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# *Competitiveness as a Decisive Criterion for Sustainability*

**ABSTRACT:** Competitiveness and sustainability are inseparable concepts. Competitiveness cannot be interpreted in the short term, and thus it cannot exist without sustainability as well. At both the corporate and national economy level, only those who can maintain their outstanding performance, in the long run, are the winners in global competition. There are two roads to achieving these two goals simultaneously, and they can even be followed at the same time. On the one hand, moving away from quantitative factors towards quality, and on the other hand, looking for new resources and making old resources unlimited by using them in a sustainable, “green” manner. With the development of digitalisation, data is becoming a more important resource than ever before, while money and access to energy may become unlimited. No segment of the economy can ignore revolutionary changes, such as the green and digital transition, but proper cooperation between the state and the market is necessary to achieve and maintain competitiveness and sustainability.

**KEYWORDS:** competitiveness, sustainable development, megatrends, green finance, technological development, environmental and social sustainability

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Competitiveness and long-term sustainability are closely related terms, since – bearing in mind economic and social development – only what is sustainable over the long run can be competitive and vice versa. Competitiveness (as opposed to competition) is not attached to a specific time, but is a permanent feature. If we express the goal of competitiveness in the sense of the national economy, or to put it somewhat in simpler terms as the highest degree of well-being of the public, we do not consider it as a temporarily achievable peak, but rather as a “plateau”. In order for the target status to indeed be persistent, competitiveness

must also serve sustainability. Economic, social and environmental aspects must be taken into account. In the absence of these, only temporary growth can be achieved, which will be followed by stagnation or decline, as we have seen through the examples of many developing countries that are stuck in the middle income trap (MNB, 2018).

Both competitiveness and sustainability cover countless areas. For the sake of clarity, in the following I examine the concept of sustainability in four dimensions and discuss the related ideas of competitiveness in relation to these dimensions. These four areas are financial, economic, environmental and social sustainability.

This study examines the relationship

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between competitiveness and growth through the lens of two factors. On the one hand, economic growth relying on the expansion of quantitative factors will over time encounter physical barriers, and therefore qualitative and structural changes become necessary. This can be ensured by improving competitiveness, and in the financial, economic, social areas the reforms of the Hungarian Government and the central bank intended to serve this purpose in the past decade. On the other hand, with technological development, the limited resources used so far can be converted into new resources with unlimited access – in the economy through the revolution of money, in technology through the data as a new resource and in environmental sustainability through green energy production. These are global processes which an individual national economy cannot control, but can exploit properly, and which will become key elements of sustainability and competitiveness over the next decade. Another question also arises: what might be the revolutionary factor in terms of social sustainability? The role of national governments is larger in this area, and – along with the necessary demographic turnaround – creating new job opportunities appears to be a condition for competitiveness and sustainability.

The forward-looking study and improvement of sustainable development and competitiveness requires the accurate measurability of these two aspects. Unfortunately, we do not have that today. GDP, which is considered to be the main measure of economic development, ignores factors influencing living standards, such as well-being, happiness or ecological sustainability. The measurement of GDP is quantitative, while the assessment of competitiveness or sustainability would be mainly based on qualitative measures. In addition, the definition of competitiveness and sustainability is a subject of economic debate.

The most frequently used competitiveness rankings differ significantly in their results and approach. They have different strengths and weaknesses, but in general it can be said that they either rely too heavily on subjective surveys or their scope of analysis is not broad enough to cover all of the segments of competitiveness. There are certainly forward-looking exceptions, such as the UN's Sustainable Development Report and the MNB's Competitiveness Index prepared for a similar purpose, which is at the same time objective and broad in terms of content, but currently does not have global coverage and only examines the countries of the European Union, naturally with a special focus on Hungary (MNB, 2020). Despite the above measurement difficulties, composite indices are needed, but until an accurate measurement of competitiveness is achieved, global institutions and think tanks will face additional challenges, and the situation is essentially similar as regards sustainability. This study does not address the details of the measurability of these two areas, but it should be noted that as the concepts and methodology of measurement continue to crystallise, discourse on this subject will become easier and better results can be achieved.

## REVOLUTION IN FINANCES

In a journal with a fundamentally economic focus, it is advisable to start the discussion of sustainability with financial sustainability, the lack of which is unfortunately an everyday experience in economic life. At the micro level, households and companies, and at the macro level entire national economies may come close to bankruptcy or go bankrupt, which can reverse all the work of many years or even a decade. Furthermore, experience indicates that the financial sector is strongly pro-cyclical, meaning that it strengthens

economic recovery with ample funding, but also deepens recessions by tightening lending.

How can financial competitiveness contribute to sustainability? First and foremost, unsustainable processes originating in the financial sector must be prevented and excessive pro-cyclicality must be eliminated. Finally, using the opportunities offered by technological development, funding must be made much more easily accessible for economic actors which have a clear vision of the future.

The financial sector has provided many examples of unsustainable processes in some segments of the economy, leading to a general downturn. The global crisis of 2008-2009 started in the US real estate market, but it was the financial sector that was closely linked to it on the financing side which caused severe real economic damage to the world economy due to an incorrect assessment of credit risks. The financial crisis underlined that, with a lack of adequate regulation, unsustainable processes can evolve in the modern financial system. The self-regulatory mechanisms of the market do not function properly, and therefore – in addition to stimulating the real economy – one of the main purposes of economic policy should be to prevent financial imbalances (Csontos and Szalai, 2015). This is consistent with the fact of economic history that over the past 200 years only countries that have achieved appropriate coordination of the capabilities and resources of the state and the market have been successful (Matolcsy, 2020c).

With the merger of the Hungarian Financial Supervisory Authority responsible for microprudence with the Magyar Nemzeti Bank responsible for macroprudence in 2013, a more modern and efficient supervision of the financial sector was achieved in Hungary. In the past, the financial sector itself was a source of unsustainability, and this was especially true with regard to the drastic rise in foreign currency lending in the 2000s. The high

proportion and stock of retail foreign currency loans was one of the most serious sources of economic and social risk for Hungary. However, the post-2010 government, working in close cooperation with the central bank management appointed in 2013, phased out the systemic risk that threatened the housing of hundreds of thousands, using a structural approach instead of a quantitative one. Following the initial steps offering partial solutions (early repayment scheme, exchange rate cap), in 2014 economic policy eliminated the sector's external exchange rate exposure and made the transmission mechanism of monetary policy more efficient by fully converting foreign currency denominated household loans into forint. The financial crisis demonstrated that a healthy structural expansion of loans is desirable on the part of the private sector. The MNB launched the Funding for Growth Scheme in 2013, the aim of which was to avoid a complete credit crunch and to support the development of a healthy corporate credit structure (Baksay and Banai, 2019). Proceeding along this path, the MNB has applied debt cap rules (countercyclical capital buffer, payment-to-income ratio) since 2015, which effectively prevent the excessively pro-cyclical operation of the financial sector in the case of retail loans as well. The structure of the credit market was further improved by the introduction of the Certified Consumer-friendly Housing Loan in 2017, which significantly increased the share of fixed-rate loans in domestic currency even within newly extended housing loans (Palicz et al., 2020).

In Hungary, it was not only the finances of the private sector but also those of the state which were unsustainable in the 2000s. Taking a flawed approach, the government in power at that time wanted to stimulate the economy not by implementing structural reforms (i.e. not in a competitive manner), but rather by maintaining a high budget deficit (i.e. extensively). Due to

the high deficit and low domestic savings, the rapidly rising public debt had to be financed primarily from foreign sources. Unsustainability emerged as early as 2007, when economic growth fell to zero following the reduction of the budget deficit, and then, due to the fragile economic and financing structure, the global financial crisis that began in 2008 hit Hungary particularly hard.

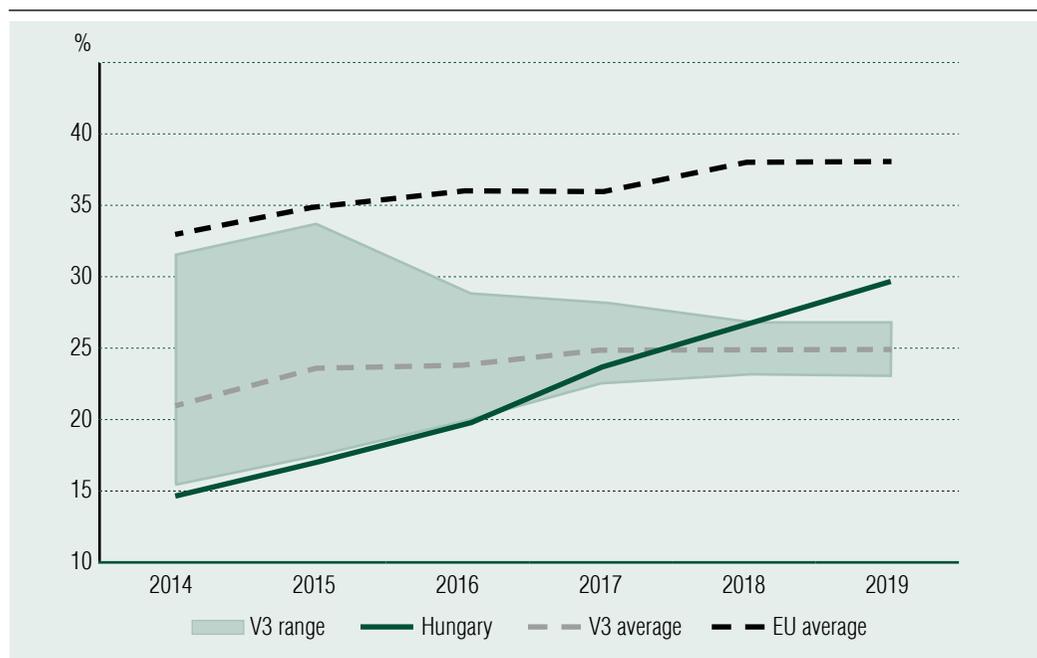
With regard to general government finances, competitiveness and structural reforms which also serve sustainability began in 2010. The basis of the budget reform was provided by the structural measures of the Széll Kálmán plans and restructuring of the tax system. With the tax reform, the focus of tax centralisation shifted from labour taxes to consumption taxes, supporting a turnaround on the labour market (Palotai, 2019). In connection with the train of thought of this study, the reform proved that significant results can be achieved by relying not only on quantities and finite resources, but also on quality and structural reforms. In addition to the structure of expenditures and revenues, the structure of public debt was also fundamentally transformed. This is because internal savings are a more stable and sustainable source for public finances than the foreign capital on which it relied. In order to restructure the public debt, measures involving debt management, which can be called a competitiveness reform, were also needed. This was supported by the Self-Financing Programme launched by the Magyar Nemzeti Bank, which effectively contributed to channelling internal resources into the government securities market. As a result of these reforms, the share of FX-denominated central government debt fell from about 50 percent to 17 percent, and the share of public debt held by non-residents fell from 66 percent to less than 35 percent. The recipe for success of economic balance and growth created the foundations for balanced convergence in

Hungary and for the necessary turnaround in competitiveness, thanks to which it was prepared to face the challenges caused by the coronavirus. Undoubtedly, in order to mitigate the negative economic effects of the epidemic, similarly to other countries around the world, it is possible to temporarily loosen budgetary discipline, but after the situation normalizes, it is necessary to return to the foundations (Matolcsy, 2020a).

Over the long run, financial sustainability may be most affected by the revolution in the monetary system. Up until now, money has been a scarce resource created partly by central banks and partly by commercial banks. However, the monetary system is becoming increasingly digital, which can result in both parametric and paradigmatic changes. One important change which however does not affect the essence of the monetary system is the spread of bank cards and the online management of finances, which makes our daily lives and transactions easier and faster (Horváth and Kolozsi, 2019). In this, countries where electronic payment methods are widespread can gain a competitive advantage, and the banking system will be digitised as much as possible. There is considerable room for the Hungarian banking system in this respect, but there are also tangible achievements, notably the Instant Payment System launched in March 2020 under the leadership of the MNB, which is, in its current form, unique in an international comparison. However, a more significant, paradigmatic change may be brought about by the digitisation of the monetary system to such an extent that it makes even central bank money digital and directly accessible at the same time. The possibilities, limitations and perspectives of this are being explored by all major central banks, as well as by the MNB, as it could bring about a revolutionary change in the availability of money (see *Figure 1*).

Figure 1

### RATIO OF ELECTRONIC PAYMENTS FOR PURCHASES



Note: Annual value of purchases conducted with payment cards and other electronic solutions / Annual household consumption.

Source: In the case of international data: ECB, Eurostat; in the case of Hungarian data: MNB, HCSO

## DATA: THE FUEL FOR DIGITISATION

We tend to make the mistake of taking economic growth for granted, but this is hardly the case. The world economy is constantly pulsating and confronting countries with persistent challenges. Over the last 150 years, the world economy has survived 14 global recessions; furthermore, the crisis triggered by the coronavirus epidemic is estimated by the World Bank to be twice as severe as the financial crisis of 2007-2008 (World Bank, 2020b). However, based on the rhythms of history, periods similar to this also carry the potential for renewal. One such historical rhythm is the 80 years between 1940 and 2020 (60 + 20 years) consisting of three 20-year phases (development, highs and lows, breakdown) and a 20-year transition period.

While the other is the 50-year cycle between 1970 and 2020, which also predicts that a challenging period awaits us on the road to success (Matolcsy, 2020e).

There is no sustainable economic growth without competitiveness. The available natural resources and the human workforce are limited; therefore, continuous – and thus sustainable – economic growth can only result from the more efficient use of these resources, i.e. from innovation. Consequently, the country needs to adopt a development model that focuses primarily on improving quality factors (intensive) rather than quantity factors (extensive). Usually, the growth surplus of developing countries with higher growth runs out of steam before they can catch up with developed economies (MNB, 2018). The literature calls this phenomenon a “middle

income trap” from which only a few countries have been able to break out in the last 100 years: within Europe, these countries include Austria, Finland and Ireland, and the “Little Tigers” in Asia (South Korea, Hong Kong, Singapore, Taiwan). The countries that have succeeded in convergence are quite diverse, but what they have in common is that it was the technology- and knowledge-intensive model that allowed them to catch up (see Figure 2).

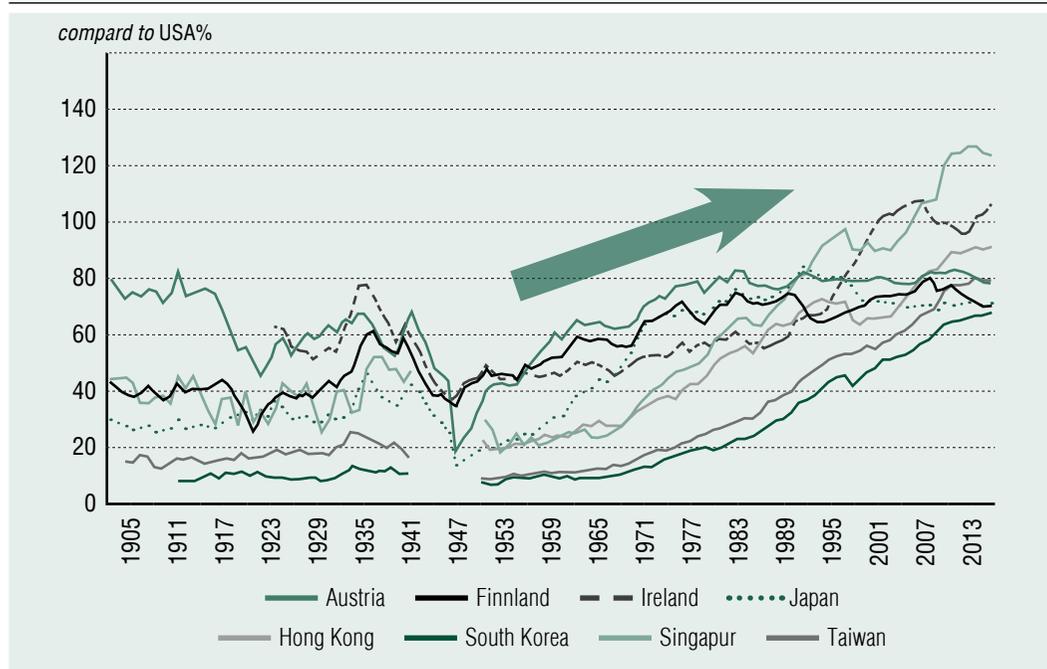
The provision of raw materials for production is a key issue, and the coronavirus has highlighted more than ever before the importance of security of supply. In global terms, one major trend for developed countries, especially for American and Western European multinationals, in recent decades has been to relocate their production to Asian countries for

profit maximization. One direct consequence of this process driven by low-cost labour has been the extension and increasing complexity of production-related supply chains. However, restrictions and border closures due to the coronavirus pandemic have underlined the risks involved in outsourcing. Due to the epidemiological situation, global supply problems also appeared immediately in the automotive industry in early 2020. In order to maintain competitiveness, multinational supply chains are expected to shorten, regionalise and diversify, with a stronger focus on stockpiling and security of supply. Hungary can also benefit from this process.

Technological developments provide an opportunity to transform the hydrocarbon-based economy into a green, circular economy,

Figure 2

**CHANGES IN THE LEVEL OF ECONOMIC DEVELOPMENT IN THE SUCCESSFULLY CONVERGENCED COUNTRIES**



Note: PPP based GDP per capita  
Source: Maddison database, MNB calculation

thereby reducing the negative effects of global warming, which is a significant risk factor for economic growth. The shift to an optimal energy mix based on renewable energy and nuclear power that is needed for sustainable convergence will reduce emissions, increase security of supply and improve Hungary's foreign trade balance. More and more car manufacturers are introducing alternative drive models instead of internal combustion engines: for example, Mercedes announced in July 2020 that it will start producing plug-in hybrid models in Kecskemét, Hungary. For Hungary, this global trend is of key importance, because a significant part of the Hungarian economy's output is attributable to automotive production. In order for the country to maintain its competitive advantage in the future, investments that can satisfy the growing demand for alternative drive vehicles will be needed.

The primary new resource related to economic growth is data. Prior to the digital age, economies were primarily able to utilise resources of a physical nature, such as soil, water, precious metals, or raw materials. In the age of digitisation, the most important raw material is data, the amount of which is practically unlimited and only expands during its use (Matolcsy, 2020b). It is much more accessible than any previous raw materials, but is also more attached to us. The usability of personal data is one of the big dilemmas of the near future. Data would, of course, be worth nothing without adequate data processing capacities. However, according to Moore's law, the expansion in computational performance provides the knowledge needed to process large amounts of data. The revolution of "big data" and artificial intelligence is already on the verge, but is less visible only because as opposed to previous technological revolutions it runs in the background, while the interface used by the user may even remain unchanged.

## IN THE SHADOW OF DEMOGRAPHIC MEGATRENDS – THE FUTURE BELONGS TO OUR CHILDREN

Both developed and developing countries face an unprecedented demographic challenge, but in opposite directions. This could lead to unpredictable economic and environmental consequences if we do not implement greater reforms than ever. The United Nations estimates that the world's population will exceed even 10 billion in the 2050s, i.e. an increase of about 2 billion. Meanwhile, continental differences in population growth trends are expected. Africa will see the largest population growth (doubling between 2015 and 2050), followed by slightly lower growth in Asia (20 percent between 2015 and 2050). By contrast, Europe will be the only continent to face a declining population (UN, 2019). It is no coincidence that Europe has the highest proportion of countries (66 per cent) struggling with government measures to increase fertility rates (UN, 2017).

In a society with a declining population, successful economic convergence is not conceivable over the long run. Maintaining the population level requires a fertility rate of at least 2.1 in the long run, which currently seems unattainable in the world's wealthiest regions, such as Europe or North America. Today, the Hungarian fertility rate can be said to be average in the European Union, but we have already had far to go to reach even this. From 2010, the Hungarian government pursued a family policy that is already showing visible results, as the fertility rate increased from 1.2 to 1.5 between 2011 and 2019 and the number of marriages also doubled. In order for the demographic turnaround to be fully accomplished, the current family policy must be continued and, if possible, expanded. "On the slope of sustainable convergence, we will reach the top sooner if more people pull

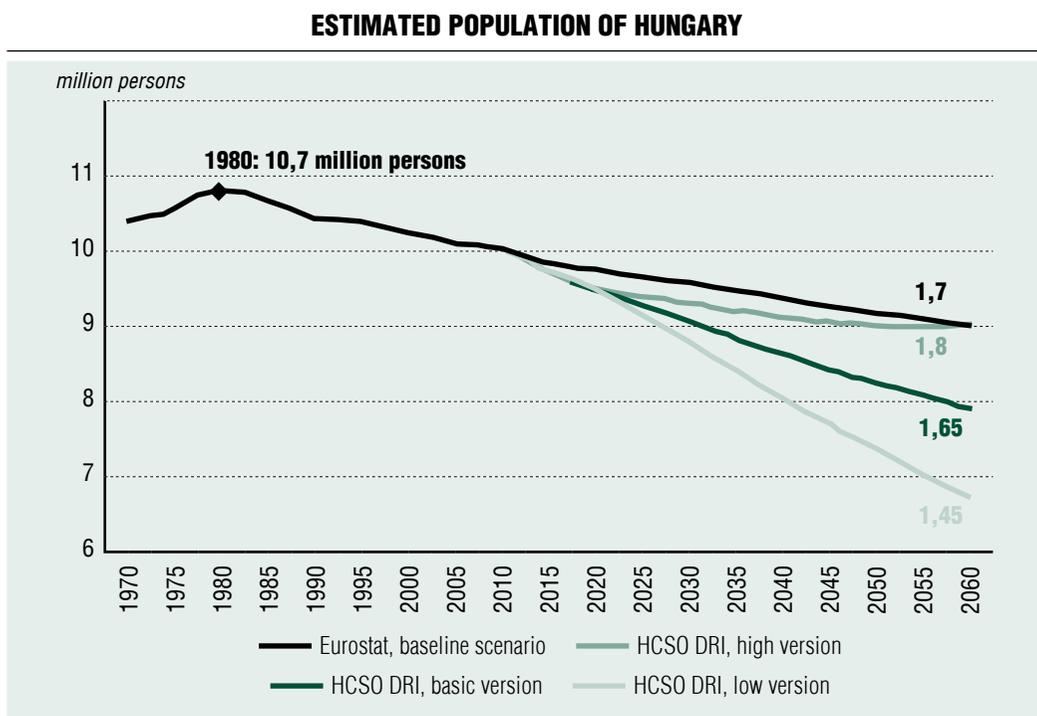
the cart of our country” (Matolcsy, 2020f). When formulating the family policy, we must also make sure that our family support scheme is not only generous but also effective. *Figure 3* shows the estimated number of the Hungarian population.

An ageing population is an unavoidable consequence of the low number of children and the increase in life expectancy. The decline in the number of working-age population not only makes the pension and healthcare systems unsustainable in the long run, but economic convergence as well (Kreiszné, 2019). Therefore, in addition to encouraging having children, we must strive to involve the economically active population in the labour market as much as possible. This can be effectively encouraged by the increased use

of atypical forms of employment (teleworking, part-time jobs), especially among women. The return of mothers to the labour market and their long-term employment would be promoted by further increasing the number of daytime nursery capacities, the provision of childcare in the workplace and the support of mothers working part-time. It is commonly experienced that employment rates are the highest in countries with high rates of atypical forms of employment. Thus, we need to activate all of our reserves. However, Hungary has so far lagged behind Western European countries in terms of atypical employment methods (MNB, 2019b).

Although Japan has taken a different approach, it has provided successful solutions to the ageing problem of its own population.

Figure 3



Note: 2011 year-to-date figures based on 2011 census data

Source: Eurostat, Eurostat 2019 population projection baseline, HCSO HDRI population projections

Japan has the oldest population in the world, with 28 percent of the population aged 65 and above in 2019 (World Bank, 2020a), while the average in the EU countries, including Hungary is around 20 percent (Eurostat, 2020c). To address the negative economic effects of ageing, Japan has successfully raised the employment rate for elderly people. In addition to raising the employment rate, their other key goal is to replace the shrinking workforce with automation, with developments by large Japanese companies (e.g., the development of industrial robots, artificial intelligence, use of big data) making a strong contribution in this regard.

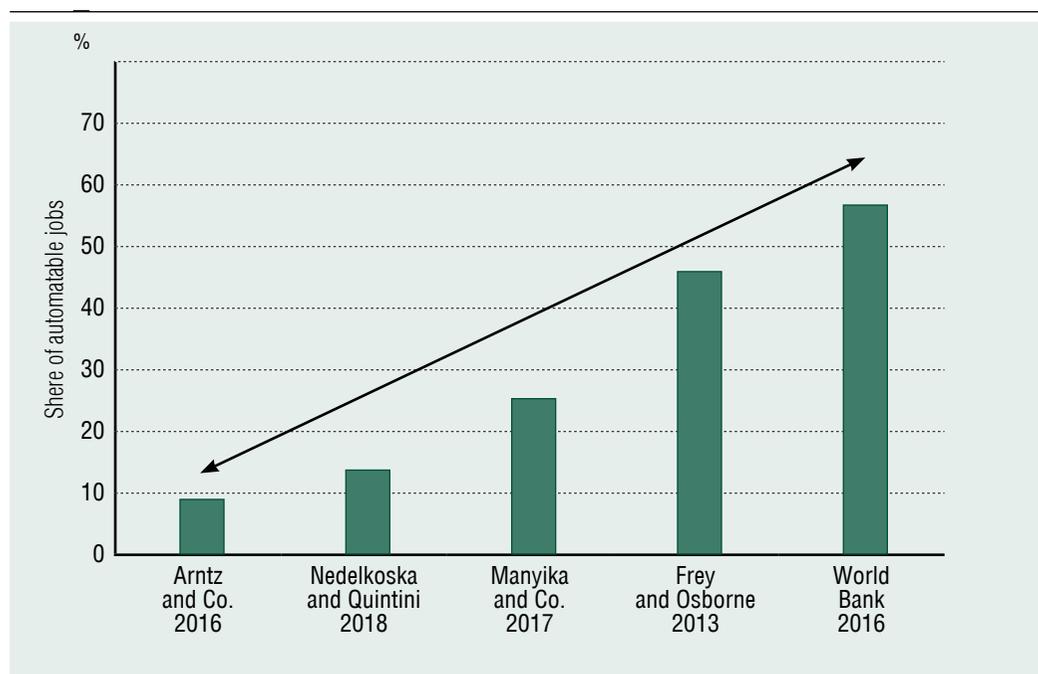
Labour market challenges need to be addressed through active economic policies. Automation will affect all jobs in the economy

in the future (see Figure 4). Only the lowest and upper segments of the wage scale may be less affected, but for the first time in history white-collar jobs may also be at risk (Erdélyi and Kis, 2019). New jobs created by innovation may be the solution to keeping employment at a high level, despite the spread of digitalisation and robotisation (Erdélyi and Soós, 2019). Jobs in their current form cannot and should not be maintained, but potential workers must be provided with job opportunities. In order to improve competitiveness, lifelong learning is becoming increasingly valuable, as it preserves marketable knowledge that can be used to fill jobs that today do not yet exist.

An additional societal challenge for some developed economies is growing income and wealth inequalities. From the 1970s and 1980s,

Figure 4

**RANGE OF AUTOMATION ESTIMATES FOR CURRENT JOBS IN THE WORLD**

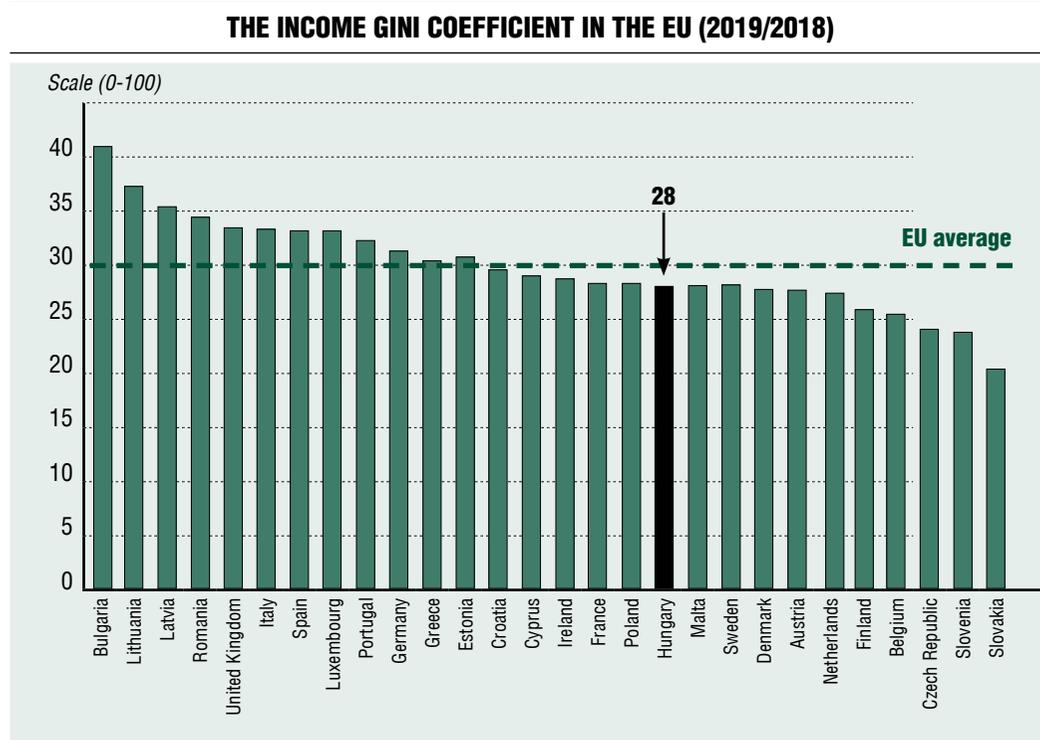


Source: MNB

the capital's share in the income increased, while wage shares, previously thought to be unchanged, began to decline gradually. New technologies also upset the balance of incomes stemming from capital and labour, which can result in income inequalities as well (Rippel and Várhegyi, 2019). During the last four growth periods in the USA (1982–1990, 1991–2000, 2001–2007, 2009–2013), the richest 10 percent accounted for more than 70 percent of income growth (Tcherneva, 2015, 2017). In Hungary, the level of income and wealth inequality is lower than the EU average and is considered to be moderate by global standards as well (see Figure 5). The proportion of people at risk of poverty and social exclusion in society has fallen significantly since 2010 and is now below the EU average.

The question is not only whether we manage to preserve the population of our country, but also the quality and living conditions of the life we live. The “locked-in” period created by the pandemic situation has shown that in the future, our homes will presumably have to perform many more functions. *“The home will no longer simply be a place to live and cook, but a place to relax, work, play sports, train ourselves and help our children learn, gardening in the garden or on the patio”* (Matolcsy, 2020f). However, for this to occur, an ever-broadening section of the population will need adequate housing at affordable prices, which is also essential for having children. By contrast, we see that today with an average income it already takes 15 years to be able to buy a 90-square-metre home. In addition, the

Figure 5



Source: Eurostat 2020b, Gini coefficient of equivalized disposable income

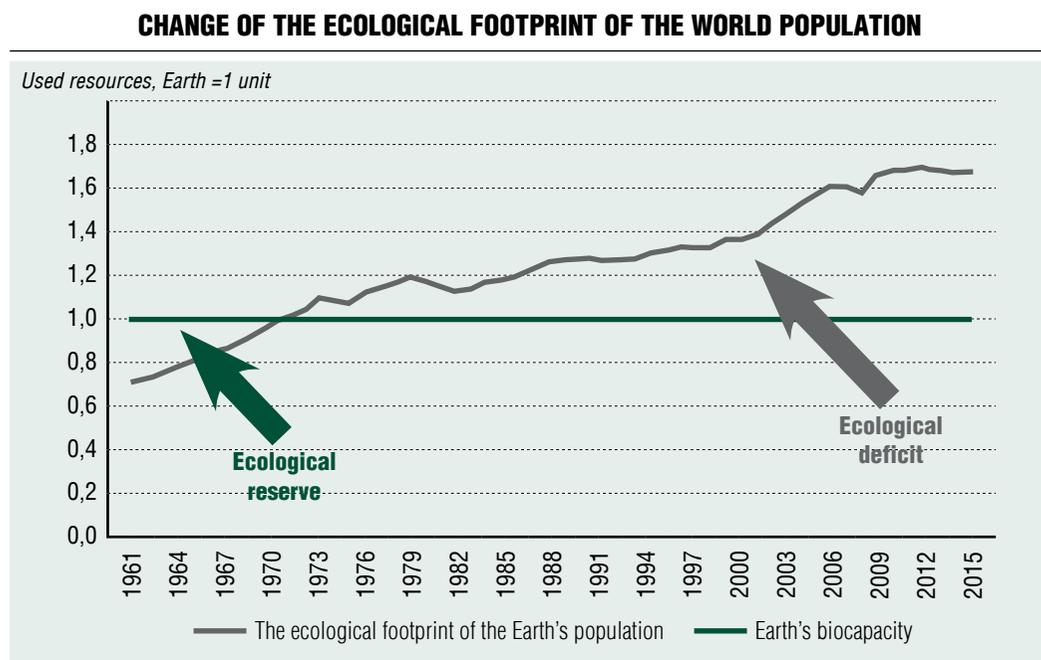
renewal rate of the housing stock in Budapest fell to 0.4 percent, instead of the desirable 1 percent or the 1.5 percent seen in Vienna. For the 2020s, we need a clear vision and a strategy based on professional consensus to exploit our housing market reserves (Matolcsy, 2020d).

### WE SHOULD NOT ONLY USE OUR ENVIRONMENT, WE MUST ALSO PROTECT IT

Environmental sustainability is the most commonly used approach to sustainability, and in recent years, quite rightly, has become the focus of public discourse. More and more often we hear the ominous statement, “there is no planet B”. These warnings are justified.

After all, if we look at our economic growth, we see that on this growth trajectory we are increasingly depleting the Earth’s natural resources. The extent to which the croplands, grazing lands, forests, waters and built-up areas can regenerate in total annually is traditionally referred to as the biocapacity. If we consistently use more than our available or renewable resources, we will run into an ecological deficit. Looking back over past decades, we see that the countries of the Earth have been using more and more ecological resources to meet their consumption and to absorb the waste and other pollution that is generated in the process. Since the 1970s, this consumption has exceeded the level our resources are able to cover or recover on their own (see Figure 6).

Figure 6



Note: In the figure, the green line indicates the maximum available ecological capacity of the Earth (biocapacity), the gray line indicates the capacity used by the world’s population. The vertical axes indicate ecological capacity of the number of Earths we would need to meet the needs of humanity.

Source: Global Footprint Network

In 2016, the ecological deficit of the Earth as a whole was already 0.7 Earth, meaning we would need almost one more planet to sustain the current consumption. The extent of overuse of resources varies from country to country and region to region: Japan, for example, uses more than seven times its own biocapacity, but most of the developed, leading countries in terms of GDP have ecological deficits ranging between two and five (Global Footprint Network, 2019). We can also capture the overexploitation of resources by saying that we already exhausted our ecological framework (Earth Overshoot Day) on 22 August of this year (Global Footprint Network, 2020). The date, which is getting earlier each year, warns us that our available resources are not unlimited and we cannot really possess them.

Ecological sustainability is the key to our survival and one of the key elements of Hungary's competitiveness, which also requires green economic thinking and appropriate financial products (Matolcsy, 2019). As opposed to financial processes and some parts of the economy – where we realise their unsustainability about every 10 years – our Earth can only reach the ultimate limit of unsustainability once. That is why we must do everything in the economy and financial spheres to make our growth “green” and sustainable.

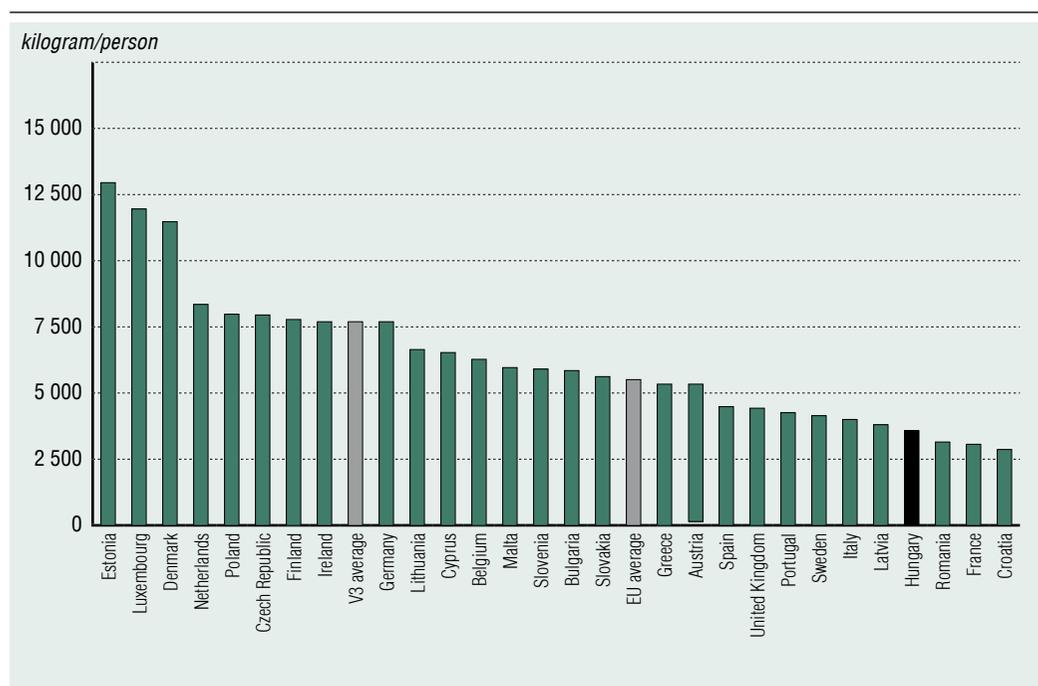
Hungary can be said to be at the forefront of efforts at both the global and European level, whether it is the development of long-term sustainability strategies, or climate commitments and their implementation. Several international organisations and many countries, including Hungary, have already committed themselves to green operations, but all of these efforts are often still at an early, planning stage. At the same time, it is important to be aware of the current strategic plans and to follow their development if we want to understand the common goals for

which the nations are working together. Hungary was the first member state of the European Union to have the Paris Convention that was adopted at the 2015 UN Climate Change Conference enter into force. Our goal stipulated in the agreement is to reduce greenhouse gas (GHG) emissions by 40 percent compared to 1990 levels by 2030. In addition, within the framework of the European Green Deal, Hungary has also committed to achieve climate neutrality by 2050. To this end, Hungary has already developed a number of its own strategies (e.g. the National Climate Change Strategy, NCCS). Furthermore, Hungary is already very prominent in terms of implementation, as its per capita CO<sub>2</sub> emission is the fourth lowest in the EU (Eurostat, 2020a), *see Figure 7*.

Making financial products greener is essential for the preservation of the natural environment, as they can provide funding for the aforementioned goals. The rapid development of green technologies also offers significant business opportunities, the exploitation of which can be significantly supported by green financial products. The supply and demand of green deposits, bonds, loans and mutual funds is growing at a rapid rate. The main purpose of these products is to use the funds exclusively for investments that are beneficial for environmental and energy efficiency, such as the construction of solar farms or clean water and wastewater treatment. For example, a green bond helps to channel capital into environmentally friendly investments, reduces the cost of the access to finance, and also draws attention to the financial risks associated with environmental degradation (Mihálovits and Tapaszti, 2018). The growing popularity of these products is well illustrated, for example, by the fact that although green bonds started from a low base, their market is expanding dynamically at the global level as well. Quantitatively, global

Figure 7

**CARBON DIOXIDE EMISSION PER CAPITA IN THE MEMBER STATES OF THE EUROPEAN UNION**



Note: V3 shows a population-weighted average; Eurostat updated the data series in 2020

Source: Eurostat, 2020a

issuance of green bonds totalled only \$ 5 billion in 2012, while it already exceeded \$ 250 billion in 2019, representing 3.5 percent of total bond issuance (\$ 7.15 trillion) (Ehlers et al., 2020). Currently, the largest green bond issuers by geographic location are the USA, China and France.

The Hungarian central bank is also actively involved in the fight for a green future, as it was one of the first to create a separate green bond portfolio in its foreign exchange reserves, and – with its Green Finance Award – the MNB encourages credit institutions, investment and insurance institutions to reduce their ecological footprint. In addition, the MNB launched its own wide-ranging Green Programme<sup>1</sup> in 2019 (MNB, 2019a). The main goal of this programme is for the financial intermediation system to support

environmental sustainability much more strongly than it currently does. The MNB’s Green Programme is fundamentally based on three pillars. First, the MNB wants to reduce the financial risks associated with ecological and environmental problems; second, it builds alliances at the domestic and international level to broaden and share its knowledge base; and third, it pays great attention to making its own operations green. *“Be the change you wish to see in the world”*, as the well-known Indian politician *Mahatma Gandhi* said.

The long-term economic effects of the emergence of green taxes for environmental and fiscal sustainability are favourable. Future economic growth may be higher because environmental pollution diminishes and the health of the population also improves. Among the international best practices, the deposit

system is very promising, as it can effectively reduce the environmental impact of different product packagings. In Finland, for example, due to a deposit refund of between € 0.1 and € 0.4, the return rate for metal beverage cans has approached 100 percent. Germany shows a similarly high return rate, where a deposit refund of € 0.25 must be paid for disposable plastic bottles (Hausmann and Kolok, 2019). In Hungary, revenues from green taxes contribute more to total tax revenues than the EU average, but there is still plenty of room to increase this (MNB, 2020), see Figure 8.

We can group the direction of our environmental activities and green strategy around five cardinal key areas.

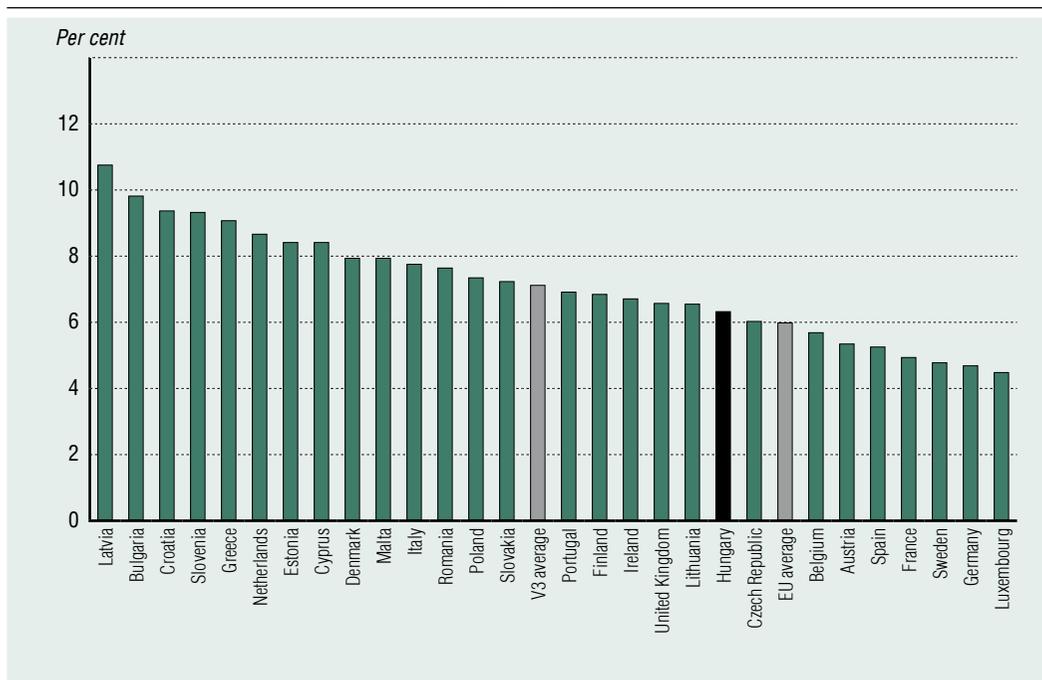
■ *First* of all, we must work to keep our lands fertile and our air and waters clean. We

cannot live off the future of our children and grandchildren! We must strive to give them a country in better condition in economic, social and environmental terms. A critical point in agriculture, for example, is irrigation development and water management, as today irrigated cultivation takes place on not even 2 percent of arable land in Hungary (Government of Hungary, 2020) and the proportion of actually irrigated areas within irrigated agricultural areas is just over 50 percent (Government of Hungary, 2017).

■ *Second*, the more that the production and consumption of food (as one of our most basic needs) occurs at the local and regional level, the smaller the ecological footprint, but of course this is also true for production as a whole. The consequences of the deglobalisation

Figure 8

**REVENUES FROM ENVIRONMENTAL TAX AS A PROPORTION OF TOTAL TAX REVENUE (2018)**



Source: Eurostat

megatrend forced by the coronavirus point in the direction of this goal. Shortening global value chains and the creation of multi-centred, regional supplier bases can also help with sustainable food supply (Matolcsy, 2020f).

■ *Third*, the biggest step in tackling climate change and reducing our ecological footprint may be to decarbonise the economy, for which we need to support and prioritise technologies using renewable energy.

■ *Fourth*, our urban planning and development strategy is also decisive in keeping the available natural capital supply and the needs of the population in balance.

■ *Finally*, a solution needs to be found to resolve the dilemma of a growing and ageing population – outside of the EU and the USA – and limited resources. We will only be able to ensure life on our Earth and our own survival by protecting the arable land, producing food locally as much as possible, reducing our CO<sub>2</sub> emissions and pursuing energy-efficient urban planning and the widest possible scope of employment. The long-term sustainability of our environment and society depend on each other.

## SUMMARY

Examining the four dimensions of sustainability, this study underlines that competitiveness and long-term sustainability are closely related concepts. Bearing in mind the economic and social development, only

what is sustainable over the long run can be competitive and vice versa. In essence, what the concept of sustainability and competitiveness have in common is that they cannot be based on quantitative growth, but only on qualitative development and structural change. The study presented examples of how structural reforms can make our society and economy more competitive and sustainable. Another way to achieve these two goals is to renew old resources and find new ones. Our resources used in the last millennium (raw materials, money, energy) were limited. By contrast, data – as the new raw material – is available in unlimited quantities, and it is worth considering the vision that it will be possible to produce unlimited clean energy, while at the same time we are facing a revolutionary digitisation of money. We can only be winners of these megatrends collectively. After all, without a healthy Earth, there is no healthy human life, without healthy human life, there is no innovation, without innovation, there are no green technologies, without green technologies, there is no green economy and without a green economy, our Earth will soon reach the ultimate limit of unsustainability. We humans can only make this mistake once. Therefore, let us endeavour to ensure a sustainable path of development and the resources needed for it, and take care of our own environment and each other. “*We do not inherit the Earth from our ancestors: we borrow it from our children*”, said David Bower, an environmental activist.

## NOTE

<sup>1</sup> <https://www.mnb.hu/felugyelet/felugyeleti-keretrendszer/zold-program>

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