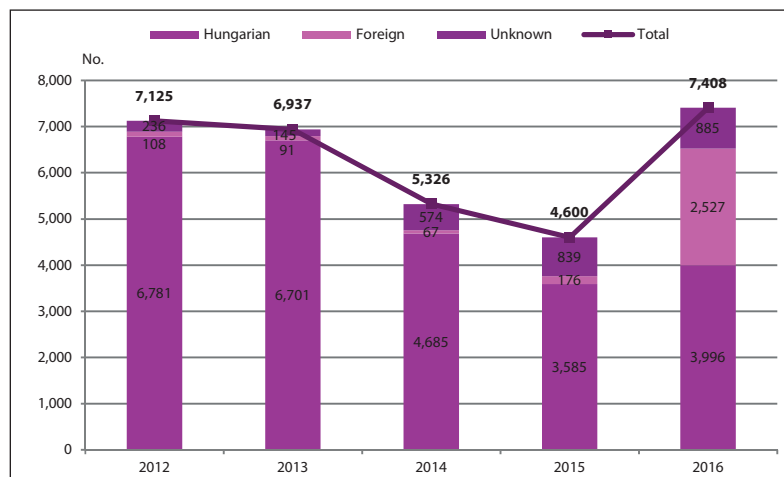
The number of complaints submitted with respect to unconstitutional judicial decisions grew by 25 from 2014 to 2015, and by 114 in 2016. This significant numerical increase unequivocally shows that citizens seeking legal remedy understand the Constitutional Court's newly introduced authority and also that judicial decisions made in individual cases must be in harmony with the Fundamental Law. What is interesting is that the Curia delivered only 10 decisions with regard to the appropriate judicial branch required as a consequence of constitutional court procedure in 2016. Despite the increase in constitutional law complaints, this shows that courts of specific jurisdictions are able to pass judgements with significant knowledge of the Fundamental Law. An increase in the use of constitutional law complaint institutions while exercising the law is expected to continue in 2017, especially since the number of submitted complaints increased by 102, or more than a third, from 2015 to 2016. In other words, citizens are knowledgeable about this opportunity for legal remedy.

In 2016, the number of constitutional complaints grew by 35% compared to the previous year, with which the institution reached its highest value over the previous years and became more widely used in enforcement of the law.

D.4.2. The number of complaints submitted to the ombudsman

Considering that the government ability bound to the substantial elements of the democratic exercise of the law is revealed through the protection of democratic freedoms, the requirement for equal treatment is guaranteed through the development of the operation of the system of domestic institutions and tools that is critical from the perspective of validating citizen and constitutional rights. The ombudsman, as well as entities characterised as ombudsman-like in academic literature, is one of the most important institutions for protecting constitutionally fundamental rights and through them democratic freedoms. Domestic legal literature considers as ombudsman-like institutions the Commissioner for Fundamental Rights and his/her deputies, the Independent Police Complaints Board and the Equal Treatment Authority. In a wider sense, the National Authority for Data Protection and Freedom of Information, the National Media and Infocommunications Authority, and naturally the Constitutional Court and the jurisdictional court, also belong to the complex institutional system of fundamental rights protection. A fundamental requirement for modern democratic states is that the manifestation of state authority is confined within strictly defined legislative frameworks, the upholding of which is promoted through various oversight mechanisms. The functioning of this mechanism is one of the most important guarantees of the genuine upholding of democracy, which in harmony with the requirement of checks and balances ensures that the operation of the state organisation is optimal and will meet its actual purpose. The oversight mechanisms need to be able to be traced back to each other, thereby preventing any authority function to become imbalanced at the expense of the other authority functions. A shared characteristic of ombudsman-type oversight mechanisms is that they can provide so-called soft law recommendations with respect to perceived constitutional discrepancies, and can also initiate proceedings in the event of genuine discrepancies. Since the decision in itself is not enforceable, they have the opportunity to investigate in a wider scope: beyond actual and concrete fundamental rights infringements, those fundamental discrepancies in a wide sense can also be the subject of investigations that only suggest some kind of basic rights infringement. The ombudsman institution's primary function is a response from the human rights perspective to problems related to constitutional rights.

Prior to 2012, there were four national assembly commissioners: the parliamentary commissioner for citizens' rights, the parliamen-



Source: OCFR

tary commissioner for the rights of national and ethnic minorities, the parliamentary commissioner for future generations, and the commissioner for data protection. From 2012, the first three of these were consolidated into the Office of the Commissioner for Fundamental Rights, while the role of the data protection commissioner was taken over by the newly created National Authority for Data Protection and Freedom of Information. Although the ombudsman institution's organisation was significantly transformed by the Fundamental Law, its original basic right protection function has remained untouched.

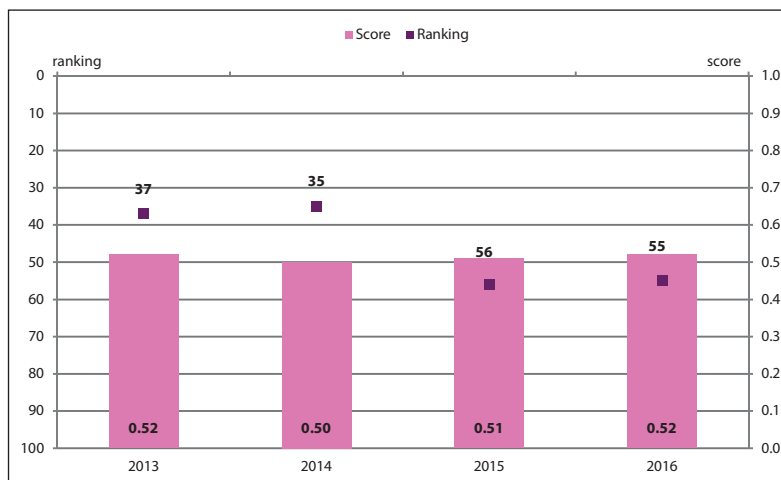
The indicator shows the number of complaints received by the Commissioner for Fundamental Rights from 2012 to 2016. In 2012, 7,125 complaints were received by the authority, while this figure was 6,937 in 2013, 5,326 in 2014, 4,600 in 2015 and 7,408 in 2016. Interestingly, from 2015 to 2016, the number of complaints received increased by 2,808, or more than 50%. Between 2012 and 2016, a total of 31,396 complaints were received by the ombudsman, which allows us to conclude that citizens are eager to make use of this legal institution to manage their affairs where they feel they have been wronged. It is interesting to compare these figures with the number of constitutional law numbers, where we discover a difference by an order of magnitude. The 388 constitutional law complaints submitted in 2016 is far below the number submitted to the ombudsman. What this clearly shows is that citizens seeking enforcement of their rights expect a higher chance of a legal remedy from the ombudsman than the Constitutional Court, despite the fact that there is scope to submit a constitutional law complaint in the direct enforcement of an unconstitutional law. This is clearly derived from the fact that while the Constitutional Court can only examine a specific injury, the ombudsman is able to proceed in the event of a fundamental rights issue in a wider sense.

In 2016, the number of complaints submitted to the Commissioner for Fundamental Rights grew by 60% compared to the previous year, which shows that the ombudsman institution was once again prominent.

D.4.3. Open government

Within democratic exercise of the law, democratic use of the law and the requirement for democratic execution can only be fully upheld if the citizens have the greatest possible access to information related to governmental processes. A high level of transparency naturally has a positive impact on the social, political and legal legitimacy of government measures. In the modern, 21st century democratic state, each activity of the state apparatus must serve the increased effectiveness of citizens' individual freedoms.

It is important to highlight that if the citizen does not have access to the relevant information pertaining to him/her, then he/she cannot form his/her political opinion adequately, and consequently they cannot fully assert their political rights. In Hungary, significant advances have occurred in government communications in terms of conveying operational activity. Here we must mention the *Kormányinfó* (Government Info) press conference held for the first time on 26 March 2015, through which government representatives provide citizens and journalists information regarding recent government decisions, responsibilities and the political-economic justifications behind these decisions. The press conferences are held the day after the government meets. Beyond the requirement for providing information, the political legitimacy of the decisions is aided by the citizens' active inclusion in the process. An essential initiative in this area is the national consultation, which is a form of subjective approach to a political topic, such as the negotiation of the social and economic surroundings of a given issue. The workgroup's opinion is that, with respect to domestic political life, the government has made serious strides regarding the transparency of government decisions and their backgrounds. Assessing the openness of governing is only possible through analysis of multiple components together. Here it is important to highlight the right to public information requests, the timely completion of complaint procedures, as well as the social advocacy activities of NGOs directed at the government. By examining and analysing



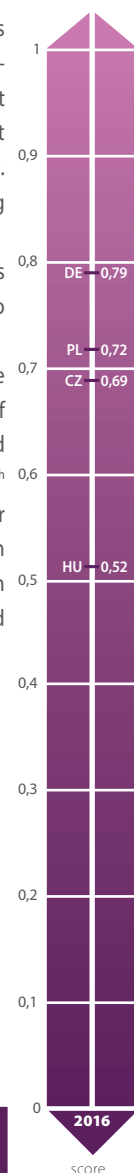
Source: WJP

the specified partial indicators together, we can make a statement with regards to the actual state of governmental transparency.

The Open Government component of the World Justice Project's Rule of Law index is an attempt to measure government transparency. The measurement is based on subjective citizen and expert impressions, that does not measure actual transparency but to what extent citizens and experts see the government to be transparent. The index has values between 0 and 1, with high values indicating positive attitudes.

While measuring governmental transparency, publicised laws and government data are taken into consideration, extending to information, civic participation and complaint mechanisms.

On the basis of research from 2017, it can be stated that there was unfortunately no progress made in this area. On the basis of the aggregated results, Hungary was in 55th place of the examined 113 countries with 0.52 points, while the Czech Republic placed 20th with 0.69 points and Poland placed 16th with 0.72 points of the other Visegrád countries, in other words significantly ahead of Hungary in this area. Germany, which can be used for comparison in the region due to common economic interests and cultural connections, placed 10th with 0.79 points. There was no data for Slovakia.



Source: WJP

In 2016, Hungary continued to lag behind the Czech Republic and Poland on the issue of government openness, and has remained in the middle of the field of all of the countries examined since its slump in 2015.

D.4.4. The upholding of fundamental rights

One of the most important features of democratic rule of law is that it promotes the upholding of fundamental rights through the operations of its institutions. In the area of fundamental rights, it is worth making a distinction between fundamental rights, constitutionally fundamental rights, and citizens' rights. We refer to those inalienable rights constitutionally as fundamental rights catalogued by a given country's fundamental law or constitution and formulated as a fundamental right. In contrast to this, fundamental rights taken in the wider sense, or rather the source of human rights can be not only the constitution or fundamental law, but various international treaties, as well. Naturally, for fundamental rights to be genuinely upheld, it is unavoidably necessary to develop a legal guarantee system to ensure fundamental rights incorporated at the apex of a given country's legislative system. At the same time, to fully understand this distinction, it is worth thinking of those countries where fundamental rights codified in international treaties are not upheld. The primary feature of citizens' rights in contrast to fundamental rights is that they exclusively establish rights and responsibilities for a given country's citizens. Due to the above, action plans must be present among government aims and capability developments that are established with the aim of developing the means of upholding fundamental rights.

It was our emphasised strategic aim that, in addition to the indicators showing the government apparatus's objective operation, we would also introduce indicators that would show the population's subjective feelings across a broad area. The Fundamental Rights component of the World Justice Project's Rule of Law index is this type of indicator and measures whether fundamental rights are actually enforced in the view of citizens. The measurement is based on subjective citizen and expert impressions that does not measure actual enforcement of fundamental rights but how citizens and experts view it. The index has values between 0 and 1, with high values indicating positive attitudes. The index measures fundamental human rights through the effective execution of those laws that ensure rights to equal protection, rights to life and personal safety, rights to a fair trial and the upholding of the rights of the accused,



Source: WJP

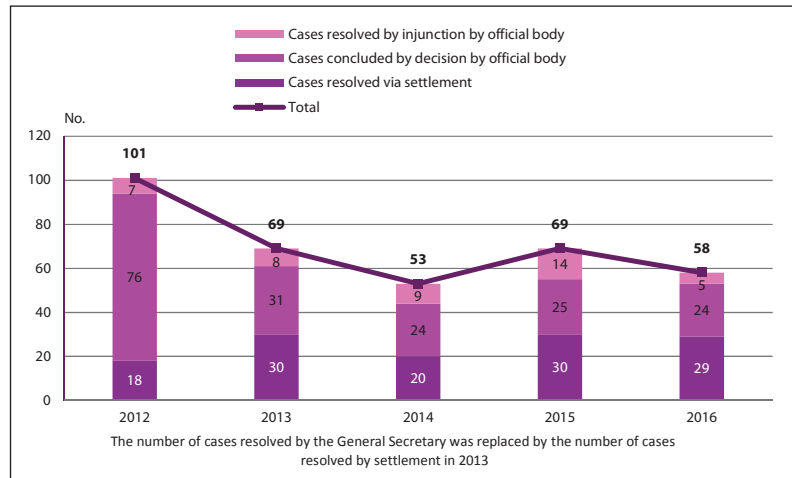
freedom of speech and opinion, freedom of conscience and religion, the right to privacy, freedom of association and assembly, as well as fundamental rights to work, including the right to collective bargaining, the prohibition of forced and child labour, as well as the termination of discrimination. This indicator is also a subjective indicator of high validity but low reliability. On the basis of the study, it can be stated that, of the examined 113 countries in 2016, Hungary was in the middle of the field. Hungary placed 50th with 0.62 points, Poland ranked 26th with 0.74 points, the Czech Republic placed 11th with 0.81 points and Germany placed 7th on the aggregated list with 0.85 points. There was no data for Slovakia.

On the basis of the total points, we can observe a negative trend compared to the study results from 2015. While Hungary placed 37th on the aggregated list in 2015, a year later Hungary fell 13 places to 50th in 2016. We can observe a similar trend albeit at a smaller scale in case of Poland, which fell five places to 26th on the aggregated list. On the basis of the indicator, it can be determined that the subjective view on the upholding of fundamental rights worsened in Hungary in 2016, so it is absolutely worth focusing on the issue of how this subjective negative trend can be reversed and made positive. It is important to highlight that a negative trend can also be observed in the long term, because Hungary has fallen 20 places in the subjective area of perceptions of upholding fundamental rights since 2013.

In terms of the subjective view on the upholding of fundamental rights, 2016 saw a continuation of the previous negative trend spanning several years.

D.4.5. Subsequent review procedures initiated by the courts

In international treaties, the elements of the rule of law determine the commitment to fundamental rights and the operations of state institutional systems that promote the upholding of fundamental rights adopted widely by the international community. Given respect for fundamental rights, it directly follows that state institutions in a state under the rule of law are also subject to the law and operate within constraints set up by the law, promoting the actual realisation of the requirement of checks and balances. We can speak of institutional democratic exercising of rights when rights are exercised and laws are processed by state institutions subject to laws, as the exercising of rights is manifested through an institutional system that genuinely operates on democratic principles. If we were to speak of the exercising of rights that goes beyond or is contradictory to the legal framework – *contra legem* – it would necessarily also be antidemocratic as the exercising of the law could not be traced back to the democratic fundamental value, legitimacy derived from the people. We can therefore see that the actual content of the legal foundation values can be determined indirectly depending on the social structure and needs. For this reason, governance can on the one hand mean governing from the law or governing because of the law, and on the other hand shows a relationship with some sort of idealistic state code of ethics, which the government seeks to spread out to every state subsystem. Such idealistic structural principles of the state can, for example, include fairness, appropriate action and the emphasis on the protection of disadvantaged citizens. The actual legal manifestation of an idealistic ideology primarily appears at the level of catalogued fundamental rights. If a legal regulation contradicts the Fundamental Law, then the achievement of ideological aims can be endangered. In our view, it is of significance to the protection of fundamental rights that, if a judge, on the basis of § 25 of the Constitutional Court Law, needs to use a law during the review of the individual case in process before him/her, that he/she sees as being contrary to the Fundamental Law, or the Constitutional Court has already established it as such, he/she can initiate a process at the Constitutional Court to determine if the law or statutory provision is unconstitutional, or prevent the use of the unconstitutional law. This opportunity, in addition to Article 28 of the Fundamental Law, ensures the fundamental



Source: CCH

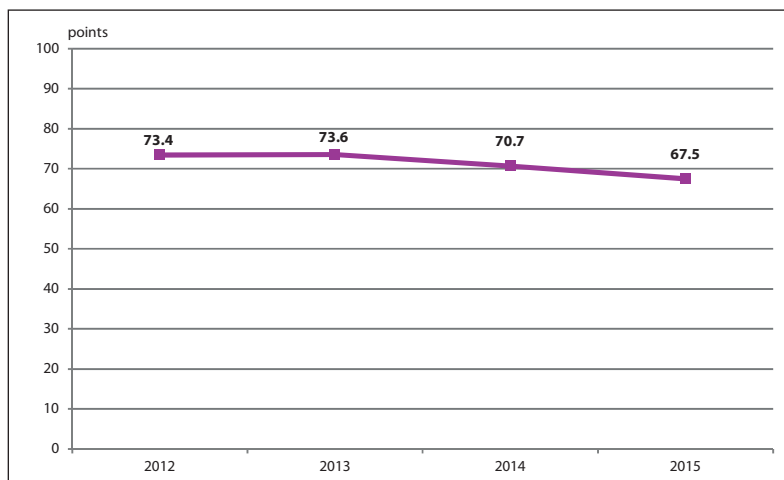
right to protection by the user of the judicial branch, which equally intends to exclude the use of the law that is unconstitutional and legislation that is unconstitutional.

The workgroup examined the judicial initiatives submitted from 2012 to 2016. Overall, it can be determined that the number of subsequent review procedures submitted in this manner, following the exceptional value of 2012, has since been stable between 50 and 70 annually. Compared to the thousands of judicial procedures that occur annually, this can be considered an exceptionally low number, from which we can conclude that the proceeding jurists do not consider the legal regulations that serve as the basis unconstitutional. In regards to the internal division of decisions, it is worth stating that the Constitutional Court provides a substantive decision in the vast majority of jurist initiatives, which means that the initiative submitted by the judge was suitable for evaluation. What this means is that the jurisdictional courts can utilise their opportunity to protect fundamental rights as ensured by § 25 of the law on the Constitutional Court, for the number of completed decisions, or rather that the number of unaccepted jurist initiatives has in essence consistently been below 10, except in 2015. From the data examined, it can also be determined that 2012 was exceptional in terms of jurist initiatives; excluding the number of cases closed through mergers, the Constitutional Court made decisions exclusively as a body, or in accordance with the principle of judging in tandem. The various judges in that year made a total of 83 decisions. The number of collective decisions was 39 in 2012, 33 in 2013, 39 again in 2014, and 29 in 2016.

The majority of subsequent reviews initiated by the courts from 2012 to 2016 reached substantive constitutional court decisions, so the institution is suitable for the fulfilment of the role of protecting fundamental rights.

D.5.1. Consolidated press freedom indicator

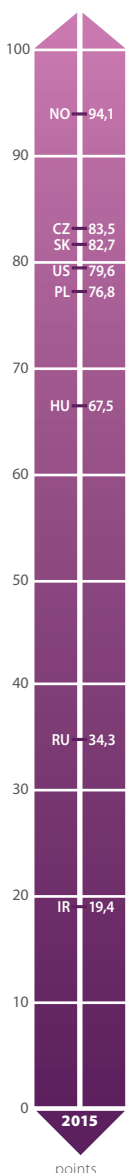
Measurement of press freedom is fundamentally based on subjective elements, since freedom itself is a subjective concept that can be understood in multiple ways. In the spirit of this, the workgroup looked for indicators to express press freedom, which through a subjective method and broad-ranging approach, are capable of capturing the state of press pluralism. Of the international surveys in existence, Reporters Without Borders ranks 80 countries. The most important criteria examined are media pluralism and independence, security of and respect for the independence of journalists, as well as the legislative framework and institutional and infrastructural environment. In 2013, Hungary ranked 56th of the 180 countries studied, placing 64th and 65th in 2014 and 2015 respectively. Scandinavian countries topped the list. The Freedom House's Freedom of the Press index is no more favourable: 74th in 2013, and 71st in 2014 and 2015, all of which place Hungary into the *partly free* category. Scandinavian countries also topped the list here. The consolidated press freedom indicator, which uses a 100-point scale, presents Freedom House's Freedom of the Press report, Reporters Without Borders' World Press Freedom Index, as well as the Civil Liberties sub-index from the Economist Intelligence Unit's Democracy Index, where higher values mean more press freedom. An undeniable advantage of these indexes is that they are long-established and each use a standardised methodology to evaluate practices in the various countries. An additional advantage is their widespread familiarity, prestige and simple interpretation. Methodologically, the indicators are characteristically of low reliability. Results, depending on the individuals asked to evaluate press freedom, can change owing to subjective elements. The summation of the three indexes produces a degree of robustness. Although minor changes cannot be interpreted, the validity of the major differences is beyond doubt. To understand the 71–73 point Hungarian data, Norway, which received 94.1 points, can serve as a benchmark which can be



Source: FH, RFS, EIU

considered a liberal democracy both in terms of legal regulations and exercise of the law. The opposite pole would be theocratic Iran, which received 19.4 points from the consolidated press freedom indicator in 2015. On the basis of the data and starting in 2013, a constantly worsening trend can be observed in the indicator, with the value deteriorating even more in 2015. While the subjective view of domestic press freedom in 2013 was 73.6 points, in 2014 it was 70.7 and in 2015 it was 67.5. Hungary was the weakest of the Visegrád countries on the basis of the aggregated indicators. The Czech Republic scored 83.5 points, Slovakia 82.7 and Poland 76.8, so the view in these countries was that press freedom is greater. By way of comparison, it can also be mentioned that Russia received 34.2 points and the United States 79.6 points, so Hungary is near the average (67.5 points) of the eight selected countries. Although impressions on press freedom, owing to its nature, are difficult to grasp and are based on subjective elements, their value is nonetheless important from the perspective of determining the quality of a democratic state. Without the free press and freedom of speech being fully upheld, we cannot speak of free democracy, since voters cannot obtain the true information necessary to develop their political perspectives.

In 2015 in Hungary, press freedom weakened further, and as such, the worsening trend has continued with the exception of a minimal improvement in 2013.

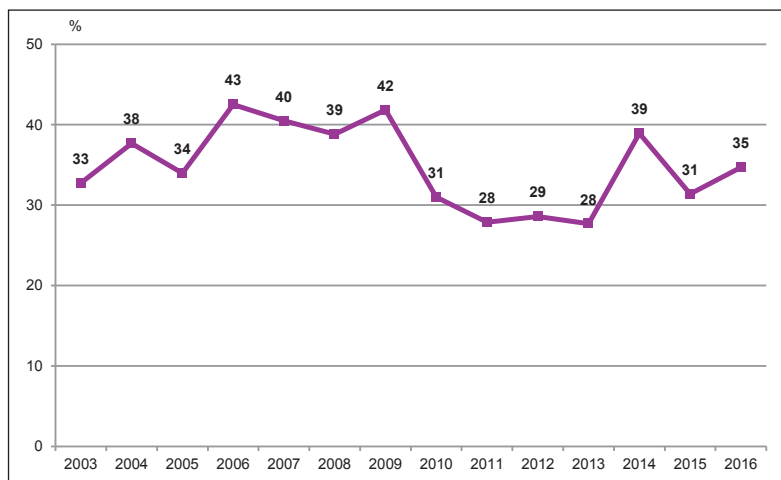


Source: FH, RFS, EIU

D.5.2. The proportion of speaking time allotted to opposition politicians on the principal news programmes

The right to freedom of expression of opinions is a defining constitutional right that is a foundational element of democratic state structures, from which political rights can also be derived. In the absence of freedom of expression of opinions and the ability to do so without retaliation, we cannot speak of a democracy, since a requirement of democracy is the meeting and discussion of conflicting opinions, thereby helping ensure prosperous and fruitful decisions to the benefit of the community. One of the primary areas for the realisation of political pluralism is the media, which is why it is especially important that politicians representing opposition views are able to access satisfactory interfaces to impart their thoughts. Appearances by opposition politicians

in the media are essential in a democratic state, on the one hand because it serves at the highest political level as oversight over the government in power, and on the other because an opposition party can offer a political alternative to the governing party's position. In accordance with this, the indicator presents the proportion of the opposition's use of the media by measuring the total *speaking time* by representatives of parliamentary parties on principal news programmes (television and radio). What makes it slightly more difficult to understand the data is that it is not unequivocal which parties can be considered part of the opposition in election years. For the study, every non-governing party was considered part of the opposition. According to the National Media and Infocommunications Authority's sample monitoring of the media, the proportion of speaking time allotted to opposition politicians – compared to that of all parliamentary politicians – is consistently high, fluctuating in the range of 28% to 43%, which can be said to be a stable, strong value. At the same time, the media dominance of governing politicians has not been successfully broken even once over the past ten years. Typically, the presence of opposition politicians is significant in election years. In 2006, the proportion of opposition politicians' media use was 43%, a value that was not improved on later.



Source: NMIA

The election year of 2014 also saw a high proportion of opposition politicians in news programmes (39%). The proportion of opposition speaking time therefore typically increased in election years, one exception to this trend being 2010, when the value was a total of 31%. Between 2006 and 2009, the opposition's proportion of media appearances was consistently around 40%, which saw a significant decrease from 2011 to 2013, falling by 10% and stabilising around 28% to 29%. We were able to observe an increasing trend for the 2014 elections, when the opposition's use of the media increased to 39%. In the year following the election, another fall could be observed as the value decreased to 31%. In 2016, another increase was observed, as the opposition's use of the media increased to 35%.

Analysing the trends together, we can state that the opposition's share of appearances with respect to speaking time is high in Hungary, which promotes the realisation of political pluralism. We can observe that in truly important periods, i.e. in election years, the opposition has its voices heard to a greater degree, when they enjoy approximately 40% of the speaking time. The increasing trend observed in 2016 is expected to continue, particularly with regard to the run-up to the election campaign, as well as the advance forecasts of its high intensity.

In 2016 the opposition's proportion of speaking time was 35%, which is in the mid-range of the previously observed figures of 28% to 42%. The highest figures are in election years, but the dominance of the governing parties has remained solid over the past ten years.

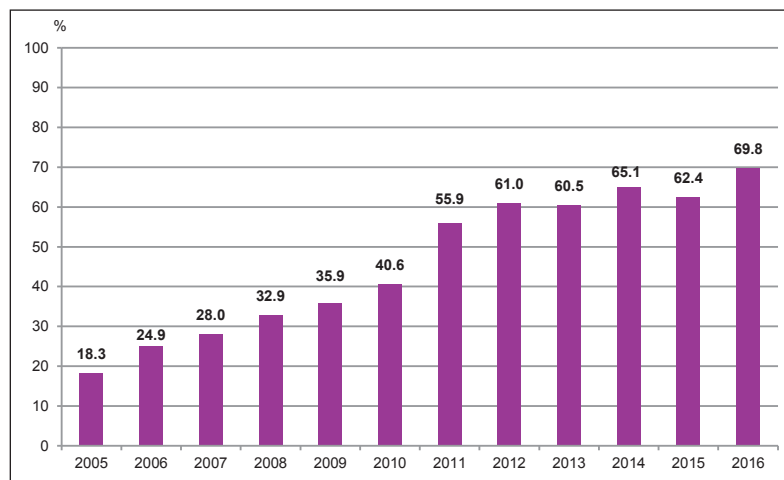
D.5.3. The proportion of 16–74 year-olds in the population who read online news, dailies or periodicals

Consumer habits are changing in multiple sectors of the economy as the 21st century progresses. With the growth of infocommunications technologies, communication formats have come to the fore that were previously unavailable. The appearance of digital media is one of these new forms of communication, with online news portals and websites falling into this category.

By the mid-2010s, we arrived at the point where most citizens receive their information on daily events through digital media in advance of the printed press. Since the appearance of digital communications formats, the number of printed copies and the readership of the latter has consistently declined. This is also the result of the print media being a step behind online news outlets in a number of respects. The printed press cannot compete with online portals in terms of real-time reporting.

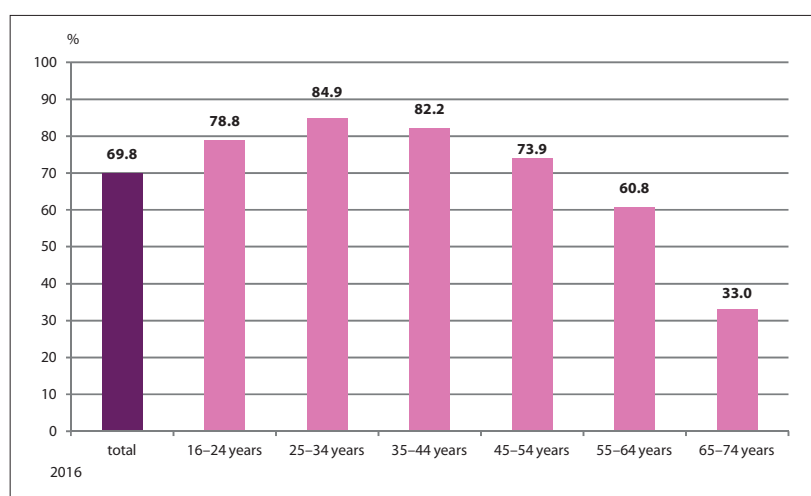
As a result, market trends are now dictated by internet portals as opposed to the printed press, as online media trends exert a greater impact on the trends affecting the print media than the other way around. Their innovative and interactive delivery of services (such as embedded video reports) allows portals to increasingly compete with television, not just the printed press. News portals with the highest readership also compete with the popularity of certain television news channels.

The government capability for this indicator is the extent to which it can promote and support digitalisation to advance the free flow of opinions in an online format. Online media continues to gain ground on the basis of HCSO research. In 2015, the breakdown of those who received their information from online news or newspapers was 77.2% of those aged 16–24, 77.0% of those aged 25–34, 75.1% of those aged 35–44, 69.5% of those



Source: HCSO

aged 45–54, 47.7% of those aged 55–64, and 24.0% of those aged 65–74. In 2016, there was a significant increase in nearly every age group, as the numbers were now 78.8% of those aged 16–24, 84.9% of those aged 25–34, 82.2% of those aged 35–44, 73.9% of those aged 45–54, 60.8% of those aged 55–64, and 33.0% of those aged 65–74. While a total 62.4% of the population received their information from online news in 2015, by 2016 this number had increased to 69.8%. What this means is that the majority of people read online media in place of printed media, or rather they collect their necessary information primarily from online sources. On the basis of the data, it can be observed that, although the online activity of older generations is consistently growing, the majority of young people receive their information from the internet, and this proportion is only set to increase. What can be concluded from this is that the most certain way for political information to be delivered to citizens in the future will continue to be online news.



Source: HCSO

Those who receive their information from online sources continued to grow in 2016, with the 16–44 age group most likely to receive their information from the internet, while the greatest year-on-year increase from one year to the next was in the 55–74 age group.

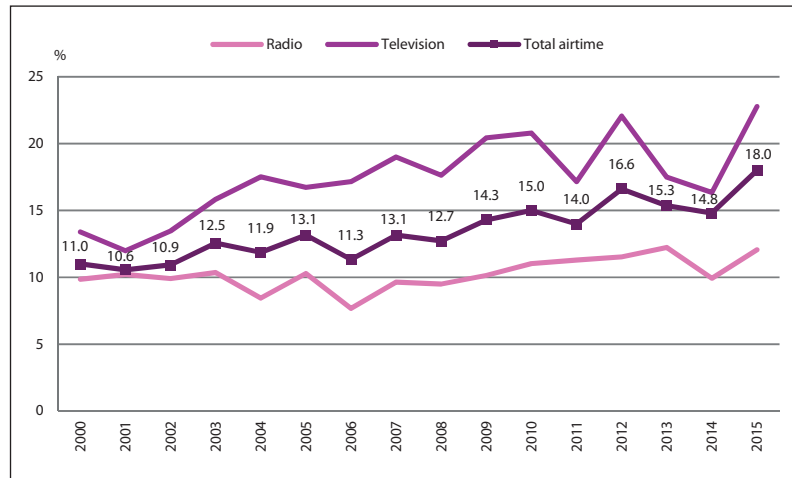
D.5.4. The proportion of television and radio programmes focusing on news, current events, politics and economics

One of the fundamental measures of the maintenance of political pluralism is the proportion of media products of political-economic nature on television and radio, so the workgroup found it necessary to measure this in the *Press freedom dimension*.

When it comes to commercial channels, programming is adjusted to media consumption demands, so the proportion of news programmes reflects society's interest in public affairs. (This is obviously influenced by the fact that different social groups – for example by education level – watch different channels to learn of the news.)

As a result of the previously mentioned press freedom indicator, we had to primarily take the political and economic press as our basis. The government's capabilities appear in these indicators in that the government must ensure the conditions necessary for the manifestation of press pluralism. The government must provide for the press the necessary political-economic information to ensure that the various media can always fulfil their duty to provide balanced and factual information as regulated by law.

Our analysis examined the proportion of programmes focusing on news, current events, politics and economics as part of the total programmes in a year on the basis of the programmes reported by radio and television providers, broken down by content and on the basis of length. The workgroup therefore considers programme length, not the number of viewers or listeners, so the more popular channels are presented with equal weight to those with fewer viewers or listeners. This led to uncertainty in the statistical results in regard to the actual impact on society, but provides a complete picture of the actual situation regarding news providers. It is important that the data presented here contains both commercial and public channels. The indicator shows the infrastructural characteristics of the realisation of political pluralism rather than its actual thought-forming activities that can be determined on the basis of



Source: HC SO

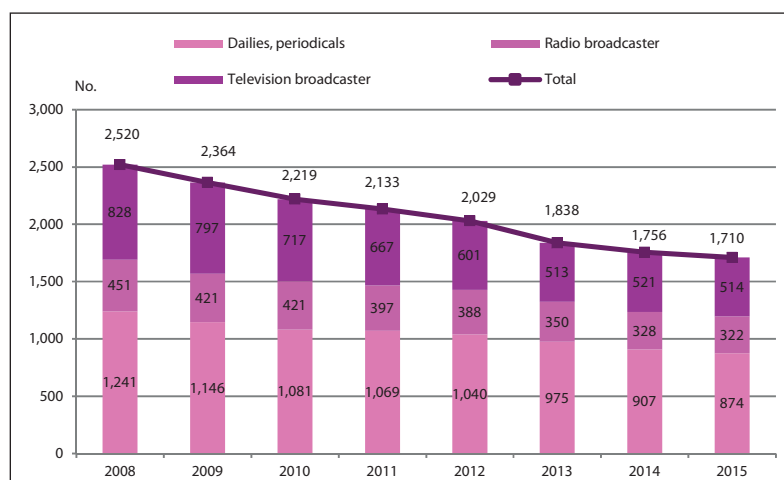
viewing or listening figures. The percentage of television and radio programmes dealing with public affairs grew from 11% in 2000 to 16.6% in 2012, after which a decline was observed. In 2015, this proportion grew to its highest point over the previous 15 years, reaching 18% in total.

In television programmes in 2015, a 23% proportion could be observed: an 8.6% proportion was measured in public television, while 23.6% was measured in commercial channels. For radio in 2015, the result was nominally lower, with 12% of programmes focusing on political-economic issues. The combined 12% is the result of combining the 12.3% of programmes on public broadcasters, while for commercial providers it was 14.4%. From the numbers, it can clearly be seen that, in case of television, a greater proportion of the programming focused on political-economic issues than in case of radio programmes. This may be the result of the different characteristics of the two genres. Music programmes are heavily favoured on radio, while television channels have a higher rate of programmes focusing on news, current events, politics and economics. The trend that developed following the regime change, or on the basis of average for the past 15 years, is that 10% of the radio programmes have these characteristics, while the proportion is 17% on television.

The share of programmes in question grew by more than 20% in 2015 compared to the previous year. This growth was primarily the result of television programmes.

D.5.5. The number of enterprises engaged in periodical publishing, programme production and broadcasting

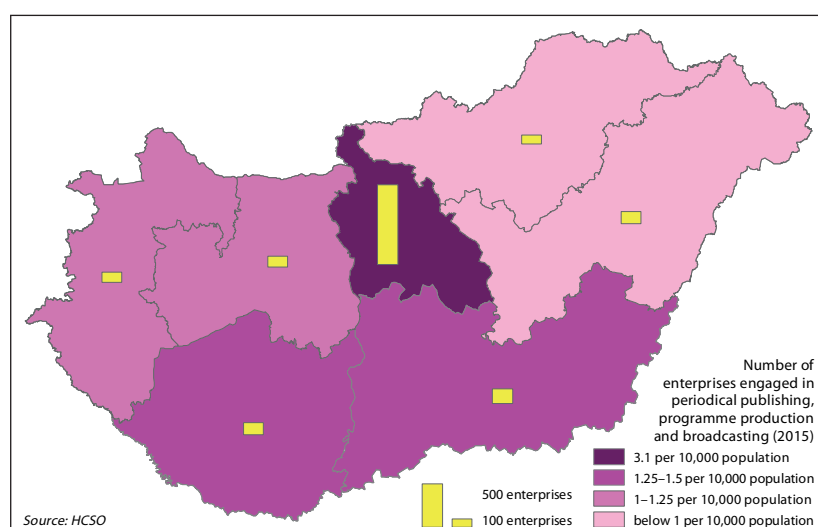
In relation to research from last year, we continue to believe it is important to measure the environment of press freedom, i.e. the media's infrastructure development from a quantitative perspective, on the basis of the number of enterprises. With this understanding, the infrastructure of press freedom is represented by the number of examined enterprises, since the greater the number in a given market, the more effective and likely it is that a variety of opinions can be conveyed to citizens. In order to uphold press freedom, it is especially important that the various media that cooperate in forming political opinions are in greater numbers as a result of political pluralism and freedom of expression. Naturally, the number of enterprises focusing on these types of activities on their own does not provide a full picture of the status of domestic press freedom and political pluralism, but the other indicators selected by the workgroup, taken together, can contribute to understanding the issue. The indicator's quantitative characteristic (the number of enterprises in question) contributes to the measurement of press freedom, and measures the background and development of the free flow of media and ideas. What the government capacity related to the indicator amounts to is whether the government can create an economic and market atmosphere that allows for the free flow of political opinions in harmony with the constitutional right to freedom of enterprise. The media market has consistently shrunk, with the previous years not even showing a temporary increase in the number of enterprises operating in this sector. Over the last seven years, the number of enterprises operating in the sector has declined by nearly 31%. The drop, although it applies to every sector – television, radio and print media – is not uniform in extent across these media. While the number of enterprises engaged in



Source: HCSO

publishing printed publications dropped from 1,241 in 2008 to 907 in 2014, that is, showed a decline of 27%, the number of television broadcasters fell from 828 to 521 in that period, a decrease of 37%. The number of radio broadcasters decreased from 451 to 328, a drop of 27%. The total number of affected enterprises fell from 1,838 in 2013 to 1,756 in 2014, which is a drop of 4.5%. It is important to emphasise that, at the time this publication went to press, we only had preliminary data for 2015. From this, we can learn that there has not been a significant change in the number of enterprises focusing on this type of activity. There were a total of 1,710 enterprises operating in 2015, which is only 46 less than in 2014.

With regards to the territorial distribution of the enterprises, we were able to ascertain the following: similarly to five indicators examined in the *Promotion of social relations* dimension, this indicator is exceptionally centred on the capital and Pest county. In 2015 in the Central Hungary region, 3.1 enterprises existed for every 10,000 of the population, while in the eastern regions the figure was only 1.0.



The number of enterprises in question – continuing the trend of the previous years – decreased by 3% in 2015. This decline was apparent in every sector, but primarily affected newspapers and periodicals.

EFFECTIVE PUBLIC ADMINISTRATION

SUMMARY¹

The aim of this impact area and its points of connection

The *effective public administration* impact area is defined by the Good State conceptual framework as horizontal and supplementary with respect to the other impact areas. In our interpretation, administration here refers to the role of the administrative machinery as a form of infrastructure to serve the operation of the state. Public administration enables other actors to more effectively perform their functions of directing society and providing public services. At the same time, this *behind-the-scenes* role is not the only one played by public administration as it also comes into direct contact with the citizens themselves, who manage their affairs and are assigned rights and obligations through it; that is, they too utilise the public administration infrastructure. It is important, however, to point out that this *use* is also a tool for meeting citizens' demands and respecting their rights, and this capability can already be assessed and researched within the scope of the other impact areas. In this way, the seamless operation of the civilian public administration system contributes to the effective functioning of the internal law enforcement agencies, and the activity of administrative and supervisory bodies helps ensure law and order, fair market competition and competitiveness. In addition, public administration is the executive *nervous system* of the individual policies (education, health care, employment, environmental protection, etc.) and provides the necessary conditions for the exercise of democratic rights.

Criteria for defining the dimensions

The individual dimensions present the effective public administration capabilities that are perhaps closest in their definition to the concept referred to in public policy literature as *administrative capacity*. The establishment and expansion of the latter, also as a requirement for the public administration of EU member states, is sometimes formulated according to the following objectives: raising the standard of administrative services, reducing the burdens on clients and ensuring they are treated appropriately, and efficient use of assets and resources. It is as an analogy for this and in line with these goals that we have specified the 4 + 1 dimensions of this impact area, i.e. the most important capabilities of public administration, as follows:

1. *Accessibility*. In this dimension, we examine how the state strives to dismantle barriers to access to public administration services arising from individual life circumstances, and how it exploits the advantages arising from these measures. With the unprecedented pace of development and adoption of information and communications technology, the digitalisation of public administrative processes has today become

the norm – rather than the exception to the rule or a movement toward modernisation. We measure the characteristics of this normalisation both from the supply and demand sides of public administration: what channels for administration are available that differ from those traditionally used, what level of development they currently stand at, and to what extent these services are utilised by citizens.

2. *Customer burden*. This dimension measures the same relationship as the previous dimension. Our aim was to identify and measure stresses arising when citizens manage their administrative affairs, as well as to consider services that reduce the load on public administration. These so called *e-services* in support of the streamlined processing of administrative affairs no longer serve to simply broaden the traditional administrative channels for core services, but are now also expressly aimed at reducing the burdens on customers through a pro-active approach.
3. *Resource efficiency*. The principles of utilising public funds, budget constraints, and the demands of society all necessitate the prudent and cost-effective management of personnel and financial resources. It is clear that the aims of this dimension are in competition to the previous two, which require largely resource-intensive development. The main driver of administrative reorganisation is the faith placed in increased efficiency, and for this reason, it is not merely from the cost perspective that we examine the related capabilities, but also in terms of success factors in light of the other dimensions.
4. *Preparedness*. In addition to processes and organisation, the third great subsystem of public administration is human resources. The competence of the individuals who make up the public administrative staff determine the quality of public administration and the performance capabilities of their organisations in a fundamental way. Only a staff of well prepared and adequately motivated professionals is capable of providing consistent levels of performance and flexibility even in situations where resources are increasingly limited and environmental conditions are deteriorating. In this sense, we examine preparedness both in terms of individual competences and the entire human resources system: whether the individual HR subsystems can recruit and select the best staff, as well as ensuring that civil service is able to attract and retain labour, and offer suitable motivation and career paths; overall, the ability to ensure stability with regard to the conditions necessary to perform their various tasks.
5. *Satisfaction*. The function of this dimension is to evaluate the public's perception of the four dimensions listed above, which measures and monitors the capability of public administration to adequately integrate its services, organisations and personnel into society. We seek to answer the question of whether the public is aware of, understands and uses public administration, as well as whether their

¹ The authors of this chapter are Krisztián Kádár (workgroup leader), Zoltán Rupp, Dr. jur., Éva Kovács, PhD, Zoltán Tarpai, Anita Fibinger, Péter Szabolcs Kovács, Dr. jur., András Magyar

expectations are being met, whether their experiences match their needs, and finally, whether they are satisfied with public administration. For the second time since the launch of the Good State and Governance research programme, a representative survey was conducted of the population's experiences with and opinions on public administration as customers. The survey makes it possible to analyse deeper correlations with regard to customer preferences and service-use habits. The name of the dimension should be interpreted broadly, covering both satisfaction with the provision of services and, indirectly, the factors that influence the responsiveness of public administration and whether needs are met, as well as feedback on expectations of what good public administration should look like.

Criteria for selecting key and sub-indicators

Similarly to the other areas of influence and owing to the complexity of the subject under assessment, we have attempted to strike a compromise between precision of measurement and intelligibility of the narrative. It is important, however, to point out that the selected indicators only offer characterisations of the given administrative capabilities, but are not able to provide seamless and comprehensive analysis. Accordingly, what we agreed to undertake was to shed light on many of the aspects in view of the performance concept of public administration explained above. The most important filter for the use of the indicators was obviously the availability of data and the quality of data collection. At the same time, our research also sheds light on the fact that certain fundamental measurements, data sources and monitoring systems are still lacking, and that these would allow us to examine the capacity, efficiency and influence indicators of public administration as a whole using time series data, a consistent set of concepts, and a methodology that can be matched against other methods. In short, the indicators to be included in the Report had to satisfy the following set of criteria:

In the *relevance test*, we examined whether the given capability is able to describe a characteristic and allow it to be measured (that is, as directly and independently as possible) with regard to the dimension.

The essence of the examination of values was that we were not only looking for descriptive data, but data where any change or trend clearly indicates whether the characteristic contributes to the good state/good public administration, or whether they work against it, damaging the capability of administration.

Finally, we used the *validity test* to assess the availability of reliable, longitudinal time series data or data sources. For the first two, we had to loosen this requirement in one or two cases, (for example, due to the newness of the phenomenon under examination).

Introductory thoughts for 2017

We have updated the majority of the indicators used in last year's Report and replaced seven indicators with new ones, partly

because data were no longer provided and partly as a result of the measurability test described above.

As a result of the changes in methodology in this year's Report, we were able to make several international and regional comparisons within the country using several criteria for certain areas of analysis. We also attempted to add enterprises to the range of clients to the extent this was possible.

1. *Accessibility*. In this dimension, we presented the quantitative parameters of direct public administration services for the three main channels of public administration. We examined to what extent clients use the latest forms of services and how the scope and availability of personal client services were expanded. In this context, we wish to point out that, assuming the volume of required public administration work to be constant (disregarding changes to the extent of burdens arising from regulation), concurrent development of competing channels of public administration may limit potential increases in the *utilisation* indicators.
2. *Customer burden*. In this dimension, we looked at the proactive attitude of public administration, i.e. the extent to which it can eliminate or assume the burdens borne by clients. Similarly to the previous dimension, we believe the major problem here is the lack of a considered strategy for diverting clients to other channels in public administration: the qualitative and quantitative development of personal administration does not promote the adoption of more cost-effective administrative channels. At the same time, there is a clear tendency on the government's part to significantly reduce the burdens on clients.
3. *Resource efficiency*. It is in the narrowly interpreted dimension of economic cost-effectiveness that the lack of reliable measurement covering the whole of public administration is most strongly felt. The indicators to be presented here show certain (but by no means all) aspects of *management*. The weak results, however, do not indicate any opportunity to exploit genuine reserves of efficiency.
4. *Preparedness*. As the people working in public administration are the faces of public administration and represent the system to clients, it is extremely important to assess the capabilities of public administration staff. Development projects should be launched to simultaneously increase citizens' trust in civil service officers and public administration, as well as to improve the attractiveness and ability to deliver of public administration. The structure of the indicators included in this dimension is aligned with the career development model and maps its key components.
5. *Satisfaction*. The data included in the dimension is derived from the Good Public Administration Opinion Survey. The research was conducted in February 2017 using a representative sample of 2,500 adults by gender, age, place of residence and level of education.

E.1.1. Users of advanced e-government services as a proportion of Internet users

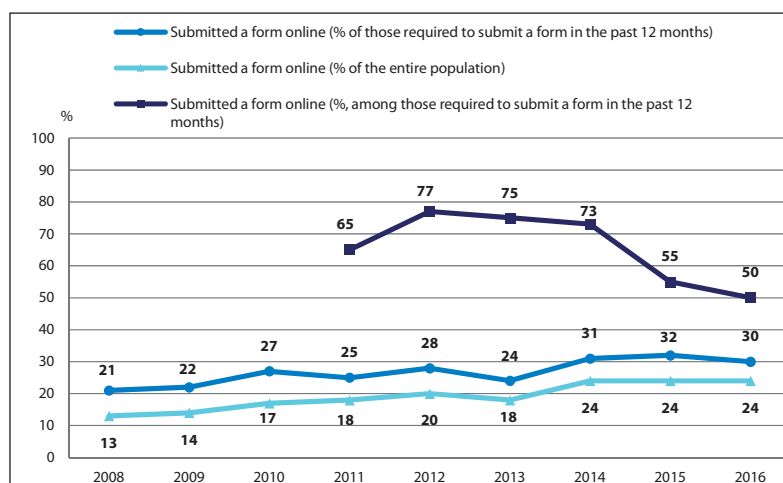
The development of digital administration (e-government) has been a strategic direction on the agenda of both the EU and the Hungarian Government for the past decade and a half. The dynamic development of technology has resulted in a constantly changing service environment, which, from the very beginning, made it difficult to precisely define e-public administration, and hence also its measurement. Experts agree, however, that, although broadly interpreted, all customer-side (C2G) or government-side (G2C) tasks related to the management administrative affairs that take place with the use of information and communications technology (ICT) can be considered to be e-administered affairs, although significant differences can be discerned in the level of development of the individual methods used.

Based on the methodology developed by Capgemini in the 2000s and endorsed by the European Commission, it is possible to differentiate, at the time of using the administrative services (in the course of communicating with the government authority or arranging affairs), between four so-called maturity levels: 1. obtaining information via the Internet; 2. downloading forms; 3. electronically submitting forms downloaded electronically; and 4. the option of comprehensively transacting the entire service online without making a personal visit.

The indicators that signal the *presence* of e-administration can be divided into two basic types: supply-side capacity indicators (that measure services made available and accessible in public administration) and demand-side efficiency indicators (the actual use of services by clients).

The indicator selected to be the indicator of the *Accessibility* dimension measures the use of e-government services by the public (specifically the submission via the Internet of electronically filled-out forms), at the same time giving us an indirect picture of the supply side as well, since, in the absence of an available service, there will obviously be no use. For the same reason, we employed a similar approach in narrowing the focus to a higher level of development, since the use of a more mature level of service presupposes, without room for doubt, the use of levels of lower complexity (or the capability to use these levels). This is supported by statistics showing the negative correlation between the level of development of the given services and the percentage of use.

When selecting the indicator, our aim was also to narrow down, as far as possible, the reasons for *non-use* to areas of interest with regard to public administration. Therefore, on the one hand, we

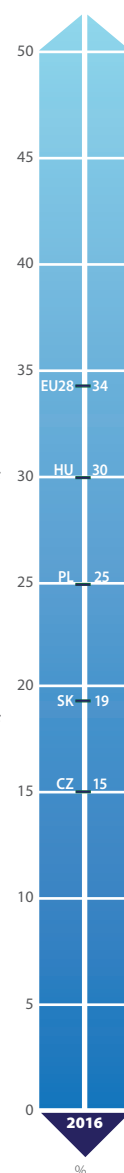


Source: Eurostat, HCSO

narrowed down the age group in question to people between 16–74 years of age who potentially use e-government services on their own, and, on the other, we looked at citizens in the sample population who are already using the Internet (thereby eliminating the relationship between non-use and digital illiteracy).

The graph shows the percentage of Hungarian people who use electronic services in public administration (based on self-reporting) on the third tier of development in comparison to EU data. According to these results, the growing trend seen in the past few years seems to be coming to a halt. In 2016, 30% of Internet users submitted an electronic form at least once over the previous 12 months (only every fifth digitally literate person did so in 2008), which is 4 percentage points below the EU average.

This downturn is in line with this year's results for the DESI indicators, which measure general digital maturity in the EU member states. Although these results are better than those of other countries in the region, they indicate a growing trend with Hungarians lagging behind in the use of e-administration tools at an EU level. If the proportion of users is projected onto the entire population, it becomes apparent that the decrease is not nominal, which means that the increase in the number of Internet users is not followed by similar growth in the use of e-government services. This leads us to conclude that the reason for non-use is a lack of publicity, so promotion of electronic public services can therefore be expected to improve the use of these systems. This seems to be supported by the information (also derived from the ICT survey) that the proportion of those Hungarian people who were required to submit official documents but did not do so via the Internet had doubled in the past two years (from 21% to 40% within the entire population, and from 27% to 50% among Internet users).



The use of modern e-government services showed a decline in 2016 – following a previous fall in 2013 – putting Hungary below the EU average.

Source: Eurostat

E.1.2. The number of types of affairs that can be managed at government windows

When it comes to customer access to services, the simplification of administrative processes is of high importance. Of the currently known models, the so-called one-stop-shop system of managing affairs at government windows is the most suitable, as it provides the opportunity to administer all actions relating to individual procedures at a single location and for the greatest possible number of types of administrative task. Although electronic and telephone channels for administering affairs are assigned increasing importance, managing affairs in person continues to be the most important in most segments of society.

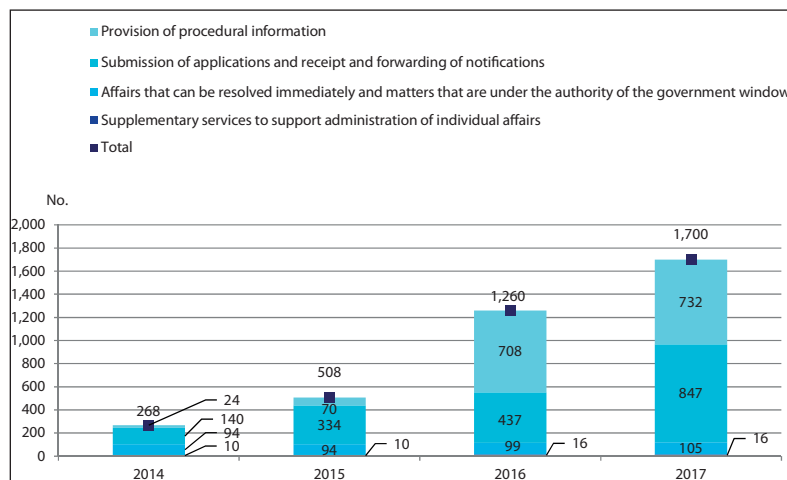
The importance of the personal customer service network is also justified by the fact that, in many cases, the administration of public affairs still requires clients to make personal visits, in addition to demanding a special identification and authentication procedure.

By enabling clients to arrange all matters of public administration at a single point of contact, the administrative burden of clients and the time required to manage affairs have been reduced significantly, since clients no longer need to stand in line several times or visit several authorities.

Since the introduction of government windows in 2011, the tasks performed by offices of government-issued documents and specialist authorities have been integrated into the uniform customer service network. Simultaneously with this, the number of administrative areas that can be administered has grown steadily, with the government setting them forth on an itemised list in Government Decree 515/2013 (XII. 30.). The clearly observable expansion in the number of tasks that can be managed at government windows is a forward step not only in terms of quantity, but also in the quality of customer service provided by the government: The final goal of the reform is to ensure that the range of affairs that can be administered at government windows covers all special administration areas; the plan is to ensure that clients are able to receive assistance at a single location for 25,000 different types of official matters.

When interpreting the indicator, it is important to note that, with respect to the administrative areas covered, services of varying complexity and type are available as per the following:

1. *Provision of procedural information:* clients are informed regarding the progress of the given procedure and their rights and obligations pertaining to it. The range of cases requiring the provision of information should be established for matters where it would be better for clients to submit their applications at a government window, because the administration of the given case would be faster through a body with the required competence (e.g. in cases where money is to be paid out), and where the administration of



Source: Hungarian Official Gazette

the given case requires specialist knowledge that is not available at government windows.

2. *Submission of applications and receipt and forwarding of notifications:* the client initiates a procedure at the government window by submitting an application. In cases where the submission should be forwarded, the government window forwards the application along with its enclosed documents for further processing to the competent government agency, which will make a decision on the basis of its authority.

3. *Affairs that can be resolved immediately and matters that are under the authority of the government window:* the administrator completes the entire administrative procedure. The authority either concludes the official matter immediately or takes the necessary steps and makes a substantive decision on site on the basis of its own authority within the deadline set forth by law.

4. *Supplementary services to support administration of individual affairs:* as an official service, the government window also offers supplementary services to clients, such as Customer Portal registration and provides access to the internet and assistance with the use of information technology for the completion of individual official tasks.

There is also a small number of tasks that can be completed officially at the government windows that cannot be subject to the client's will or intention and are generally made necessary by a (mandatory) measure taken by another authority (such as the withdrawal of a driving license).

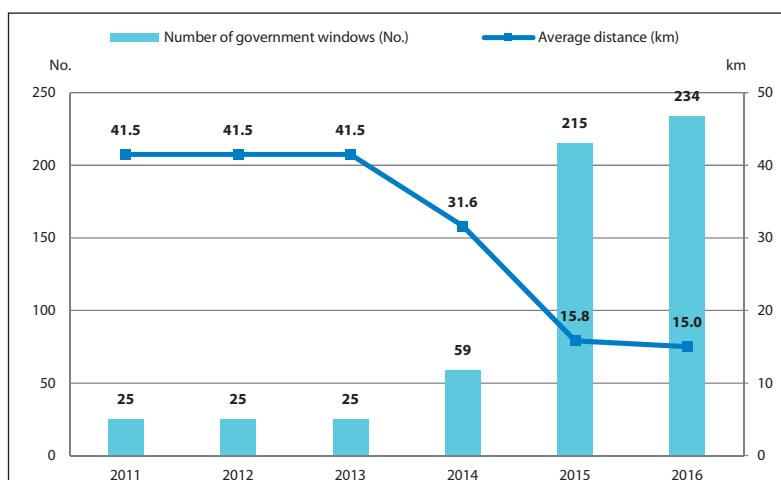
The data above show that the service portfolio of the government windows continues to expand and the number of affairs that can be arranged has doubled on average since their introduction. In 2017, the number of types of cases was 1,700. Of these, 847 were cases where forwarding was required, and there were 732 cases in which the government window only provided information. The number of tasks that can be completed immediately or within the authority of the government windows is still small (105).

The range of affairs that can be arranged at government windows continues to expand; last year, another 440 types of cases were added.

E.1.3. The average distance by public road to the nearest government window outside the capital

Geographical distance from physical customer service points fundamentally determines their accessibility, alongside the expansion of the number of types of administrative affairs that can be managed at government windows one-stop shops. Obviously, there are other public administration customer services operating in addition to the government windows, but this sub-indicator (in view of the intentions of the government described above) focuses on government windows as an integrated customer service network that set an example with their modern equipment and highly skilled staff, while also providing equal opportunities and accessibility to disabled citizens. At the time when physical locations for these offices were chosen, one of the criteria was that they are installed in locations that are easily accessible to all customers (e.g. in railroad stations, near busy public spaces).

The gradual expansion of the network of government windows has made access to administrative services easier for the rural population. This is illustrated by the distance by public road from the nearest government window, calculated using the Google Maps application. We examined the distance between the centre of all communities in a given county and the closest government window belonging to that county, and then the national average of all such county information (not including data for Budapest). In this way, the indicator is able to provide a more rounded view of geographic access (rather than distance as the crow flies) by taking into account the road network infrastructure, and although it is easy to see that the growth in the number of government windows if dispersed by region reduces the value of the indicator, the indicator



Source: Prime Minister's Office, NUPS, Google Maps

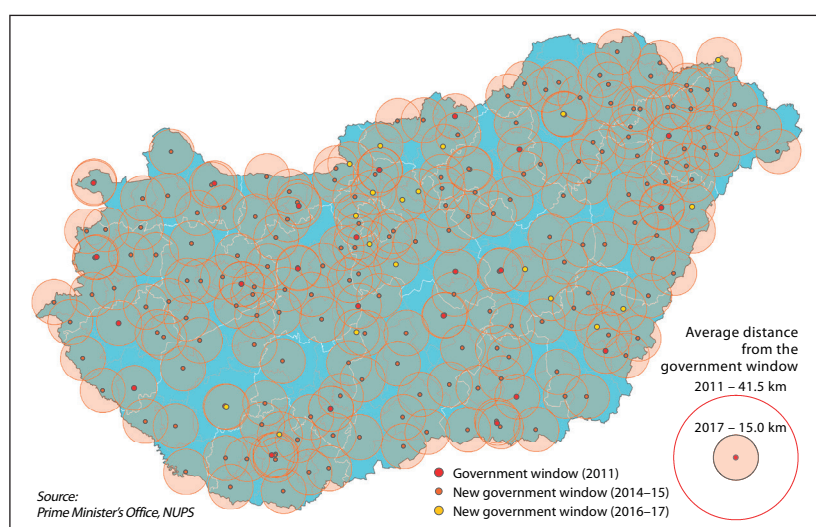
can also be applied as a useful outcome indicator of the uniformity of network development.

In 2011, as the first phase of the single-window customer service reform, 29 integrated government customer service offices (IGCSOs) were opened as first-generation government windows operating as the organisational units of metropolitan and county government offices. The next phase of the reform was the creation of the second-generation government windows, primarily on the basis of the locations of former offices of government-issued documents. When the 175 districts in the country were established in 2013, one of the key criteria was to ensure that the offices could be accessed from communities located far from the centres, that various tasks could be completed easily by all citizens, and that the closest point of administration is within a distance of 30 km. The *blind spots* on the map show the areas where clients need to travel more than the average distance in order to handle their affairs at personal customer service points (e.g. in Kisbárapáti, which is

36 km from the closest government window in Tab). In addition to the average distance, we also examined how the development of the network is able to meet the principle of equal opportunity for access.

While the difference between the shortest and the longest distance was 42 km in Borsod-Abaúj-Zemplén County in 2014, it was reduced to 16 km by 2016.

With the opening of 19 new government windows in 2015 (four of which were opened in communities that had never had a government window before), the network of second-generation government windows continues to expand in order to bring integrated public administration opportunities closer to citizens.



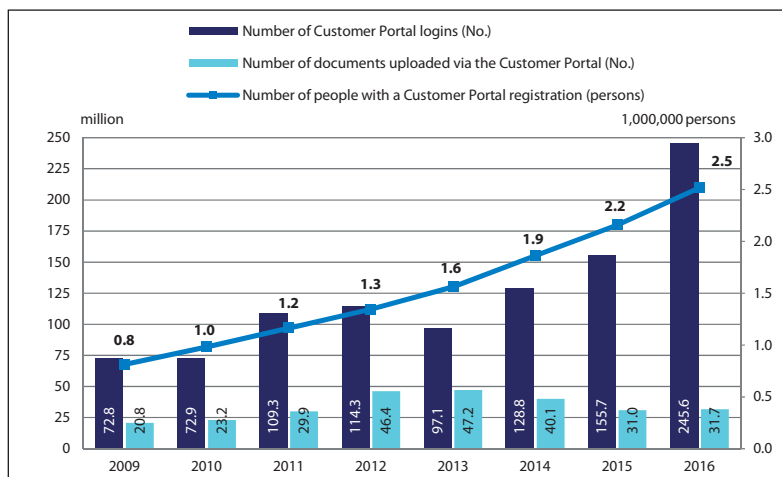
The expansion of government windows continued last year in rural areas, as a result of which the average distance between the citizen's place of residence and the closest government window was reduced to 15 km.

E.1.4. The number of registrations and electronic documents uploaded to Customer Portal

This indicator shows the number of users registered for the Customer Portal (CP) service available on the Magyarorszag.hu government portal, as well as the volume of documents sent by citizens to institutions via the Customer Portal. The indicator measures the spread in the use of e-government services on the basis of the statistical data provided by the National Infocommunications Service Company Ltd. (NIS) that are based on visitor logs for the Magyarorszag.hu portal. The Customer Portal is the public administration's electronic customer log-in and identification system, which allows users to securely communicate with government offices once they have verified their personal identity for a single session. Registration for the service requires clients to make a personal appearance once at a government window, an office of government-issued documents, an NTSCA office, or the HR department of selected government agencies, and online registration is also possible with an electronic identity card (eSZIG).

With the growth in the supply of e-government services, numbers of Customer Portal registrations and traffic data have also grown steadily, with more than 2.5 million users making use of 200 different services requiring CP registration.

The significant increase in the number of logins through the Customer Portal (a total of nearly 156 million in 2015 and over 245 million in 2016) is primarily due to the expansion of services available through the web-based Customer Service Tool and the introduction of the Civil Action Portal. The web-based Customer Service Tool can be used by private persons and private entrepreneurs to arrange their affairs – typically from start to finish – electronically, while the Civil Action Portal can be used by business organisations and parties with a legal representative to submit their petitions. The Civil Action Portal is exclusively reserved for electronically contacting courts competent in civil legal actions, and public administration bodies or notaries that make administrative decisions in proceedings related to the protection of property and administrative litigation.



Source: NIS

The number of documents uploaded in 2016 slightly increased compared to 2015, with a total of 55,000 cases submitted through the Civil Action Portal. The use of the Customer Portal in itself indicates more extensive use of e-government services, since it is required for official transactions where clients need to identify themselves. The difference in the trend from that of the E.1.1. indicator is primarily due to the fact that Customer Portal data measures the activity of both citizens and enterprises in public administration. For the latter, use of the electronic channel is mandatory for administering affairs.

Act CCXXII of 2015 on the general rules for electronic administration and confidential services, which entered into force on 1 January 2017 (hereinafter: E-administration Act), regulates the relationship between the government agency providing electronic administration and clients, as well as third parties providing IT services. According to the E-administration Act, as of 1 January 2018, the competent government agencies must support the electronic administration of affairs, and hence the numbers of clients using electronic identification (Customer Portal, electronic identity card, etc.) are expected to grow further, as well as the numbers of services that can be accessed through electronic identification.

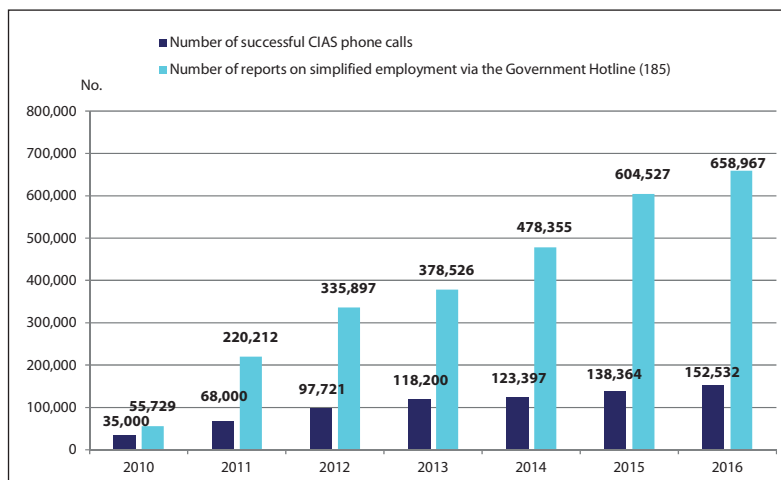
The increase in activity using the Customer Portal clearly shows the continuous growth in demand for e-government services among enterprises and citizens and the ongoing broadening of the portfolio of offerings.

E.1.5. Number of phone calls resulting in the successful conclusion of an administrative process

In addition to the online and personal administrative channels already analysed and assessed previously, this indicator shows the use of telephone administration services provided for matters associated with taxes and contributions. On the one hand, it includes the number of occasions when information was provided by telephone on taxes managed by the NTSCA (via the Customer Information and Administration System in particular cases) and, on the other, data pertaining to reports on simplified employment provided via the Government Hotline for taxation. Recognising the current needs of citizens, the government issued a decree to design a concept for a uniform telephone and electronic customer service system that, inter alia, will be expected to expand the range of opportunities for telephone administration.

The use of the indicator is justified by the fact that the opportunity to administer and report affairs will make administration convenient for clients who wish to have direct contact with an administrator but who cannot or are not willing to travel to personal administration points. Additionally, it also helps those who are unable to meet the conditions necessary for electronic administration (such as lack of access to a computer and the internet, or insufficient digital competence).

In order to meet increasing demands from taxpayers, the tax authority introduced the Customer Information and Administration System (CIAS) from the second half of 2009 as a new service. Taxpayers and their representatives, after identifying themselves with a secret identity number (PIN code), can now manage individual affairs and request information on what is classified as confidential tax data. In addition, a special form of employment known as simplified



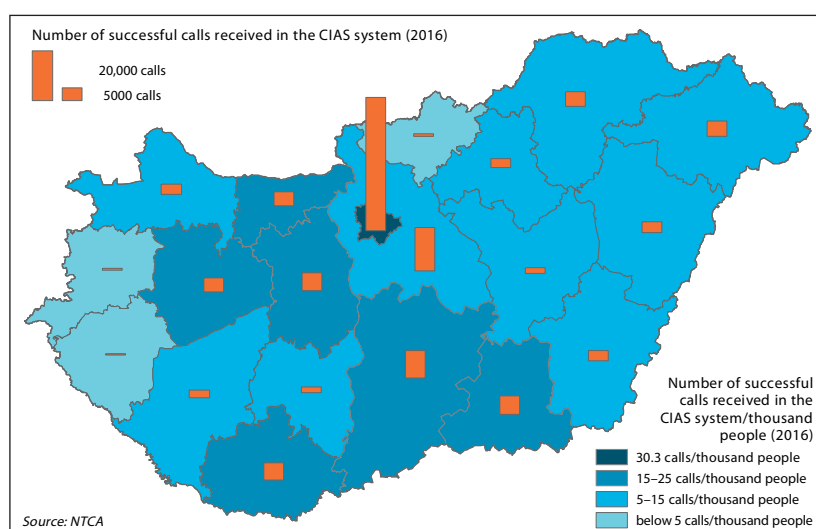
Source: NTCA, NIS

employment was introduced in 2010 for taxpayers to report data on the phone.

Among the tasks that can be processed with the assistance of telephone customer service, 50% of taxpayer calls were in relation to the filing of taxes, taxpayer register inquiries made up 20%, and requests for administration and information on account balances each accounted for 10%. (The remaining 10% of cases are made up by an additional six types of cases.)

Examining the question from a regional perspective: Budapest stands out by some distance numerically and in proportion (number of cases per person) as far as the use of telephone administration is concerned. Central Hungary and the Southern Great Plains region also recording relatively high values, but the use of this channel of administration is negligible in Vas, Zala and Nógrád counties.

The data in the graph includes only those incoming telephone calls which resulted in a definitive customer service being offered upon successful identification of the caller. The data series therefore does not merely show an increase in the popularity of this form of contact, it also demonstrates an increase in effective administration. The number of reports on simplified employment submitted by callers continues to grow in spite of the fact that this task can now also be completed via a mobile application. The increase in access opportunities simultaneously lowers the administrative burdens of in-person customer service on the public administration side and also promotes the conscious and law-abiding behaviour of citizens, thereby directly contributing to the effective collection of state tax revenues.



The use of the telephone administration channel has shown consistent growth since its launch, but its popularity is unevenly distributed by region.

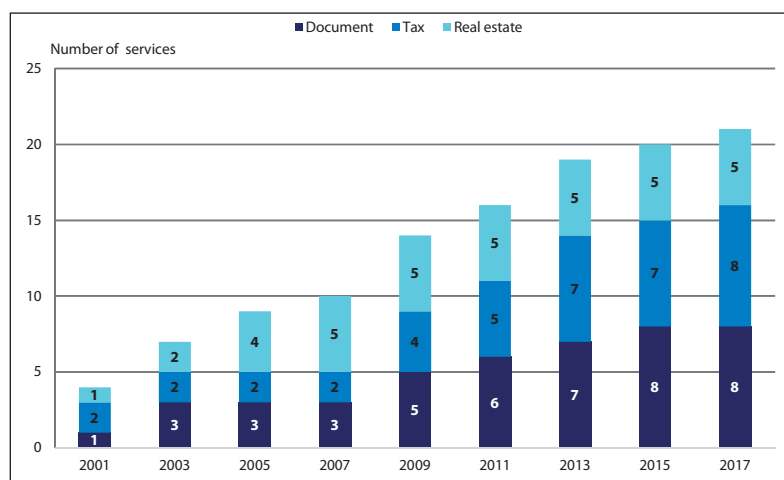
E.2.1. The number of services supporting the administrative process

Management of personal affairs continues to be the most widespread form of handling public administration activities in Hungary, and is also the most accessible form for all citizens. Services provided by public administration will be able to substantively improve the citizens' sense of convenience provided their development is able to keep pace with the efficiency of the simple, transparent and efficient services they are already accustomed to in the course of everyday life, in banking services, for example. The strategy for the development of public administration shows that it is the government's intention to introduce electronic support services to reduce administrative burdens.

With this indicator, we examined which support services promote personal administration to deliver an improved customer experience as well as relieve the burden on clients by simplifying administrative processes. In order to ensure comparability, we did not use case-specific services; instead, we defined eight support services by identifying general functions that can be interpreted as a kind of service basket. They include the following:

1. Electronic information service: in our case, the provision of useful information via the Internet.
2. By booking an appointment, we mean a solution that supports the scheduling of management of affairs in person.
3. The proactive service informs clients in advance about any changes to the status of their cases, as well as any procedural events affecting them or their administrative obligations.
4. The text message/e-mail service typically provides clients with information on a decision planned by an organisation or of any action taken or change in the status of their case.
5. The status query service can be used by clients to query the milestones reached in the procedure in progress.
6. Through payment by bank card, payment in cash can be eliminated during administrative processes.
7. The *Initiate a process, download, data provision or other query* service provides additional functions to support administration (such as the function for initiating a case in preparation for processing, or the opportunity to query and download various pieces of information and data).
8. Mobile applications – rather than interfaces optimised for mobile devices – that can be run as stand-alone applications.

When creating the indicator, we examined three administrative areas that, due to the high number of cases, are relevant for both



Source: MI, MNE, GOBP

natural and non-natural persons and are supported by a nationwide customer service network. These areas include the administration of documents, taxes and real property cases. The administrative channels of these three areas represent the framework of our study of support services. The availability of convenience services is showing a constantly improving trend in all three areas, and this is spurred by both technological development and the incorporation of client needs into public administration.

Initially, the first supplementary services were designed to make the acquisition of information necessary for personal administration (customer service opening hours, the necessary documents, etc.) easier, that is, built around the concept of a *prepared client*. These were gradually supplemented by services that support the acquisition of data and information necessary for initially preparing the cases. The service for reserving an appointment paved the way for predictable waiting times, while the provision of information (via text message/e-mail, proactive services) generated in advance or provided subsequently by public administration addresses the clients themselves in order to support administration. The expansion of convenience services to support the process of administration continued with the introduction of payment by bank card and mobile applications in line with the latest technological trends.

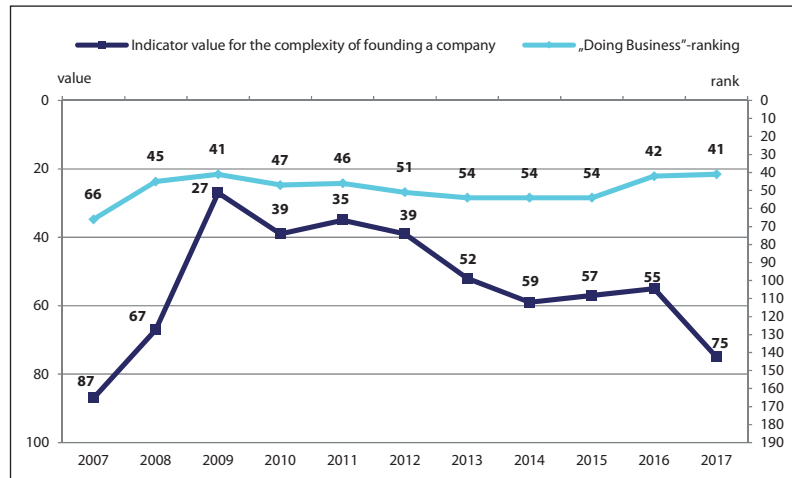
All in all, it can be established that the range of convenience services almost reaches the level of proactivity in the three special areas under investigation. Some support services are not available for real estate processes, but it should be noted that the existence of the proactive services are not always relevant for every case due to the special features of each.

E.2.2. The complexity of starting a company

The World Bank has been publishing its *Doing Business Report* every year since 2004. The study uses 11 sub-indices (starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts, resolving insolvency and regulation of the labour market) to examine the effects of regulations that facilitate or limit business operations. The survey uses quantifiable indicators to compare 190 countries in the world.

The survey is associated with the action plan launched by the European Commission in 2007, which aims to reduce the administrative burdens of businesses. The objective of the Hungarian *Public Administration and Public Service Development Strategy* for the period between 2014 and 2020 is to reduce bureaucracy related to public services for businesses in its target group.

The *Doing Business Report* measures various aspects of economic regulation at domestic SMEs in the biggest city of each country on the basis of standardised cases. The survey relies on four major sources of information: the answers provided in the relevant laws and requirements, companies, government actors and the regional experts of the World Bank. The values are provided on a scale of 0 to 100, where 0 represents the worst and 100 the best performance. The value received in the individual and aggregate dimensions shows how far the performance of a given country is from that of the best country. This determines the difference between the performance of the given country and that of the best country, as well as the absolute change in the regulatory environment of the economy.

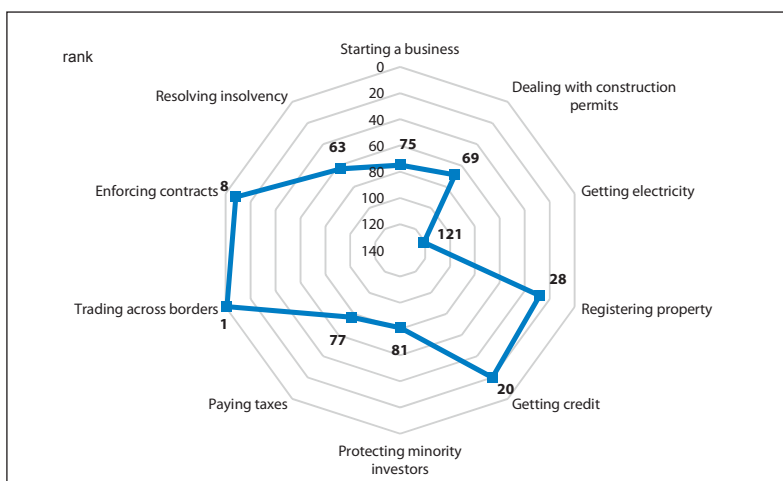


Source: World Bank

The *Starting a business* indicator measures the number of procedures necessary to establish a limited liability company, the time and cost required, as well as the minimum amount of initial capital to be paid. According to the 2017 report, company formation requires six procedures (hiring a lawyer and producing the necessary legal documents, opening a bank account, registration at the Companies House, registration with the National Health Insurance Fund, registration of local business tax with the local government, registration at the Chamber of Industry and Commerce), for which a company has seven days and must pay 7.1% of its per capita revenue. The mandatory initial capital is 45.5% of per capita revenue. With this, Hungary ranks 75th of 190 countries.

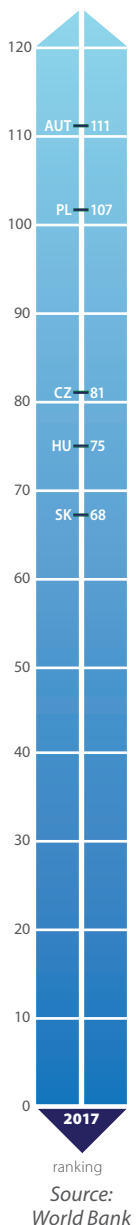
Although we can observe significant improvement when looking at the absolute value of the starting a company sub-indicator compared to the base value in 2005 (6 procedures and 52 days, with the cost dimension at 22.9% and 86.4%), the international ranking has shown a continuous decline after an improving trend up to 2012. A slight improvement can be seen only in the ranking that includes all dimensions.

When Hungary increased the registration fee for limited liability companies and stipulated mandatory registration to the Hungarian Chamber of Industry and Trade in 2013, as well as raising the initial capital requirement in 2015, these changes immediately had their effect on the *Doing Business* dimension.



Source: World Bank

Starting a business became significantly simpler from 2007 to 2012, but the trend was reversed in 2013, when measures that influenced the value of this indicator worsened Hungary's position in the international rankings.



ranking

Source:
World Bank

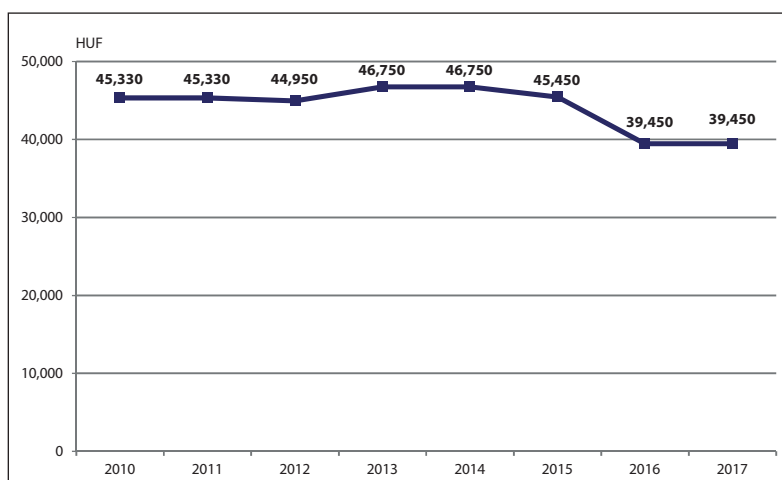
E.2.3. The administrative service fees and stamp duty most frequently paid by customers

Although the economic models for measuring administrative burdens typically consider fees payable for different procedures separately, the dimension examining customer burdens also includes the compensation payable for the administrative actions requested by clients. The reason for this is that these payment obligations arise as a more direct burden for clients than other costs related to administration (such as disruption of work, travel, etc.).

Recognising this, the government envisaged a so-called *state utility rate cut* under the *State Reform 2* programme for reducing bureaucracy, as a result of which state revenues deriving from procedural fees declined by HUF 10 billion on an annual basis in the first phase from 1 January 2016. In the second phase of the state utility rate cut programme, from 16 March 2017, 20 procedural duties and administrative service fees were eliminated that placed a burden on a broad range of citizens and businesses. Among other changes, fees for issuing passports to citizens above 65 years of age, making electronic requests for non-official title deeds more than twice in a year, issuing a birth certificate and requesting the certificate required to apply for the family home creation allowance were eliminated. Companies can now be established free of charge and other costs in connection with starting a business were also eliminated.

It should be noted, however, that, on the basis of other public policy considerations, it was suggested that, instead of eliminating the administrative service fees payable by clients, they should be distributed in a fairer manner. Accordingly, the costs of providing a service would not place a burden on the entire population of taxpayers (as is the case under the current regulation), but only on those who directly benefit from the outcome of a particular official procedure, such as those who buy a car, travel abroad, buy a real property, etc.

The ten most frequently used administrative service fees were the basis for calculating the indicator, taking 2010 as the base year. The content of this *basket of cases* is therefore not identical to the services included in the E.2.1. indicator. The sample contains other case areas, as well as processes that were already free of



Source: Hungarian Official Gazette

administrative and service fees before 2010. Of the customer burdens, the indicator therefore takes into account only direct costs arising from payment obligations (so it ignores post office administrative expenses, for example) for the following procedures: extending a driver's licence (HUF 4,000), vehicle registration transfer (HUF 12,000), personal ID card replacement (HUF 0), property registration (HUF 6,600), temporarily withdrawal of a vehicle from road use (HUF 2,300) and meat inspection (HUF 800), as well as issue of student ID cards (HUF 0), passports (HUF 7,500), copies of title deeds (HUF 6,250) and certificates of good conduct (HUF 0). (The fees payable in 2016–2017 are included in brackets.) As for title deeds, it should be noted that as of 1 March 2017 and in order to promote electronic administration, two non-official title deeds a year can be queried and downloaded free of charge from the online platform of the Land Registry via the Customer Portal.

It can be seen in the data for fees that there was a marginal increase in fees to be paid between 2010–2015. Thereafter, there was a significant decrease in 2016: the combined cost of the basket shown above dropped from HUF 45,450 to HUF 39,450 since the fees for some of the procedures were abolished. Several fees were also eliminated in 2017, but there was no change in the fees under investigation. The only exception is that the issue of passports to people over 65 years of age became free of charge.

The change in the total cost of administrative and service fees was below the inflation rate between 2010 and 2015, saw a significant drop in 2016 and did not change in the past year.

E.2.4. The amount of time spent by citizens managing their affairs

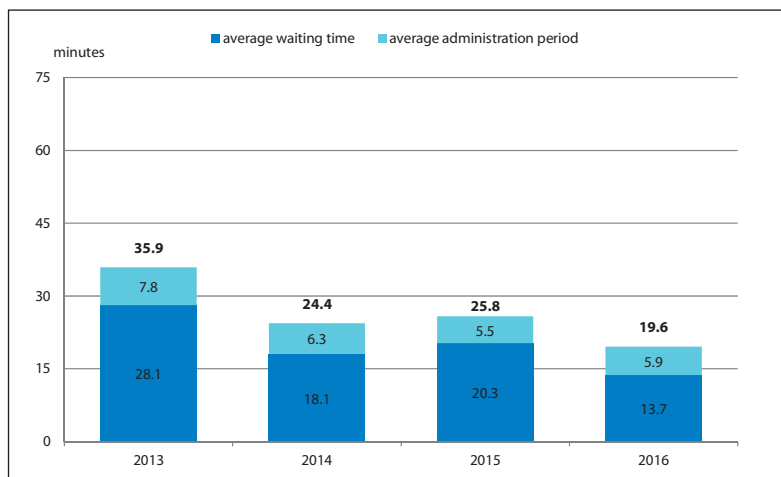
The customer burden dimension is fundamentally determined by the amount of time spent managing affairs. The two main elements with regard to administration of personal affairs are waiting (queueing) time and the time spent meaningfully completing the task. The former starts when the client takes a queue ticket upon arriving at the customer service office and lasts until the client is called in to a member of the administrative staff. The time spent meaningfully managing the affair starts when the client is called to come to an administrator until the time the entire case is resolved.

The amount of time spent with managing affairs is determined by several factors both on the client and on the administration side.

The former is typically determined by the types of affairs to be managed. On the administration side, the complexity of the cases, the skills of the administrators, optimal work organisation and IT support, as well as the quality of customer management all have an influence on the time required to manage affairs. It is a strategic objective of the government to reduce the average time spent with managing affairs by 20% by improving the efficiency of central public administration organisations.

To provide an overview of the actual time required to manage an affair (in the absence of reliable national measurements), we used the Central Office for Administrative and Electronic Public Services' (COAEPS) customer service data as a basis. The selection of the customer service as mentioned previously was determined by the convenience of its regional location, customer traffic as well as the high number of cases that characterise the capacity of this customer service.

The details of the customer service statistics show that the percentage of clients who attended a scheduled appointment against all clients served increased compared to previous years. In 2014, only 12% of clients served had an appointment, while every fourth client arrived for an appointment in 2015, rising to 38% in 2016. All this resulted in an increase in the number of scheduled clients and a decline in the number of clients managing their administrative affairs in an *ad hoc* manner. Awareness is also shown by the fact that when making an appointment, customers also ask questions about the affair to be managed, so they are typically more prepared when they arrive at the customer service, which increases the number of successfully resolved administrative cases.



Source: MI

There was no real change in waiting times. Since 62% of clients served still arrive without an appointment, the waiting time for these customers is still a factor that increases overall average waiting time in the indicator measuring the quality of customer service. According to the data, despite the higher frequency of appointments, close to 80% of the total amount of time devoted to administration is spent waiting, while actual administration is only 5% of the total time on average. It is not realistic to reduce this second time as the relevant procedural steps cannot be significantly simplified further.

By examining the time series data, it can be established that the number of clients served declined compared to previous years (176,192 in 2016, 232,198 in 2015, and 272,538 clients in 2014), but the number of clients with appointments increased. This change in the number of customers served results in better distributed, more flexible and more manageable client traffic, which also reduces the waiting times mentioned previously.

At the same time, by carrying out deeper and more comprehensive analysis of customer service statistics, it can be established that, although the number of clients served and hence the number of cases completed decreased at the particular customer service office selected for the measurement of this indicator, the total number of cases administered increased at the national level (8,795,835 document office cases were closed in 2014, 8,864,599 in 2015, and 9,832,116 in 2016). This means that the introduction of systematic and scheduled customer management makes it possible to divert clients to other customer service centres, which can help ensure an even load in the long term in the national network.

The average time spent on actual administration did not decrease further, while the waiting (queueing) time decreased by 7% year-on-year at the centralised personal customer service centre.

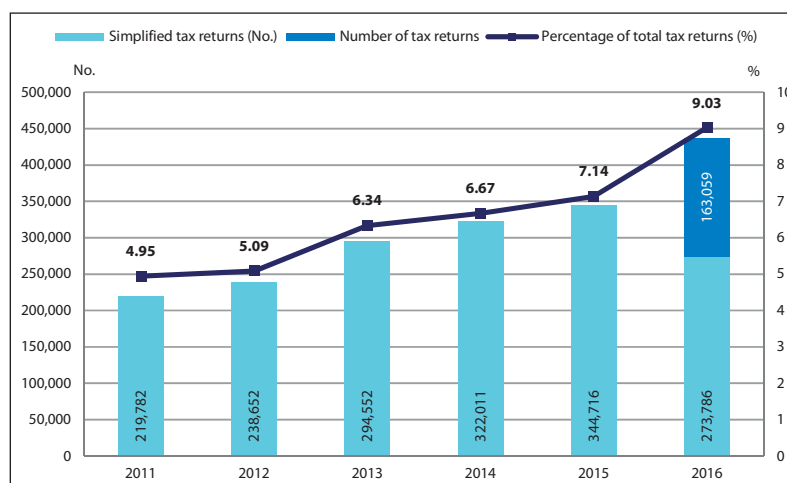
E.2.5. Percentage of simplified personal income tax returns

The procedural burden created by the obligation to submit tax returns imposed on 4 to 5 million private persons annually is one of the most important points of contact between public administration and clients. The tax return is a form of tax self-assessment that provides the option of filing an individual income tax return prepared and individualised by the state tax authority based on a preliminary declaration on the part of the private individual. The indicator related to it is the percentage of type *E* simplified tax returns prepared by the tax authority against all person income tax returns submitted in the given year.

Although the data provided by the NTSCA clearly show the popularity of the option, which first became available in 2016, the results demonstrate that the earlier upward trend (as a result of the most recent simplification) ground to a halt both in terms of numbers and in terms of percentage. In 2015, the percentage of simplified tax returns was 7%, while it was only 6% of the total number of 4,837,921 personal income tax returns in 2016. At the same time, the ratio of tax declarations with even simpler data content slightly increased, with 1.24% of citizens filing their tax returns in this form.

The interpretation of this indicator is limited by the fact that it disregards additional possibilities that result in a reduction of customer burdens. Thus, it is not possible to present the nature of the actual change, and additional background analysis and information are needed. The reason behind the decline in the value of the indicator is that the personal income tax reform introduced in 2016 offers additional solutions for reducing customer burdens to citizens who are required to submit a tax return. Since 2016, it has been possible for a particular group of taxpayers to request that the tax authority – after they have submitted a tax declaration – prepares the tax return on their behalf, which is a completely new way of submitting a personal income tax return.

The reform of personal income tax introduced in 2017 (for returns applying to the 2016 tax year) abolishes the legal institution of tax declarations, with simplified tax returns drawn up with the help of the tax authority, as well as the legal institution of a tax assessment prepared by the tax authority based on the private individual's declaration statement, resulting in a transparent and even easier system of personal income tax returns. On this basis, the tax authority prepares the tax return and makes the draft version



Source: NTCA

of the personal income tax return form available via a dedicated electronic platform (WebNYK) for taxpayers who do not request tax assessments from their employers, or for whom the employer does not undertake to provide a tax assessment. The results of this will be shown in the *Good State and Governance Report* to be published next year.

The opportunity to take advantage of the tax assessment by the tax authority (and the reform that continues to restructure the system of personal income tax returns) further simplifies the administrative burdens on taxpayers. This direction taken by the government also appears in the *Public Administration and Public Service Development Strategy* as an extension of efforts to optimise administrative processes. The intention to considerably reduce the administrative burdens of customers clearly shows that the state is willing to *take over* certain burdens from citizens, even at the expense of increasing burdens on the administrative side. This solution is also used by other OECD Member States and represents a shift in taxation philosophy. While the tax authority used to perform a monitoring function previously, this is now built into its service activity. Clearly, these solutions also reduce the volume of monitoring activities, helping to keep internal public administration burdens in check.

The government is also planning to introduce similar solutions for other tax categories and taxpayer groups: Following on from electronic personal income tax returns (eSZJA), similar steps can be expected soon for excise duty, which will affect SMEs rather than private persons.

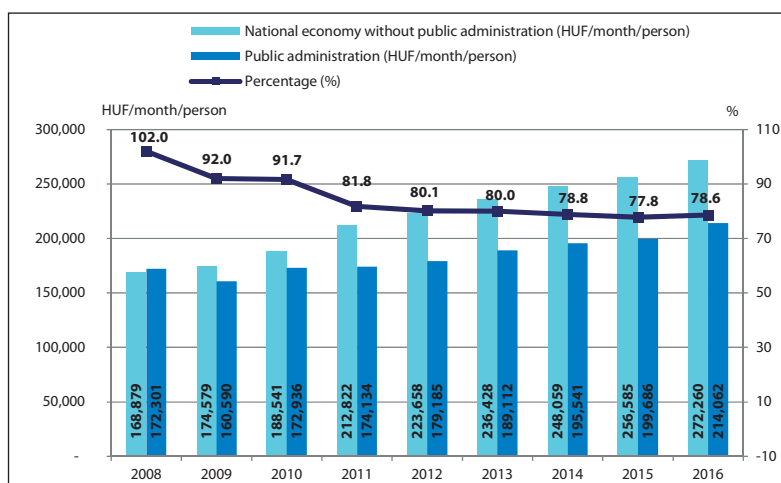
E.3.1. The net average wages of knowledge workers employed in public administration compared to the average in the commercial sector

This indicator measures the efficiency of human resource management in public administration and projects the average monthly salary onto indicators for the average incomes of employees in the private sector. We investigated only the earnings data for knowledge workers broken down by the type of work they do in light of the fact that they make up more than 90% of the workers in public administration.

In the commercial sector, net earnings data can be best influenced directly by the government through taxation and the minimum wage, while in public administration, earnings are fully dependent on decisions taken by the government, since remuneration levels are set out by law and funded by the central budget. An efficient state based on strategic fundamentals requires a highly skilled and professionally committed staff in every area of public administration.

The earnings data of the public sector were below levels in the commercial sector in every year with the exception of 2008. On the one hand, this indicates cost-effective and efficient use of public funds, while, on the other, European public administrations are also paying increasing attention to maintaining the image and competitiveness of public services as an employment option in response to unfavourable demographic processes. Accordingly, the indicator is affected by two diverging interests. If the two values are identical, this allows for competitiveness in the public administration labour market to coexist with appropriate labour costs in line with prevailing labour market trends.

The ratio dropped steadily since 2008 up to 2015 (by close to 25 percentage points), which, although it does show more efficient use of public funds, has a negative effect on the labour-market competitiveness of a career in public administration. After



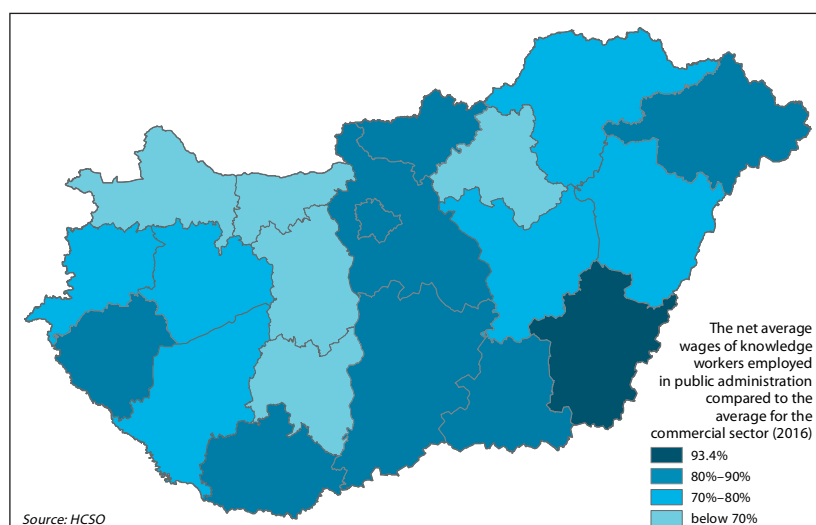
Wages are valid without regard to tax incentives.

Source: HC SO

stagnation in recent years, there are signs of a slight change, but additional measures for closing the earnings gap are needed to generate positive outcomes. It should be noted from a methodological perspective that while values reflect actual earnings data in public administration, grey employment (paying wages cash in hand) significantly distorts the picture in the competitive sector. Accordingly, there is good reason to assume that the difference between earnings in the two sectors is actually much higher than what appears in the data.

As there is a fixed wage bracket in public administration, the regional earnings differences typical of the labour market are relatively limited, except for in Budapest, where administrative organisations able to provide a higher category of wages are located. The regional disparity that can therefore be seen on the map largely derives from the differences in the commercial sector (disregarding the exceptional data in Budapest, the difference is 35% in comparison to the average income in Békés and Komárom-Esztergom counties).

As for the difference between the two employment sectors, it should be noted that the smaller difference on average in Budapest is due to the higher wages paid by the central organisations mentioned previously, while the wage advantage of the private sector is highest in Győr-Moson-Sopron county, and Békés is the only county where earnings in the budgetary sector exceed the national average.



Source: HC SO

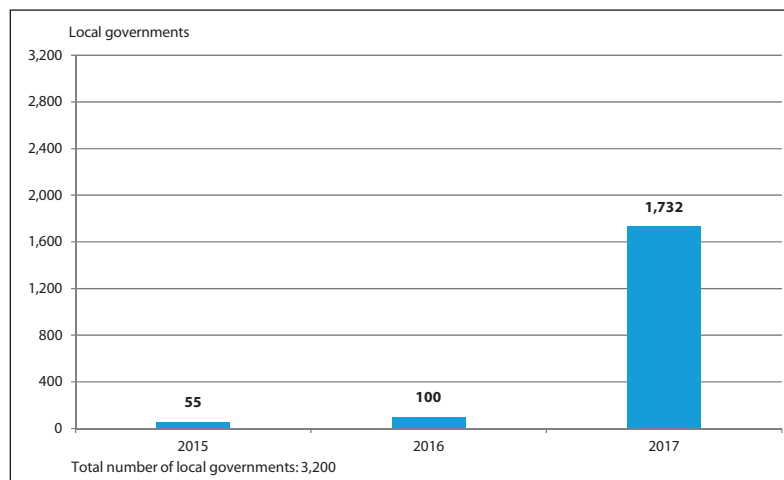
Despite rising wage levels, the income of knowledge workers is still lower in public administration than it is in the commercial sector, although regional differences do exist.

E.3.2. The number of municipal governments using the services of the Application Service Provider system

This indicator shows the number of municipal governments connected to the municipal Application Service Provider (ASP) Centre. This indicator is important because it provides information on the quality of the IT infrastructure of municipal public administration, which accounts for one-third of the public administration staff in Hungary (in terms of the number of administrators).

The municipal government ASP centre is an electronic information system that provides remote application services to support the work of municipal governments. The service can be used simply via a reliable Internet connection and web browser; no software needs to be installed on the local computers in municipal government offices. Once the platform is opened in the browser, the services provided by the centre can be accessed in a standardised and uniform form (once the administrator is authenticated). The operation of the municipal government ASP system is therefore provided centrally, which represents a significant saving in costs as the municipal governments do not need to maintain and develop their own IT systems. In addition, the data repository to be set up will ensure that the funding mechanisms of the municipal subsystem can be monitored. The introduction of the ASP system makes reduced IT operational costs possible for municipal governments at the level of the national economy. This solution based on cloud technology makes it possible to share public administration resources efficiently.

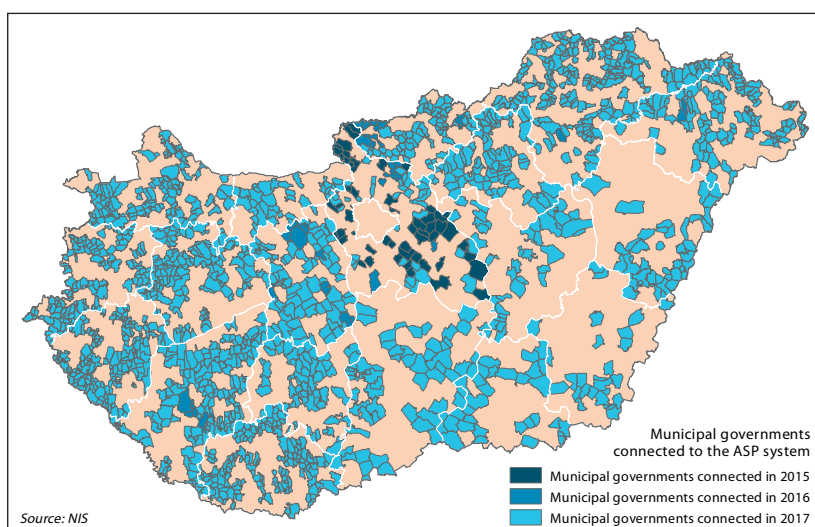
The number of connections has rapidly increased recently. After a period of voluntary connection and in response to new legal obligations, 1,732 municipal governments, typically with small populations and low levels of IT infrastructure, adopted the service, according to the data provided by the NIS. Almost all connected



Source: NIS

municipal governments use the special systems for taxation and management purposes, but a much smaller number take advantage of the entire application portfolio. As development progresses, the municipal ASP Centre will be rolled out to provide all municipal governments with the entire application portfolio; only municipal governments, primarily those with higher populations and better IT infrastructure and conditions, will be exempted from this obligation. As shown on the map, in the first phases – following the municipalities in the Central Hungary region that voluntarily joined the programme – municipalities in regions with a large number of small villages (in Western and Northern Hungary) were connected to the centre in large numbers.

As Government Decree 257/2016 (VIII. 31.) on the municipal ASP system precisely stipulates which municipal governments should be connected to the service from 1 January 2018 and 1 January 2019, it can be expected that every municipal government will be connected in some way within the next two years.



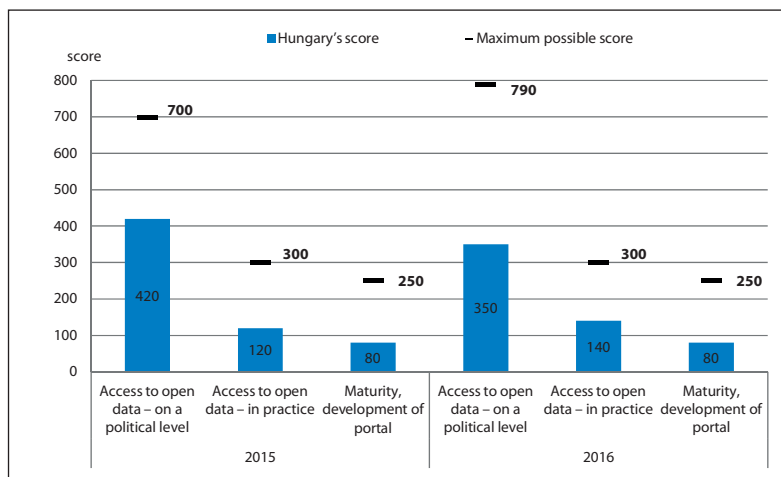
Source: NIS

Municipal governments continue to be connected as part of the municipal ASP project. More than half of municipal governments are currently using the services provided by the ASP centre.

E.3.3. Maturity based on access to open data

Open data is a term applied to information that can be freely disclosed to, used or reused by any citizen. This definition can be limited to information that exclusively affects public administration, but it can also refer to data collected or published by public administration. Open data can also contribute to ensuring the political, economic and social sustainability of a nation state. Many studies published in recent years have stressed the importance of open data to economic growth, innovation and the development of products and services. These benefits are not limited solely to the private sector. The operation of public administration itself is also made more efficient through better use of data. For this to happen, data needs to be accessible and reusable.

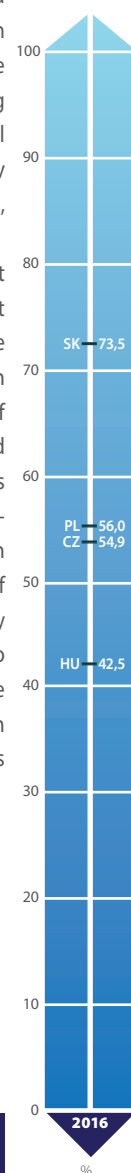
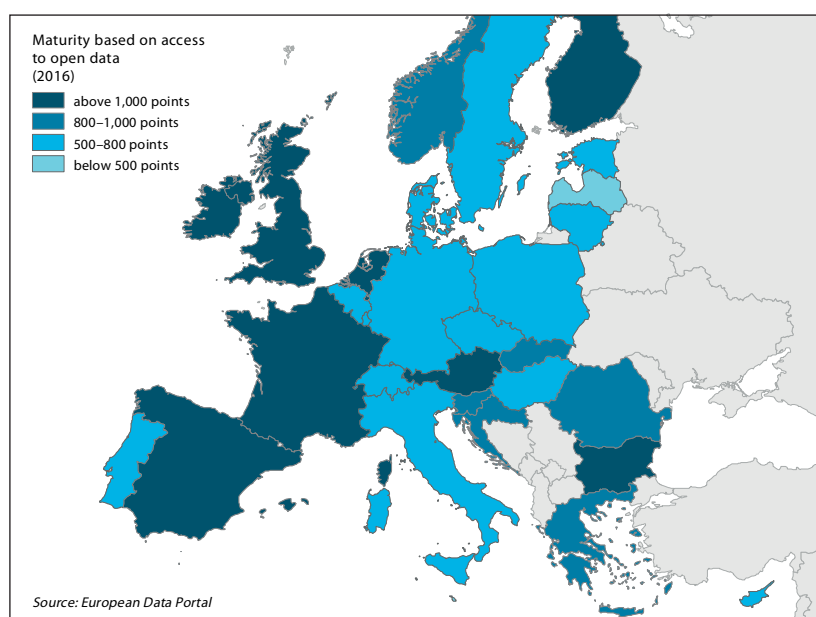
Since 2015 the European Commission has been surveying the EU28 member states, as well as Norway, Switzerland and Liechtenstein to establish their maturity and preparedness on the basis of the principle of open data. The results of this work are published on the European Data Portal. The measurement is built on two indicators for each country: 1. accessibility of open data and 2. quality of the public data mining portal. The former indicator measures what open data policies and requirements each country has in place and how they perform in implementing the PSI directive on the further use of information provided by the public sector; in addition, it assesses the use of open data and the political, social and economic impacts of open data. The latter indicator measures the usability of the portal based on its functionality, as well as the reusability, accessibility and distribution of the data.



Source: European Data Portal

The sub-indicators assigned to each indicator are rated on the basis of this based on a list of questions comprising 41 + 13 elements, and the value of the indicator is given as a percentage of the maximum achievable points. The report has been published twice to date and the most recent data runs up to September 2016. According to the survey, Hungary's performance is contrary to international trends in terms of the maturity of open data: In 2016, the country achieved 43% of the total points available compared to 50% in 2015, while the average was 57% for all countries surveyed.

In case of Hungary, it was seen as an achievement that the amendment to the PSI directive was implemented, and that the *White Book* on national data policy was published. At the same time, practical implementation falls short of expectations both in terms of the protection of open data and the facilitation of its reuse. The European Commission ranked the countries surveyed into four categories on the basis of their achievements: beginners, followers, trend-setters and leaders. In 2016, Hungary was included in the group of followers, which means that it had successfully formulated its data policy and was able to offer advanced portal services. At the same time, the free use of data is still limited, which prevents the free use of datasets and restricts the possibility of reuse.



Source: European Committee

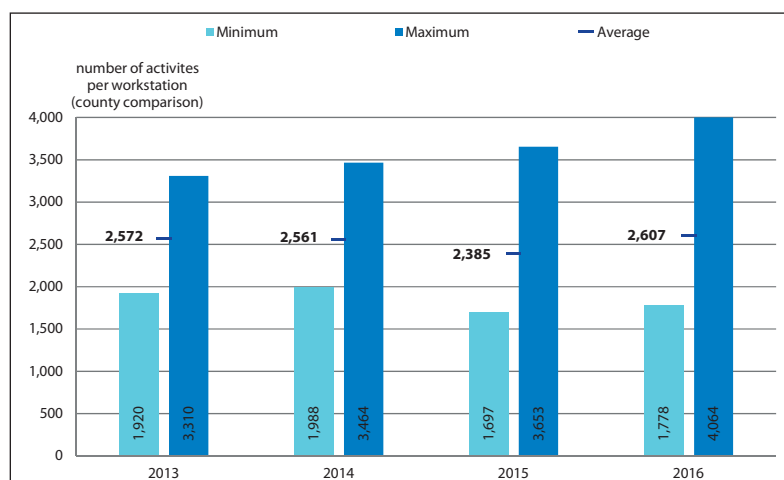
According to the report published by the European Commission, Hungary's open data indicator deteriorated last year, going against the trend in Europe.

E.3.4. Evenness of the distribution of the number of activities per document office workstation at the county level

This specific performance indicator based on the statistical data of the national network of document offices shows the average annual distribution of over 9,800,000 activities being performed at more than 3,500 workstations (in 2016), which demonstrates the efficiency of the customer service infrastructure. For this indicator, we examine the activities of the network of government windows as a channel for personal administration that includes affairs related to document management. This refers to the management of affairs associated with the registration of documents, i.e. the registration, deletion or modification of documents in a special document system. The further data that forms the basis of the indicator is the number of workstations, which is provided by the average number of workstations available to each of the customer service centres across the year.

The actual capacity of the personal customer service centres to serve their clients is dependent on the available staff and the infrastructure that is the basis of, as well as the tool for their work. The development of the personal customer service centres not only refined their physical layout, but also included the qualitative and quantitative development of IT infrastructure.

Several criteria must be taken into account when the optimal number of customer service administrators and workstations is determined, and these provide the basis for the efficient operation of customer service centres. In an ideal scenario, the number of workstations needed is the number required for customer-friendly and efficient operation of the given customer service, taking into account opening hours, physical layout and customer needs. As usage patterns are constantly changing, it is not possible to precisely define these factors, but customer service centres can be expected



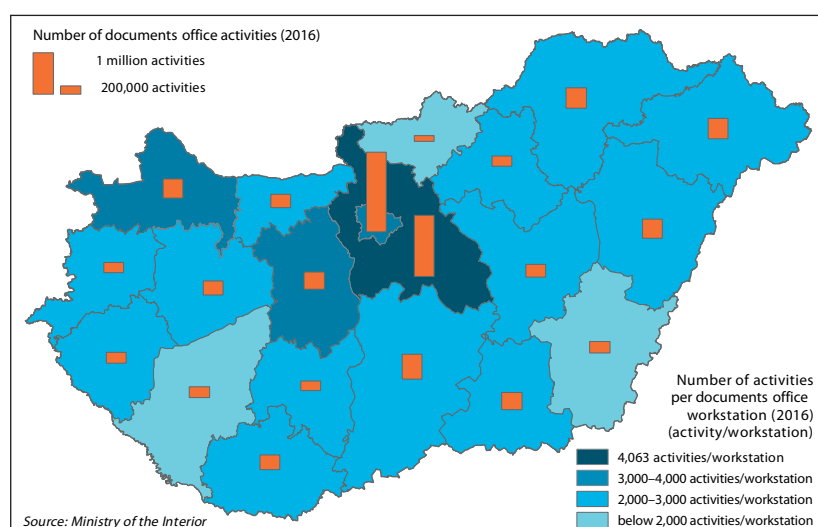
Source: MI

to allocate resources as flexibly as possible given their knowledge of statistical and traffic data. The number of activities per workstation shows the workload of individual workstations and the differences that result between the various customer service stations, which also, in effect, shows the use of IT resources.

With the stagnation in the number of workstations, the number of completed administrative cases also increased in 2016, while the number of completed activities also rose significantly (9,832,116 in 2016, from 8,864,599 in 2015 and 8,795,385 in 2014). This also resulted in an increase in the number of activities per workstation. The graph shows that utilisation of workstations at government windows dealing with documents was the smallest in Nógrád County and greatest in Pest County as far as the average of the total and the percentage ratio of the average deviation were concerned.

The map clearly shows that resource allocation is uneven at the national level on the basis of the number of cases, while there are also significant differences across particular customer service centres.

This is due to the lack of uniform service-level standards to cover every case, as well as deviations in the actual numbers of customers at each customer service centre (which do not correspond to the size of the local population).



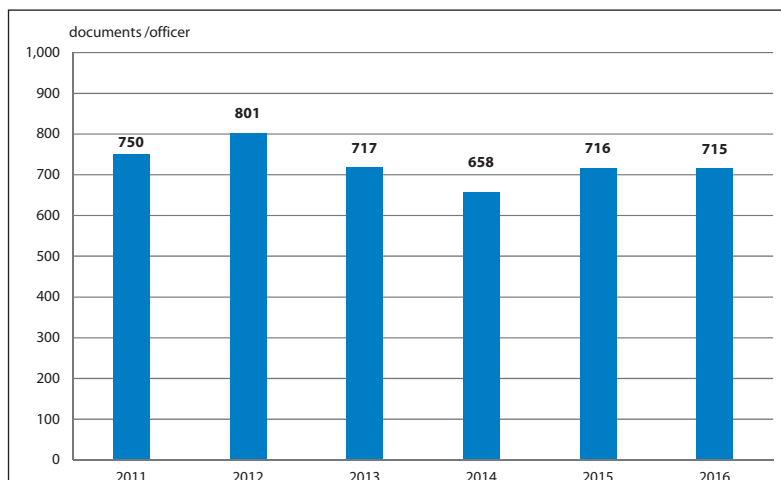
Disparities in the loads placed on government windows in terms of document handling continued to grow in 2016, but this could potentially be managed by standardising service levels.

E.3.5. The average number of primary documents per regional government office officer

The establishment of metropolitan and county government offices on 1 January 2011 brought to a close a decentralisation project lasting for nearly two decades and involving 253 departments in 14 institutions, as well as 23,000 government officers (a total of 36,000 employees). The horizontal and, at the same time, operational integration implemented at the regional level ensures efficient utilisation of a uniform organisation – in a single budgetary organ – in each county and in the capital, while also reducing duplication of work and redundancy. As with the number of workstations, we can project the number of cases recorded in the authority's statistics on to the number of government office staff. The case numbers include all cases managed at both the county and the district levels.

The comparison of specific performance indicators is made difficult by the fact that responsibilities and powers were considerably reorganised, organisations were merged (external integration) and young government officers were consolidated internally during the period under investigation. This is presented briefly below.

One of the government's key objectives in 2010 was to increase the efficiency of public administration with a focus on the creation of a public administration system that can operate in a more coordinated, controlled and cost-effective manner, while also performing its tasks efficiently and effectively at the regional level. Initially, functional work was standardised at Budapest and county government offices, and the coordination of the work of integrated special administrative bodies in terms of special policies was improved only later. The public administration tasks of government offices were expanded even before the district offices were established. Since 15 April 2012, government offices have been acting on behalf of notaries as the authority responsible for general misdemeanours. A master office and several special bodies were created at the district offices established in 2013, similarly to those in Budapest and county government offices. Accordingly, the following bodies started to work as part of district government offices: the office for family services and guardianship, the office for building affairs and heritage management, the district office for animal health and goods inspection, the district land registry, the HSE district office



Source: Prime Minister's Office

and the district office for public health, but the documents office working at the seat or the local branch of the district office also belongs under this category.

After revision, several bodies omitted in the first phase of integration were included in the system of government offices by the spring of 2017. This external integration was, however, preceded by an internal reorganisation of institutions in order to rationalise the system, which brought to an end the special administration system created initially. The former bodies now worked as part of the system of government offices and were merged into departments, while the number of management staff was reduced.

The number of so-called primary documents in the special administrative areas managed by government offices fluctuated between 16 and 22 million over the six years. The staffing numbers, however, relate to the number of government administrative officers among the staff at the government offices.

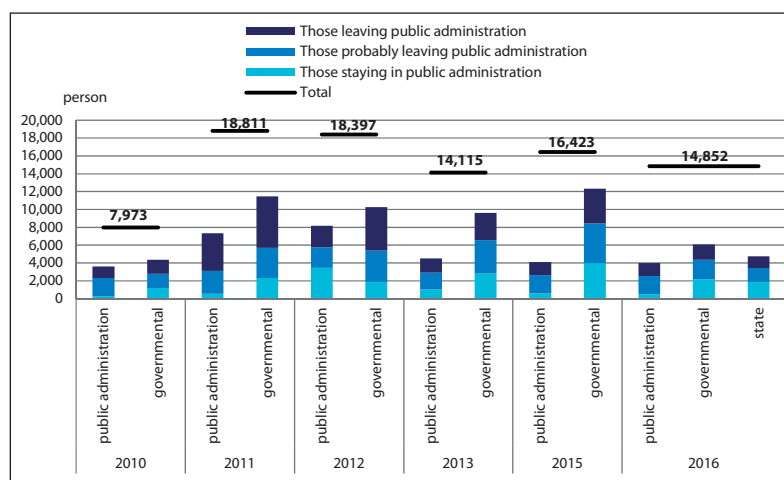
For comparison, we examined the data of two years in which both internal and external integration played a role. In 2015, 28,878 administrators worked at government offices and handled 20,662,696 cases in the course of their work, which means that the number of cases per person was 716 on average. Compared to this, 29,019 administrators worked at the government offices in 2016, and the number of cases filed was 20,750,022, so the number of cases per person was 715 on average.

The specific performance of government office staff in terms of the number of cases handled appears to be stagnating now that the period of consolidation of the system of government organisations running over several years has been completed.

E.4.1. The percentage of members of the middle generation among civil service staff

The preparedness of human resources in public administration is characterised effectively by the age distribution of civil service officials. In a healthy and sustainable system of organisations, the middle generation (people aged between 36–55) are represented in a well-balanced, stable ratio. The public officers belonging to different age groups contribute to the operation of organisations differently: young career starters bring dynamism and innovative momentum, while senior officers are experts who retain and pass on organisational knowledge.

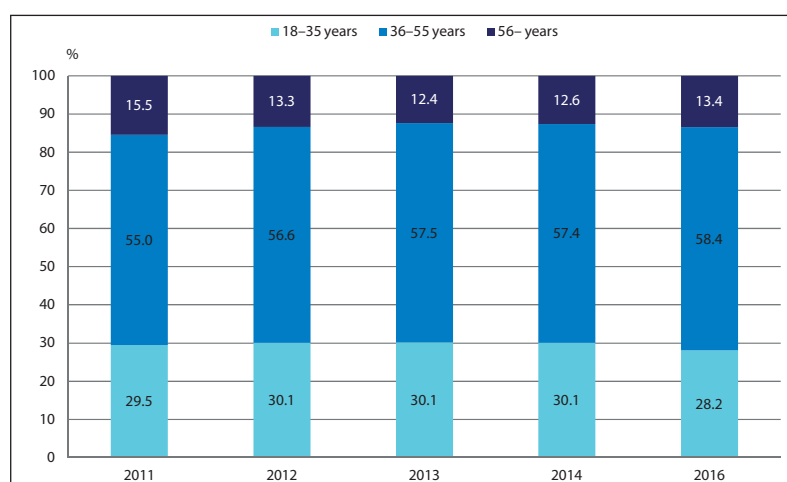
The effective amalgam of expertise, the ability to handle pressure and perform a large number of tasks, however, are primarily the resort of the middle generation. Without this age group, an organisation's ability to work based on the effective and robust performance of employees is called into question. In the Hungarian public administration of the 21st century, high levels of migration are characteristic of the middle generation. The reason for this is perhaps the uncertainty caused by changes in government, higher demand for labour in the commercial sector, as well as the income gap between the public and private sectors. A stabilising trend can be observed in recent years, as the ability of public administration to retain the middle generation has improved. As far as the ratio of young people is concerned, Hungary has the highest value in this indicator among European countries, so ageing, which typified the previous decade, is no longer an issue in public administration. The series of data shown in the graph could lead us to conclude that the ability to retain staff along a career path in public administration does exist, since new entrants in public administration typically stay in the sector, while continuity and stability of staff can also be observed in the sector. To properly assess this, however, we should



Source: MI

take a closer look at the changes in the labour force. As there are no methodologically valid data available for calculating the fluctuation rate, we based our analysis on the aggregate statistical data provided by the Civil Service Statistical Data Subsystem, which records the termination of civil service employment. Civil service employment may be terminated for a reason beyond the intentions of the parties (due to death, for example) or on the basis of mutual agreement initiated either by the officer or the state. Since laws regulating the employment of public officers provide several different legal designations for the termination of employment, which change in time, we classified these legal titles into various categories relevant to our topic: 1. Is certain to stay in the civil service (whose employment status is terminated by transfer or a change in legal relationship). 2. Is likely to leave the civil service (whose employment is terminated by mutual agreement or on expiry of a fixed term). 3. Is almost certain to eventually leave the civil service permanently (due to retirement, during their probationary period, or due to redundancy or resignation).

On the basis of the data, it can be established that the reforms that reorganised the employment relationships of civil service officers and the system of organisations in recent years have generated significant fluctuations in the civil service workforce. Projected onto the state and municipal public administration, 15% of jobs were replaced on average during the period under investigation, and the grounds for termination were distributed largely equally.



Source: MI

The age distribution in the civil service produces a balanced picture. The estimated percentage of those who leave their careers does not jeopardise the quality of service, but this cannot be said of the high internal mobility rate.

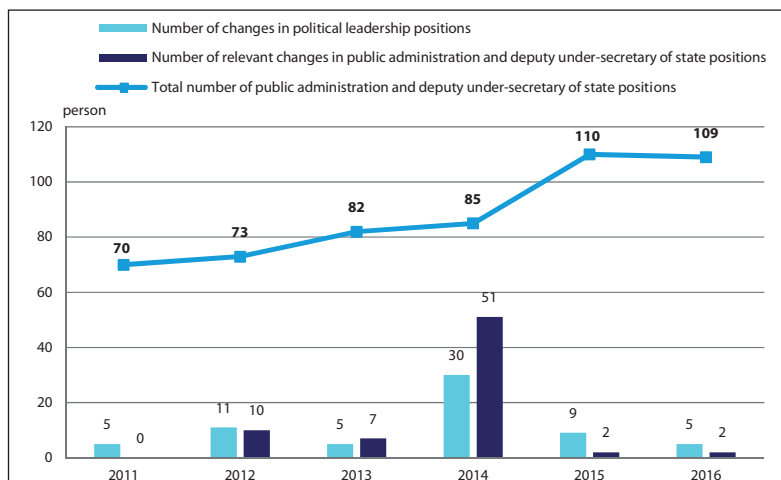
E.4.2. The permanence of top professional executives in public administration

There are two sub-indicators associated with this indicator: on the one hand, the number of changes in the identities of the political leaders of ministries in the given year and, on the other, the number of times that senior heads of staff were replaced in the month up to and in the half-year subsequent to the departure of a political leader. (The source of the data is our own calculation based on the resolutions of the President of the Republic and the Prime Minister.)

Senior heads in public administration can be separated (by law) into political and technical categories. The former group includes ministers and under-secretaries of state, while the latter consists of under-secretaries of state for administration and deputy under-secretaries of state. This is designed to present the context of changes in their identity (legal relationship) and the effect of changes in the identity of political leaders on the replacement of technical leaders. In accordance with our data collection method, we included any change in the identity of both the under-secretary for administration and the under-secretary for political affairs in the data for the minister replaced (since the minister is the highest leader of the given ministry). If the identity of the under-secretary has changed, we only considered changes in the identity of the deputy under-secretaries reporting to the under-secretary.

The indicator examines changes in the identities of leaders since 2011, since comparability with the previous period is prevented by the substantial restructuring implemented in 2010 (merging certain ministries) as well as by a major amendment made to the regulation of legal relationships, as a result of which certain senior levels cannot be clearly matched (for example, the positions of under-secretary for a special area, deputy under-secretary and under-secretary for administration did not exist).

One of the most important indicators that public administration is functioning professionally and independently of parties is how the senior technical heads who have strong control over the operation of the entire system of public administration are affected by changes in the identities of political leaders. It is important to note that data collection does not assess any subject or individual motivations, so there is no clear causal relationship between



Source: Hungarian Official Gazette

the appointment of a new political leader and the *replacement* of a technical leader reporting to him or her.

This indicator is not suitable for measuring *highly politicised* decisions, that is, political influence on the appointment of technical heads responsible for public administration. Still, the indicator is significant as a high level of fluctuation can be detrimental to continuity and the high-quality performance of leaders. It is also harmful to the strategic reinforcement of the career path in civil service, as it endorses volatility in the positions that represent the *peak* of this career.

There is a clear and marked upward trend in the number of under-secretaries for administration and deputy under-secretaries (around 60%), which increased significantly after the government was set up in 2014, and now seems to be stabilising. By examining the numbers of the past six years, it can be observed that the change in the identity of the minister, with a few exceptions, resulted in a change in the identity of the under-secretary for administration. As for deputy under-secretaries, significant changes resulted within the given ministry in the previous government cycle when the minister and/or the under-secretary was replaced (around 30% and 40% respectively), but this is not typical of the present government term. The chart clearly shows, however, that after the current government was established in 2014 – although the same party continued to form the government – the number of changes in the identity of deputy under-secretaries was exceptionally high at close to 60%. In recent years, however, there has been no substantial change in this segment.

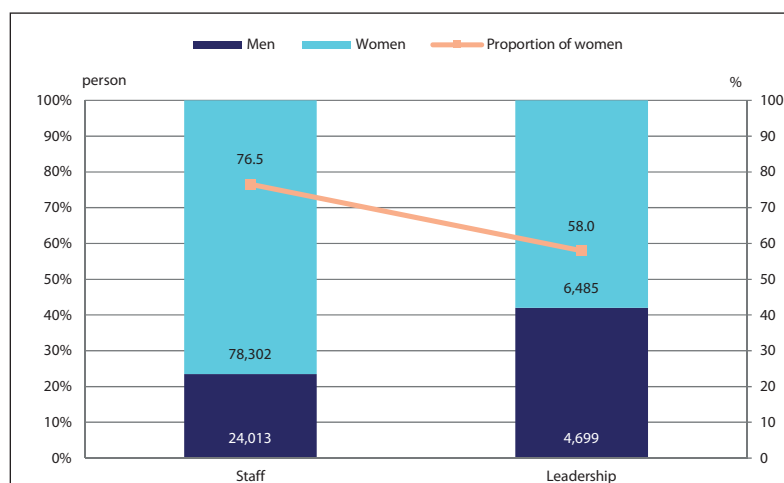
There has been a significant growth in the number of senior heads in public administration, but, since a peak when the new government was formed in 2014, there have been very few changes to the identities of heads that can be temporally linked to the replacement of political leaders.

E.4.3. The proportion of women in public administration

The further examination of the composition of the staff of public administration can shed light on the factors that influence the quality of public administration. Although the paradigm relying on open and closed civil service systems has already been superseded by the current practice, career management in public administration continues to play a key role in the state's HR systems from selection through performance assessment and training to promotion to a leadership role. The *Public Administration and Public Service Development Strategy* also recognised the importance of this and expressed the need to introduce a comprehensive career path model in public administration more distinctly than in any previous modernisation programme. Public administration intends to use the career path model to attract the labour force and retain its professional staff.

It is of key importance to the effectiveness of public administration to ensure that both employee and leadership positions are filled by the people most suited to the given job. We can indirectly examine the effectiveness of this by comparing the distribution of employees and executives by gender. We assume that, by presupposing identical competence, women should have an equal opportunity to attain a leadership position. If the two ratios diverge, women may be discriminated when leaders are selected. The explanation for this, however, cannot be limited to a bias in the selection of leaders as there are distinct individual motivations and different career attitudes characteristic of both genders. Various *diversity strategies* are identified in 15 countries in the EU, which are designed to provide women with equal opportunities for advancement in their careers by introducing a flexible working schedule, leave for parents and quota targets. The strategy mentioned above (and professional discourse) in Hungary does not address the issue of gender parity either, which may be due to the following:

- In Hungary, the proportion of women in the total number of people working in public administration amounts to around 75% (74.7% in 2016), which is extremely high even by international standards. Hungary has the highest proportion of women working in public administration among the OECD countries.
- As a result, the number of female executives exceeds the number of men in executive positions in public administration organisations (56%).



Source: MI

- The data for civil service show a much more balanced picture in terms of the gender distribution of senior management in the commercial sector: by examining labour force surveys broken down by major employment groups, it turns out that, when comparing people working in legislation, administration, unions and the economy to the group of all knowledge workers, 16% of men (123,000 people) and some 7% of women (79,600 people) held some form of executive position at the end of 2016. At the same time, the 39% of women in executive positions exceeds the EU average (35%).

Statistical data, however, do not disguise the fact that, while the number of women entering a job in lower positions is three times higher, advancement for them is much more difficult than it is for men. While the likelihood of becoming an executive for men is much higher on average than for women in the national economy, the data show that, in international comparison, civil service in Hungary gives women more chance on average to become an executive (although this is still not equal to the opportunity enjoyed by men). The higher we progress up the hierarchy towards the leadership positions with the highest prestige, the lower the proportion, and it is exceptionally low in political positions: In 2017, there were 83 men and 31 women in the position of deputy under-secretary and only five female under-secretaries; and since 2014, there has been no woman among the members of the government (the only other country comparable among the OECD nations is Slovakia). The 18.5 per cent difference between female employees (76.5%) and executives (58%) suggests the need to introduce special HR measures in order to provide well-balanced prospects for advancement.

The proportion of women employees is exceptionally high in the Hungarian public administration: only every fourth member of the staff is a man but almost every second person in executive positions is a man.

E.4.4. The number of completed teaching hours in the public service further education system

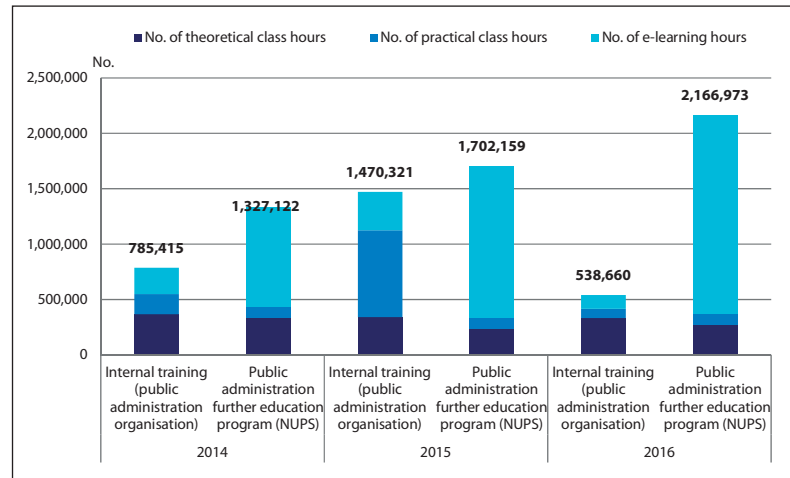
The crucial factor that determines the quality of public administration is the staff working in it. For this reason, a focused human resources policy should be aimed at attracting workers in the labour market as well as retaining the skilled workforce. Current government policy also shares the view that the development of staff should be implemented in an integrated manner by improving the functions of human resources management and providing a career development model that is as attractive as possible. Personalised career management is assigned an important role in this by ensuring continuous education and further training of officers.

The public service continuous education system that was renewed in 2013 supplemented the previous fundamental and specialist examination system with a further education programme based on an academic point system to be completed over an individualised four-year cycle. The level of preparedness of public administration staff is, therefore, fundamentally determined by the training programmes developed and provided by the National University of Public Service, on which the following statements can be made on the basis of statistical data (derived from the ProBono IT system) below:

- In 2016, 1,434 public administration bodies prepared annual further training plans, with individualised training plans assigned to 82,977 officers.
- The annual individualised training plans of the officers included 302,842 training programmes, of which 302,349 training programmes were successfully completed.
- In 2016 (as in 2015), the number of further training programmes in the individualised further training plans was four on average, with 36.6 academic points achieved on average.

By late 2016, 2,186 programmes were listed in the training register, of which 330 were public service training programmes offered by NUPS, while 1,829 were internal training programmes registered through a simplified procedure, and 27 were internal further training programmes certified by a public administration body.

In terms of their methodology, the further training programmes include e-learning trainings, blended learning course and in-class courses. In 2016, 69,123 people participated in e-learning trainings, including e-learning courses in their individualised further training



Source: NUPS

plans on 290,037 occasions. The blended-learning training programmes offered by NUPS and the in-class courses of the blended programmes were organised with the participation of ten partner universities in 2016 and had 8,726 participants. In 2016, 1,604 executives attended the blended learning executive further training programmes offered by NUPS in 128 groups. In 2016, the officers included in-class courses in their annual further training plans on 33,895 occasions, the majority of which were internal courses offered by public administration bodies. A total of 9,321 officers attended the in-class courses offered by NUPS.

The indicator shown on the chart shows the number that officials successfully completed (scoring more than 60% in the concluding examination) of the total number of public service training teaching hours provided. This does not therefore measure the effectiveness of the training and does not provide feedback on how much the competence level of the officials improved; it simply records the output of the further training system without assessing its efficiency and success.

The officials spent 33 hours (41 hours in 2015) on average engaged in in-class or e-learning courses. The specific decline is due partly to a 6,000 increase in the training target group and partly to the fact that, contrary to a growing trend in the central programmes, the number of internal training courses (organised locally by employers) decreased dramatically. This is due partly to the change in accounting for academic credit points and partly to the smaller number of local trainings that resulted from the reorganisation of the training programmes.

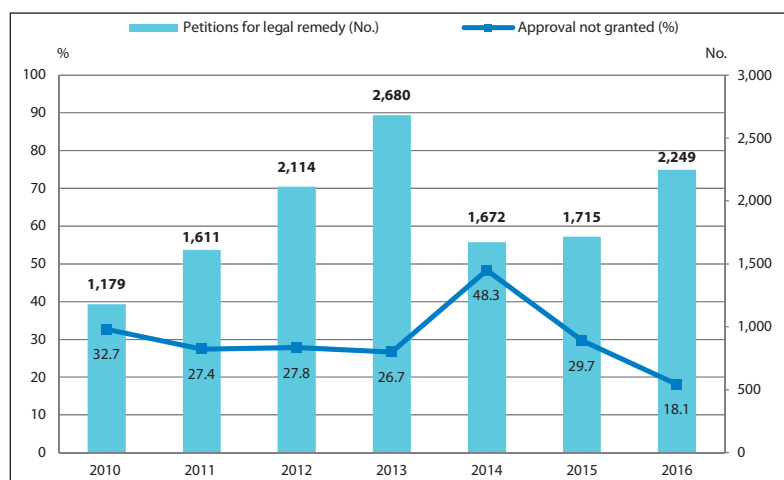
The number of participants in central training programmes provided by NUPS and the number of teaching hours continued to grow in 2016, with a significant decline in the proportion of internal trainings.

E.4.5. The percentage of decisions altered by judicial or supervisory bodies

An important measure of staff preparedness is the proportion of petitions for legal remedy against administrative decisions that are overruled by the body (court or supervisory body) overseeing the system that originally made them. Official statistics from the government office authority provide detailed data on every level of review of the decisions made by municipal governments and state administrative bodies. This indicator examines those petitions for legal remedy against second-instance decisions passed by general-purpose government agencies to undergo a review. The figure depicts the ratio of contested second-instance decisions that are altered, overruled, corrected, replaced or supplemented by the judicial or supervisory body, or amended or revoked by the authority.

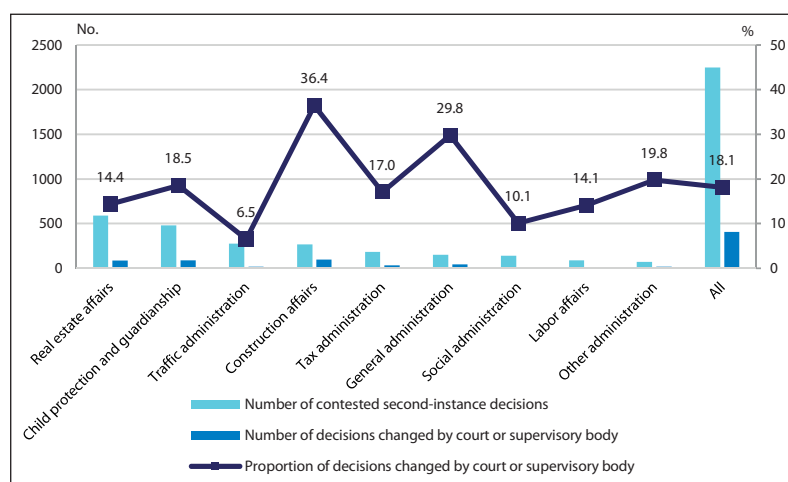
As shown in the *Public Administration and Public Service Development Strategy*, one of the pillars of efficient public administration is a staff of prepared, ethical and motivated people, and several HR development projects have been launched in order to achieve this. The measures were designed to develop competences, capabilities, skills, experiences and attitudes that can make the every-day work of the officers more efficient and effective. The value of the indicator turned out to be in line with the direction initially set.

Through the development of the government office system and despite the growth in the number of cases, a decrease can be seen from 2010 with regard to the ratio of altered decisions. At the same



Source: Prime Minister's Office

time, the figure grew from 30% to nearly 50% in 2014, before returning to its earlier level in 2015, which was improved successfully by 2016: despite the growth in the number of petitions for legal remedy, the percentage of assessments without approval being granted was much smaller at only 18.1% compared to previous years. By looking at the partial data of particular special administrative areas, it can be established that this ratio is the highest for the activity of the building and building supervision authority (36.4%) and the lowest for transport administration (6.5%). The number of decisions against which the court *accepted* a petition for appeal is also higher (29.8%) in case of general-purpose administrative tasks (for which the law stipulates that a special authority must take action).



Source: Prime Minister's Office

In 2016, the value of the indicator reached its peak for the period under investigation: despite growth in the number of petitions for legal remedy, the percentage of assessments without approval being granted was much lower.

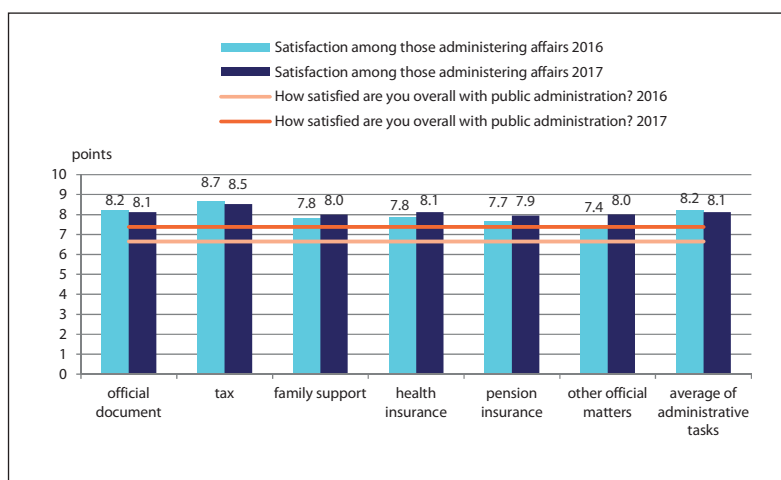
E.5.1. Citizens' satisfaction with managing specific public administration affairs

Opinion polls are particularly important in public administration. Satisfaction indicators provide feedback on how citizens respond to the services provided by public administration. This is important because the satisfaction of the people means meeting the expectations of most partners (in addition to enterprises). This indicator examines the segment of customer perception that is drawn from specific experiences: it provides information on the respondent's opinion on and satisfaction with their experience after using a given public administration service.

On the basis of the *Good Public Administration Opinion Survey* conducted with a representative sample of 25,000 respondents, every member of the Hungarian adult population contacted the public administration system as a customer for at least one of the 12 types of cases defined (to facilitate understanding, these are merged into six categories on the chart). Most respondents marked managing affairs in connection with personal income tax (57%), and a large number of the population managed their documents (43%), with close to 20% managing affairs in connection with the registration of their vehicles.

On the basis of the detailed responses, it can be established in general that citizens are very satisfied with the work performed in the public administration areas under investigation. The real questions are: which are the channels and areas where satisfaction is higher, which public administration segments provide better performance for each of the factors, and where do weaknesses lie. When examining this issue by case type, we find that respondents are most satisfied with the management of their tax affairs at municipal governments. As for the attributes assigned to administration, the preparedness and helpfulness of administrators attracted the highest level of satisfaction. The majority of negative customer feedback concerned the time spent completing administrative tasks (the time of the respondents), as well as the length of time from the beginning to the completion of the given case, especially regarding cases in connection with health insurance.

Finally, we wished to know how satisfied citizens were overall with each of the subsystems of state public services. For this, we used a scale from 0 to 10 points (a scale of 11). 0 on the scale meant



Source: NUPS, GPAOS

that the respondent was not at all satisfied with the given subsystem, while 10 represented complete satisfaction. On the basis of the results, it can be seen that public administration performs far better than the other subsystems under investigation (education, healthcare and justice), both in terms of the best assessment (scores of 10 and 9) and in terms of the average ratings. The largest difference was between the average assessment of public administration (7.4 points) and health care (5 point), but respondents were also significantly more satisfied with public administration than with justice (6.3) and education (6), which were closer in terms of the point scores received.

Compared to last year's results, we typically measured a 0.1–0.2 difference in one or other direction for each of the case types. General assessment on average by taking into consideration all responses shows an insignificant change of –0.1 points between the two years, so we can continue to characterise public administration as having achieved outstanding satisfaction. On the other hand, there is a significant increase in overall satisfaction with public administration when we examine experiences related to the management of specific affairs, which increased by 0.7 from 6.7 points in 2016, thereby reducing the gap between overall and specific perceptions. This confirms that people accept the claim that "Hungarian public administration functions efficiently". 20% of the respondents fully agreed with this claim, 48% mostly agree with it, 21% tended to disagree and 7% did not agree at all.

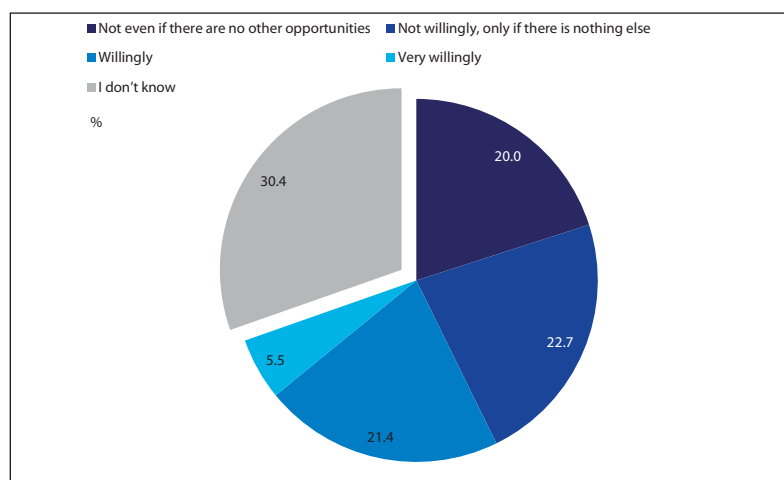
E.5.2. The perception of public administration in the labour market

In the other dimensions of the areas of influence, we have discussed in detail and in several respects whether civil service can compete with the private sector as an employer and an HR system in the labour market. In accordance with the public administration development strategy, it is extremely important to monitor the characteristics of staff employed in public administration. With this in mind, the government believed it was necessary to launch development projects that could simultaneously increase citizens' trust in civil servants and public administration, as well as the attractiveness and effectiveness of public administration.

These two goals can be accomplished primarily through the introduction of a new and flexible civil service career path model. It is of key importance for any HR system to recruit the next generation, and the right people for the career path. The goal of the staff measures taken to develop public administration is to guarantee high quality of work, secure employment, adequate living standards and professional development, and to increase the prestige of the public administration career ensuring that both financial and personal rewards are provided.

One part of the representative *Good State and Governance Opinion Survey* conducted among the population was designed to provide an impression of the prestige of public administration work. It is important to note, however, that this survey cannot be seen as a research into prestige, which seeks to set up more detailed job hierarchies on the basis of how much can be earned in certain jobs in view of the population, how useful particular jobs are for society, how much power they offer, how much people need to study to attain them, and how fashionable they are today. Due to space limitations, we were able to assess only combined and indirect perceptions in this survey.

We wanted to know how willing respondents were to work for a state organisation, an institution run by the state. This question was put only to people who were not currently working in the public sector. We did not provide any particular clues for the assessment, nor did we define any particular jobs or segments; we left it up



Source: NUPS, GPAOS

to the respondents to evaluate this opportunity on the basis of the picture they had themselves formed of employment in the public sector.

We found that 26.9% of the respondents would (very much) like to work in the public sector if it offered a secure job. The proportion of women is high among the respondents who gave this answer, and high school graduates, people under 40 and those living in small towns are also overrepresented (belying our preliminary assumptions, there is no connection between personal income and the ambition to become a state official in the light of the data, nor were citizens influenced by whether they or family members had previously worked in public administration). The majority of respondents mentioned the secure job, secure wages and livelihood, long-term opportunities and a predictable career path as the most attractive factors. On the other hand, every fifth respondent definitively rejected the option to work in the public sector, and if we add those who marked "not willingly, unless there is no other option" and those who are unsure, it is clear that the attractiveness of state employment in society is low.

Although there is no general labour shortage in public administration as yet, the number of those with a positive attitude to civil service should be increased to ensure that new, high-quality employees can be recruited from a wider range of candidates.

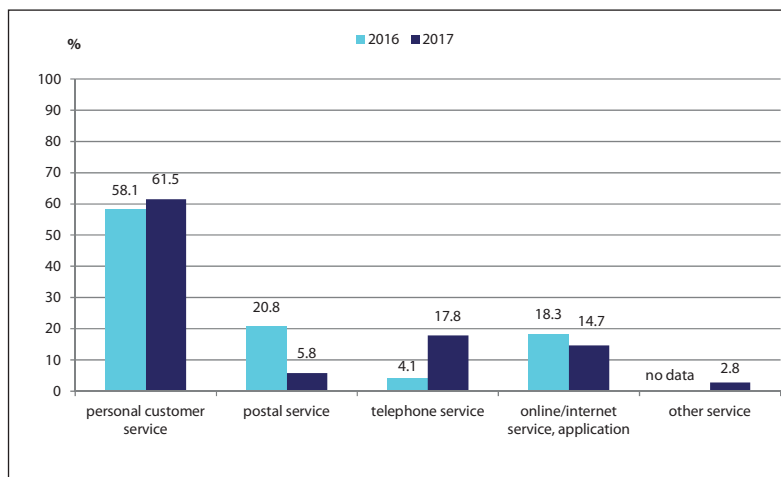
20% of the adult population (respondents) would reject this opportunity and 22.7% would not take a job in the civil service unless there were no other options.

E.5.3. The distribution of management channels of public administration by use

In the previous dimensions, we presented certain statistical data on online and telephone services, which have led us to draw conclusions regarding the amount of use of the given channel, as well as its trends, but their proportions *remained hidden* with the method of personal administration. In this dimension, therefore, in addition to satisfaction, we also present details on use in connection with the various channels analysed in the representative survey by case type. The data are based on the channels used by citizens for the affairs managed by them after being informed. Accordingly, the respondents were able to mark several channels for a particular case.

- Personal income tax returns affected the majority of respondents, but they acted in person in only 28% of the cases. They used the personal contact channel most frequently to manage their affairs, followed by the online channel.
- 43% of the respondents had to manage affairs in connection with their documents in the past three years, and nearly all of them acted on their own behalf. Administration was mostly personal (93%).
- Only around ten per cent of respondents had to manage tax-related affairs at municipal government offices, and respondents acted on their own behalf in the majority of the cases: 9 out of 10 times, in most cases personally. In addition, the postal service channel was used more often than the average.
- In the past three years, affairs related to road vehicles were managed by every fifth respondent and 87% acted on their own behalf. These cases were largely managed in person, but the online channel was also used (11%).

As we have observed previously, citizens tend to prefer personal contact when it comes to public administration. This is largely because most cases cannot be managed (fully) online. There are three additional factors that determine whether a person manages their affairs online or through another channel: lack of general digital access and competence; lack of confidence in online administration; the impersonal nature of online communication



Source: NUPS, GPAOS

and the familiarity of personal administration; lack of clarity as to what should be done, how and where; too much time is required to figure out what to do; and the instructions are too complicated.

Compared to data for previous years (in addition to the growing dominance of handling matters in person), we can see some realignment: with a radical decline in the use of the postal service, the proportion of online use has also dropped and, as a contrary trend, the use of the telephone channel has increased fourfold (which is probably due to the fact that citizens are able to ask more detailed questions relating to affairs that are managed less frequently, but which require more complex information). If we accept the claim that online public administration services represent higher added value within the philosophy of good public service than traditional (personal or postal) channels or even the personal forms that also require the contribution of human resources, the following should be considered in order to reverse the negative trend shown in the figure:

- adoption of a comprehensive strategy for diverting public administration customers who have ignored the concurrent development of all the available channels
- obligation and strong motivation to shift to the online channel rather than spontaneous change in response to perceived benefits
- education and marketing of services to overcome barriers regarding competence and trust.

Personal administration continued to dominate with postal and personal service channels simultaneously declining. It is promising that meaningful administration via telephone has forged ahead.

E.5.4. The acceptable amount of time spent managing public administration affairs

The significance of this indicator lies in the fact that the time spent on administration, its progress and its success are crucial and also sensitive attributes with regards to public satisfaction with administrative services. As well as measuring customer perception, however, the efficiency of the work of administrative staff can also be assessed through the use of this indicator. We examined how much time the respondents would still consider acceptable for administering affairs in person and online.

We examined the time spent on personal administration from three perspectives:

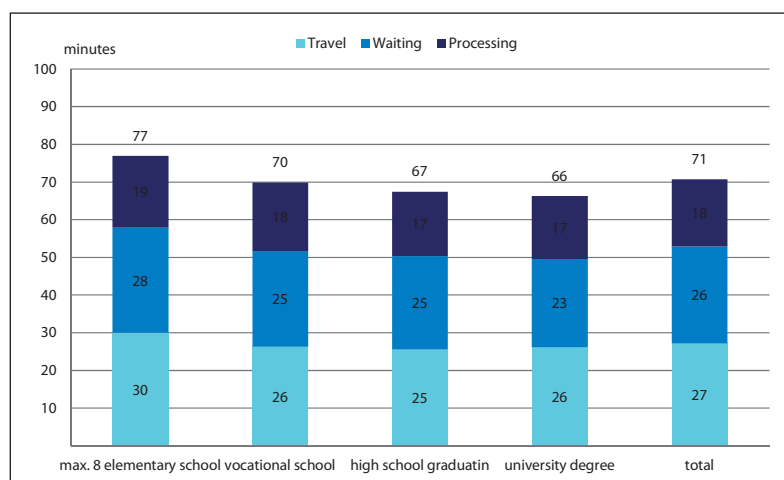
- the amount of time acceptable to travel to the location of the administrative office
- the maximum waiting time spent at the office: the period of time still acceptable that begins when entering the office and lasts until the time the customer is called by the administrator, distinguishing two variants depending whether an appointment has been made
- the maximum tolerable period of time during which the administrator is dealing with the customer

The calculation of time does not include the time spent receiving preliminary information, understanding the forms and tasks (on the one hand, this is hard to reconstruct, and on the other, it is often blurred by expectations).

On the basis of all this and according to respondents, the time spent managing affairs in person is 55–70 minutes on average, which they think they are willing to spend on general-purpose administration of a particular affair. For the former, 55 minutes becomes a ceiling if they have an appointment made in advance, while 70 minutes is deemed to be acceptable for administration without an appointment.

The majority are willing to spend the most time on travel, 39% of the total time without an appointment and 49% of it with an appointment. In the latter case, they consider the same amount of time to still be acceptable for waiting (queueing), but if they have an appointment, they believe they would tolerate no more than 10 minutes on average. The average time spent managing affairs should be 20 minutes based on the tolerance level demonstrated by the population; with the majority of respondents believing 15 minutes to be still acceptable.

The amount of time found to be acceptable by segment is largely influenced by three socio-demographic criteria: education level, income and type of residence. Citizens with basic-level education or below and those who belong to the three lowest income categories consider much more time, 10 minutes more on average, to



Source: NUPS, GPAOS

be acceptable than those who have a higher level of education or higher income. It is not only for the administration itself that they accept that more time is required (for example, because they need more time to understand and filling out forms), but also for travel, as they typically live further away.

The locality of residence should be addressed separately. If there is no appointment made in advance, people in Budapest think 62 minutes on average is acceptable; this figure is 68 minutes in the county seats, in other towns it is 72 minutes, and in villages it is 76 minutes. This suggests that the maximum time still acceptable for administration is inversely proportionate to the size of community. This changes if there is an appointment made: for people in Budapest and the county seats, the ceiling is 50 minutes, while in small cities and villages it is 58 and 59 minutes respectively.

As a control question, we asked respondents how this is in reality compared to expectations. Based on the responses received, it seems that, taking the average progress of affairs as a basis, they can complete management of their administrative affairs in the majority of the cases (60%) within the time frame mentioned above. Of the people who think this is not possible in general or never possible, those living in Budapest and in the county seats are overrepresented (they have higher expectations in terms of time, because life is faster paced in these locations).

We compared the acceptable time required for online administration with the personal channel. The time ceiling based only on the answers of Internet users is somewhere between 25–35 minutes for complete online administration. This means that Internet users are willing to spend this amount of time finding the platform and the type of case, getting information on what data should be entered, downloading or filling out the electronic forms, authenticating them with electronic signatures, uploading certificates, if required, and then saving and sending the documents.

General expectations are present in each group that the management of individual cases combined with the amount of time required for travel, should be completed in 55–70 minutes.

E.5.5. Citizens' perception of opportunities to make managing affairs more convenient

When examining the various channels of public administration and the types of affairs, it is indispensable to survey the opinions of the population in connection with certain development goals. The level of satisfaction also characterises the priorities of service developments, either legitimising or questioning the need for such development. Specifically, we wanted to know whether particular innovative elements can substantially help citizens manage their administrative affairs more efficiently and conveniently.

We presented a total of 16 development opportunities and goals to the members of a representative sample and asked them to choose two attributes that are extremely important to them and that would, in their view, contribute to the development of the quality of customer service.

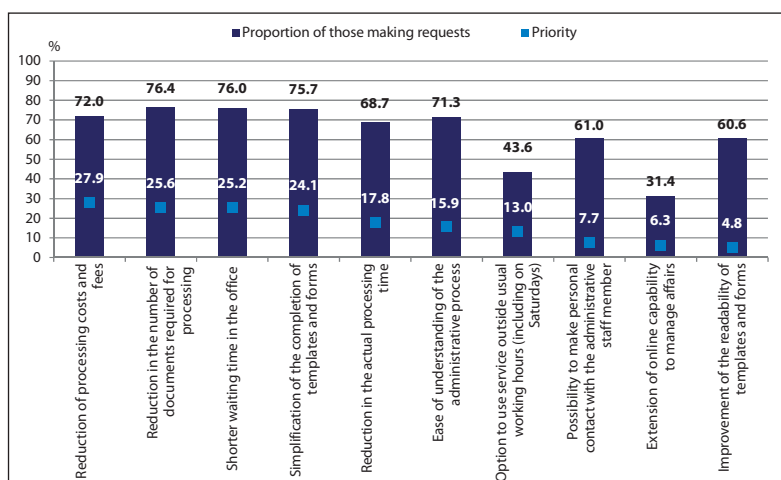
The graph shows the proportion of respondents who marked this option, and the order of the options reflects which two options they chose when they could select only two.

We identified four development target areas that, according to at least 20% of the respondents, would contribute to improved convenience and efficiency (in first or second place) for citizens to manage their public administration affairs. These four target areas are as follows:

- reducing the administrative costs of procedures, i.e. fees
- reducing the number of documents necessary for administration
- shorter waiting times at the offices
- making official forms simpler

It is not surprising that the reduction of costs directly incurred on the side of customers enjoys the highest priority. Although there has been no survey on the amount of acceptable costs and fees, the respondents probably wish to reduce their payment obligations *ad infinitum*, irrespective of their perception of the issue. 25% of the respondents think the goal should be the reduction of procedural costs, with women and people with lower qualifications than secondary school graduation being overrepresented.

The other development goals would dramatically contribute to the reduction of the time spent managing administrative affairs. As we have seen before, the time factor is a crucial aspect that



Source: NUPS, GPAOS

influences satisfaction, and the one to which customers are the most sensitive. 27% of the respondents marked shorter waiting times as a development goal (14% of them in first place), which is more significant for people under 40 than the average.

25% of the respondents see both the reduction in the number of documents for administration and simplification of official forms to be an important step forward. The former is particularly important for those with the lowest level of education, while the latter was prioritised by people with no higher education qualification. (The reduction in the number of documents necessary for administration was the goal most frequently selected by respondents.)

In addition, another important factor was to increase the ease of understanding and the introduction of administration beyond general opening hours (also on Saturdays). The latter was generally preferred by those with a higher level of education, by people under 50 and by those living in county seats.

These opinion data appear to support the government's objectives in the development of public administration, which would make certain administrative services free or cheaper in the spirit of the utility rate cuts, as well as the need and justification to digitise the back-office services of public administration procedures, which would reduce burdens on citizens. At the same time, it is interesting to note in the feedback that the simplification of personal administration is not associated with shifting to the online channel. This view confirms that people continue to assign priority to face-to-face administration.

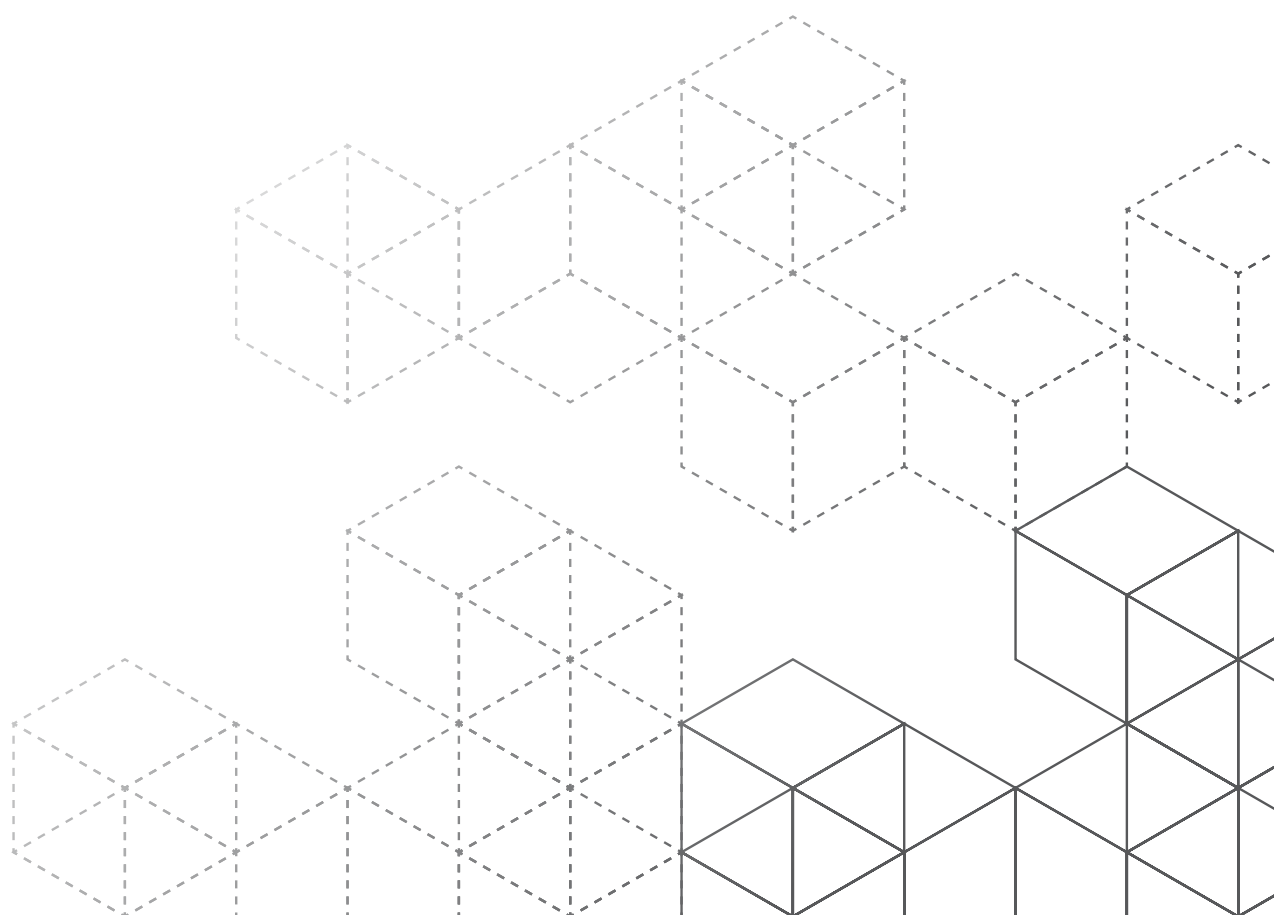
Essentially, all opportunities to support the management of affairs received widespread support among the population, especially those measures that reduce the costs and time required to manage an affair on the customer side.

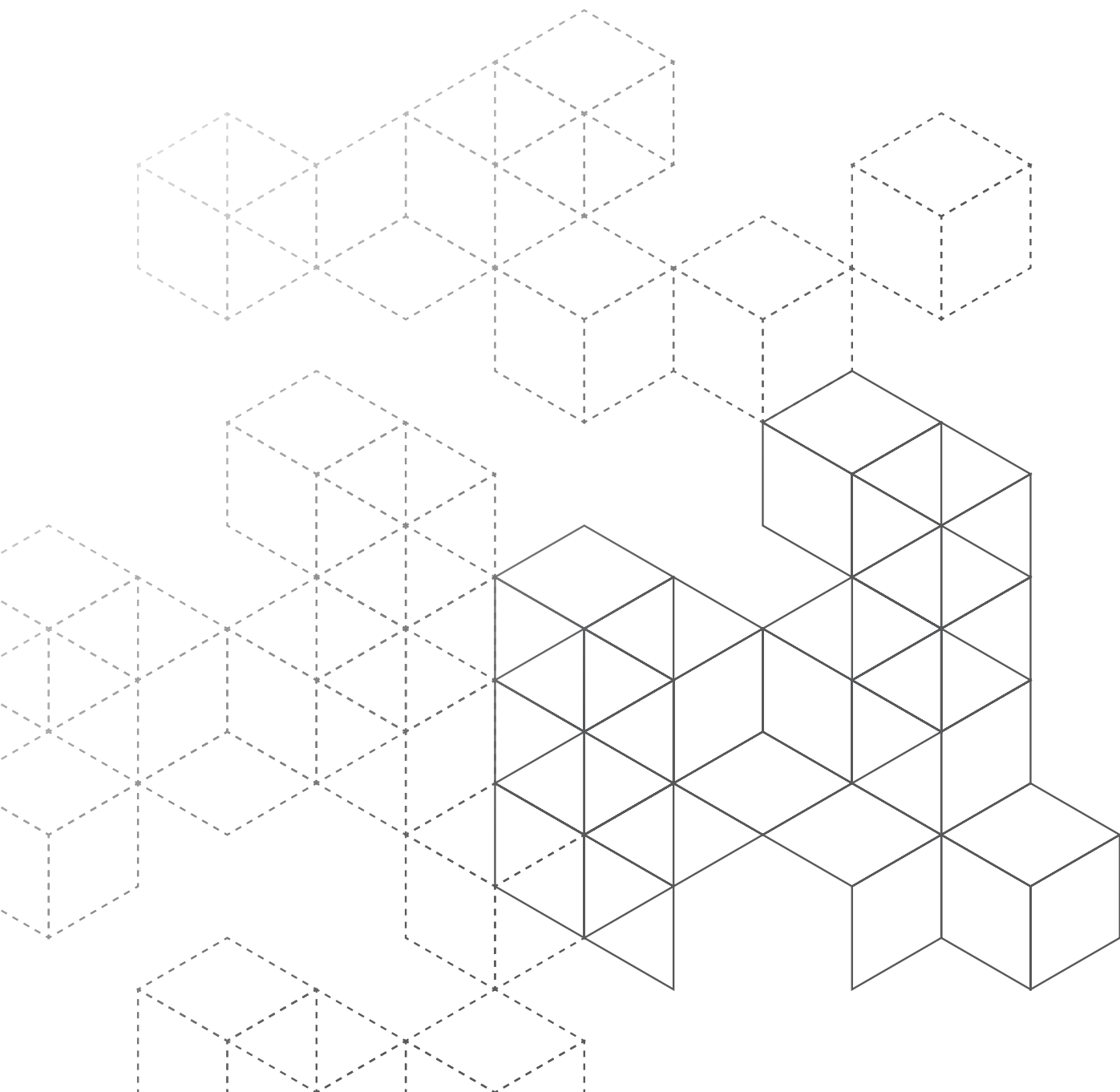
ABBREVIATIONS

BLH	Bird Life Hungary
CCH	The Constitutional Court of Hungary
CEPEJ	The European Commission for the Efficiency of Justice
CIA	Central Intelligence Agency
CMRF	Controls Mitigating Risk Factors
COAEPS	Central Office for Administrative and Electronic Public Services
COFOG	Classification of the Functions of Government
HCSO	Hungarian Central Statistical Office
ECFR	European Council on Foreign Relations
EES	European Parliament Election Study
EIU	The Economist Intelligence Unit
FH	Freedom House
GDMA	Government Debt Management Agency Private Company Limited by Shares
GDWM	General Directorate of Water Management
GFN	Global Footprint Network
GFP	Global Firepower Index
GOBP	Government Office of the Capital City Budapest
GOS	Good State and Governance Opinion Survey 2016
GPAOS	Good State and Governance Public Administration Opinion Survey
HDRI	Hungarian Demographic Research Institute
HEPRA	Hungarian Energy and Public Utility Regulatory Authority
HF	The Heritage Foundation
HIERD	Hungarian Institute for Educational Research and Development
HIPO	Hungarian Intellectual Property Office
HMS	Hungarian Meteorological Service
HNB	Hungarian National Bank
HNDF	Hungarian National Authority for Data Protection and Freedom of Information
HNPH	Hungarian National Police Headquarters
HOG	Hungarian Official Gazette
HPO	Hungarian Patent Office
IFOAM	International Foundation for Organic Agriculture
IMF	International Monetary Found
ISHE	Information System of Higher Education
MA	Ministry of Agriculture
MHC	Ministry of Human Capacities
MI	Ministry of the Interior
MNE	Ministry for National Economy
NAH	National Assembly of Hungary
NCSC	National Cyber Security Centre
NEC	National Election Committee
NEO	National Election Office
NES	National Employment Service
NIS	National Infocommunications Services Company Limited by Shares
NMIA	National Media and Infocommunications Authority
NOJ	National Office for the Judiciary
NSDCP	National Statistical Data Collection Programme
NTCA	National Tax and Customs Administration
NUPS	National University of Public Service
OCFR	Office of the Commissioner for Fundamental Rights
ODB	Open Data Barometer
OECD	Organisation for Economic Co-operation and Development
OPJ	Office of Public Administration and Justice
RWB	Reporters Without Borders
SAO	State Audit Office of Hungary
SILC	Statistics on Income and Living Conditions
SIPACS	Single Investigation and Prosecution Authority Crime Statistics
SIPRI	Stockholm International Peace Research Institute
SWB	Subjective Well-being

ABBREVIATIONS FOR THE COUNTRIES THAT APPEAR IN THE REPORT

AT	Austria
BG	Bulgaria
CY	Cyprus
CZ	The Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
EU28	The 28 European Union Member States
FI	Finland
HR	Croatia
HU	Hungary
IE	Ireland
NO	Norway
PL	Poland
RO	Romania
RS	Serbia
RU	Russia
SE	Sweden
SK	Slovakia
SI	Slovenia
UK	The United Kingdom
US	The United States of America





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INVESTING IN YOUR FUTURE