

Magdolna CSATH*

RECOVERY BASED ON DEVELOPMENT RATHER THAN GROWTH

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For less developed countries to catch up with the more developed ones it is not enough to grow the economy measured by the GDP per capita. First of all, it is typical that in the less developed countries the assembly operations of the large value chains are present, and these operations are low value added ones, offering low paid assembly jobs. Also the repatriated profit can be large, and while it is part of the GDP, it cannot be used for local development. Measuring development in the less developed countries by GDP per capita can be therefore misleading, and decisions are made based on the benefits of growing the GDP.

The goal of this paper is to prove that using growth indicators, like GDP per capita, is not sufficient for measuring real progress and convergence. As the presented data prove, growth indicators may look promising while there is small development in terms of human and knowledge capital. Quality indicators like the level of the intangible assets and intangible investment indicators are especially crucial: they are the backbone of future national success and competitiveness. This is important because growth is always past-oriented, it expresses the results of past decisions, while investments in intangibles build the basis for future development. National wealth is introduced in order to explain the difference between the quantity based measurement systems and the qualitative ones. The paper concentrates on analysing the development achievements of the V4 countries in comparison to a few developed EU countries.

Keywords: middle income trap, development trap, national wealth, intangible assets, intangible investment, resilience, growth models

1. INTRODUCTION

The pandemic, and its economic and social consequences have shed light on an important question: which countries will be threatened by falling into a development trap? It is important to emphasize that it is no longer the question of how countries should avoid falling into the so-called middle income trap measured by growth of

* Szent II. János Pál Pápa Research Centre, Pázmány Péter Catholic University, Hungary.
ORCID: 0000-0002-1975-1045.

GDP or GDP per capita. Growth is not any longer the best indicator of sustainability, resilience or adaptability. Sustainability, resilience and adaptability are qualitative, development based characteristics with a strong connection to the level of human and knowledge development. In order to be able to evaluate the situation of a country from a more comprehensive perspective, it is therefore important to include not only economic but also human and development indicators into the analysis process. In this paper we argue for using human and knowledge development indicators for analysing the development status of the V4 countries. We compare their achievements for these indicators to a few strongly developed countries to see the development gap for these human and knowledge indicators. The indicators are analysed for several years in order to see development trends. The time span will depend on the availability of Eurostat data. We will demonstrate an important fact: the V4 countries perform well in terms of the typical economic indicators, while their development achievements are less attractive. This proves the assumption that these countries are not threatened by falling into the middle income trap, but they may fall into a development trap which will slow down their convergence with the economically and socially more advanced EU countries.

2. METHODOLOGY

As the literature analysis proves there are diverse approaches to measuring success of different societies and economies. Most of them however still concentrate on quantitative indicators, among them GDP capita and the fixed capital investment indicators. There are other approaches which call attention to the importance of developing human and knowledge capital. There is less emphasis put on illustrating that especially in the case of less developed countries concentrating on quantitative measurement may actually hinder real human and knowledge capital development. This article uses comparative statistical analysis for the V4 countries calling attention to the fact that unless these countries concentrate more on human and knowledge capital development, they can have nice growth related achievement, but in the long run they may fall into a development trap. These arguments are verified by statistical data selected on the basis of their assumed importance for development, and by building on the arguments and opinions of development researchers. On the basis of statistical data relationships are analysed and confirmed. The selected statistical data warn about the historical backwardness of the V4 countries compared to the more advanced EU countries for the human and knowledge related development indicators in spite of the fact that their growth indicators show better results. The level of backwardness of course varies by indicators and countries. The article argues that poorer achievements in human and knowledge indicators will not help V4 countries converge more rapidly with the more developed countries, moreover the lack of a stronger focus

on the intangibles, human and knowledge achievements, will harm the growth potentials of these countries, as well.

In the next stage of the research the author plans to develop a mathematical model, which could forecast the future development chances of the selected countries if they changed focus and instead of setting mainly growth related objectives they would rather invest more in intangibles, knowledge and people. It is also a future objective to better describe the different development stages, and the indicators to measure them including measuring the level of national wealth.

3. LITERATURE REVIEW

We live in a time of rapid technological and social change. Nations struggle to handle changes successfully. Uncertainty and volatility are high, nations have to build resistance and adaptability to these changes. As Helen Keller¹ put it: a bend in the road is not the end of the road, unless you fail to make the turn.

Resistance and adaptability cannot be measured by past oriented quantitative indicators like the GDP, or GDP per capita. They are rather influenced by qualitative indicators expressing human and social strength, which facilitate the necessary changes. Spence (2022) talks about the need for regime change for development and modernization, as the several decades of low-income wages based growth is over. System changes need a new growth path which depends on knowledge, skills and innovation. A World Bank Report argues for the importance of tertiary education and lifelong learning to be able to get involved in the ongoing digital revolution. (World Bank Report, 2021).

An EU Study emphasizes – among others – the importance of investing in education, skills and innovation for building a more sustainable future for Europe (EU, 2020).

Sachs et al. (2021) focus on the importance of achieving the UN SDG² goals for resilience and adaptability. Among those goals human capital – health and education – investments are emphasized. On the 2021 SDG list, which covers 165 countries, positions are established on the basis of a composite of the achievements for the 17 SDGs: Finland, Sweden and Denmark are in the first 3 positions, Austria is 6th, Czechia is 12th, Poland is 15th, Slovakia is 19th and Hungary is 25th. Hungary e.g. has poor performance for the industry, innovation and infrastructure goals.

Green development is a special approach to development. The UNESCO, teamed up with other organizations, suggests to measure the “green skills” of the population, which are the professional knowledge, abilities, values and attitudes needed in the transition to a green economy (UNESCO – UNEVOC, 2017).

¹ Helen Keller (1880-1968) is an American writer and activist.

² Sustainable Development Goals.

Asian authors also emphasize the importance of human capital investment for development. By human capital investment they understand investments into higher education, vocational training and innovation. Shaping the future – they claim – will need human capacity building (Asian Productivity Organization, 2020).

A well-known development study is the UN's Human Development Research. In the latest report they argue that human development is central to a more prosperous future for all the countries (UNDP, 2020).

Finally let me mention an earlier study, which highlights the importance of the qualitative features of businesses, as well as of nations. Hall (2000) writes that even in the case of businesses, financial statements do not fully convey the real value of a company. To be able to measure real value, intangibles – like patents, trademarks, reputation, quality, integrity and sustainability – also have to be evaluated. This also applies to nations: financial indicators, like growth of the economy, physical investment level or employment, alone do not describe the development level of a country. The accumulation of intangible assets is a key source of development. Investing in it is therefore necessary if a country wants to avoid falling into a development trap. Intangible investments cover all investments into knowledge, innovation, community building and health improvement. We, of course, have to distinguish between intangible assets and intangible investments. An intangible asset is an asset that is not physical in nature. For a company goodwill, intellectual property, trademarks, licences are typical examples of intangible assets (Kenton, 2020). At the national level knowledge assets, among others, include innovation capacity, entrepreneurial spirit, good governance, social capital and resilience, too.

Investing into physical capital may increase GDP, but it does not improve quality unless new knowledge is incorporated in the new machinery and processes. Investing into knowledge also offers a chance to improve productivity, the level of which also an indicator of development. But of course it is also important to invest into health in order to sustain the physical state of human capital, as it is also a development indicator and a precondition to improving productivity.

As we can observe from the literature survey development can be analysed from different perspectives. There is no clear, generally accepted definition for describing what should we mean by development. The majority of opinions however mention human and societal characteristics as important features of development. As the purpose of this article is to analyse different development indicators to warn about the potential for a development trap even if there is no danger for a country to fall into a middle income trap, human and societal indicators will be analysed in the following parts. The achievements for these indicators in the V4 countries will be contrasted to those of a few developed countries to recognize development gaps.

The indicators will be divided into two groups:

- status/stock indicators,
- dynamic/flow indicators,

which are of course in relationships with each other. Flow indicators influence the level of future status/stock indicators.

4. ANALYSIS OF DEVELOPMENT INDICATORS: STATUS/STOCK INDICATORS

Human indicators

“If you think in terms of a year, plant a seed, if in terms of ten years, plant trees, if in terms of 100 years, teach the people” (Confucius, 531-497 BC).

We now turn to drawing a picture of the knowledge and skills level of the V4 countries and a few developed countries by analysing the percentage of the population with a tertiary education and the talent ranking positions in the IMD Talent Competitiveness Ranking (IMD, 2021c).

Then we analyse the digital competitiveness positions with a special focus on knowledge and future readiness (IMD, 2021b).

To conclude analysing the selected human development indicators we will also evaluate two health related indicators and knowledge related productivity indicators.

Knowledge and skills indicators

Tertiary education

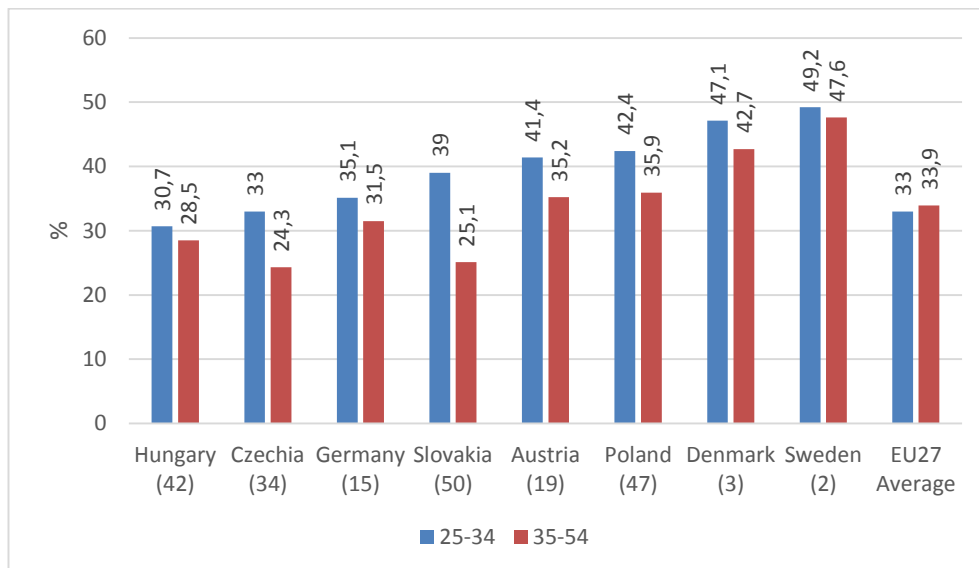


Fig. 1. Population with a tertiary education (% in the same age group) 2020 (Eurostat, 13.10.2021)

Figure 1 demonstrates the poor position of Hungary, Czechia and Slovakia. Surprisingly, the German value is also very low. The reason for this may be the large proportion of immigrants with a low level of education. Poland has the best position from among the V4 countries. Tertiary education would be crucial for a larger share of the population if the economy is planned to be transformed into a knowledge-based one. A tertiary education supports competitiveness as indicated by the numbers in the brackets. Competitiveness is analysed by IMD in 2021 (IMD, 2021a).

Poland stands out with the high proportion of the population with a tertiary education in two age-groups, but this achievement does not seem to strongly influence competitiveness. The opposite example is Germany with a surprisingly low proportion of the population with a tertiary education and a 15th competitiveness position. This can be explained by the fact that education level is an important, but not the only important indicator influencing competitiveness. We will see this later.

Talent ranking

The IMD World Talent Competitiveness Ranking Study assesses the extent to which a country develops its talent pool (IMD, 2021c). Three groups of factors are analysed:

- investment into and development of talents,
- appeal, attractiveness of the location for talents,
- readiness: the availability of skills and competencies in the talent pool.

The number of analysed indicators is 31. The ranking shows the results of a composite value of all indicators.

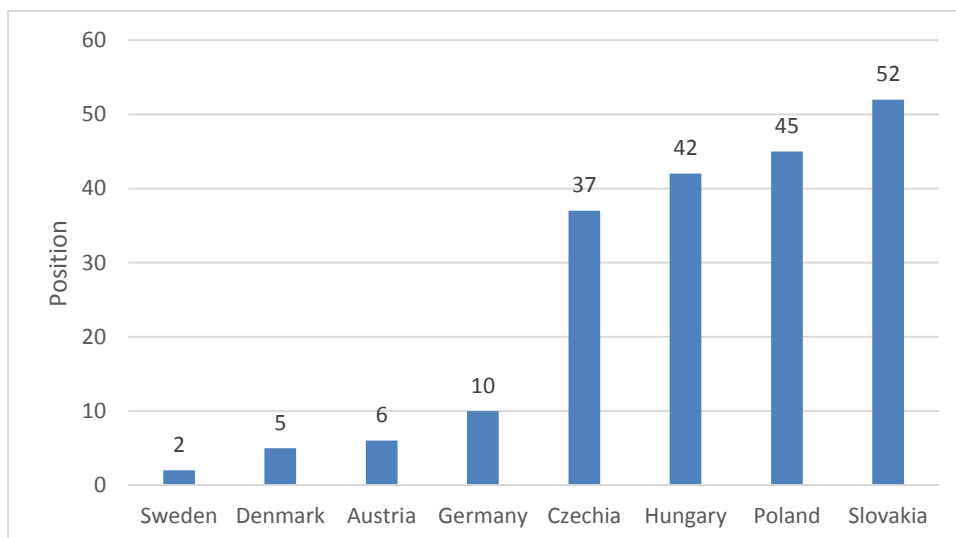


Fig. 2. Talent ranking IMD, V4 countries (IMD, 2021c)

Figure 2 illustrates a large gap between the V4 countries and the four developed countries, although the German position is the weakest among the developed ones. The worst positions for the V4 countries are:

- Czechia: appeal/attractiveness (45th position),
- Hungary: appeal/attractiveness (53rd position),
- Poland: appeal/attractiveness (54th position),
- Slovakia: readiness (53rd position).

Figure 2 suggest that the V4 countries are again in a weak human development position compared to the developed countries. Brain drain and employee motivation are among the worst indicators for Czechia, Hungary and Poland, and Slovakia is lagging for university education and the availability of skilled labour.

Digital Competitiveness Ranking

The IMD Digital Competitiveness Ranking Study (IMD, 2021b) assesses important intangible assets and investment indicators which could support exploiting future development opportunities of the surveyed 64 countries. The number of analysed factors is 4, and that of the sub-factors is 9. The number of analysed indicators is 52. The three factors are:

- knowledge,
- technology,
- future readiness.

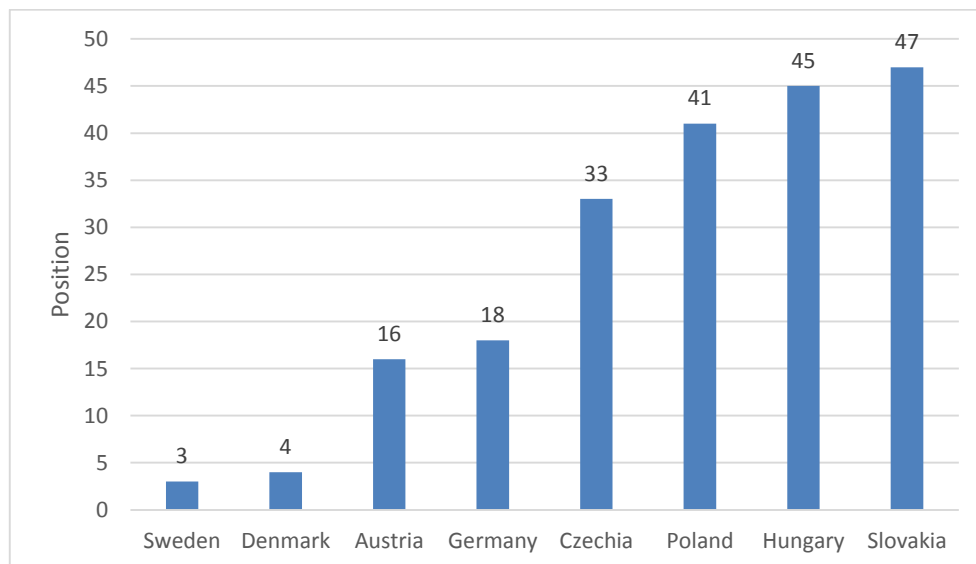


Fig. 3. Digital competitiveness ranking IMD 64 countries (IMD, 2021b)

The knowledge factor refers to the intangible infrastructure, the quality of human capital, investment in education and the outcomes, like registered patent grants or scientific publications. The technology factor is related to the development of digital technologies and the availability of capital for technology investment. Finally, future readiness, which is another intangible factor, measures the degree of business agility, adaptive attitudes and digital applications.

Figure 3 illustrates again a wide gap between the performance of the V4 countries and that of the four developed countries, although again the German position is the worst among the developed countries. The worst positions for the V4 countries are:

- Czechia: Technology and future readiness (37th position),
- Hungary: Future readiness (61st position),
- Poland: Technology (41st position),
- Slovakia: Knowledge and future readiness (46th position).

The Czech position is especially weak for the general “E-participation” indicator, the Hungarian for business agility, the Polish for development and application of technology and the Slovak for available talents and business agility.

This study is very complex, including many factors of digital competitiveness. The ranking positions comprise several knowledge development factors for which a lagging position may suggest the threat of falling into a development trap.

Health indicators

Figure 4 suggests serious health related problems, especially for Hungary and Slovakia.

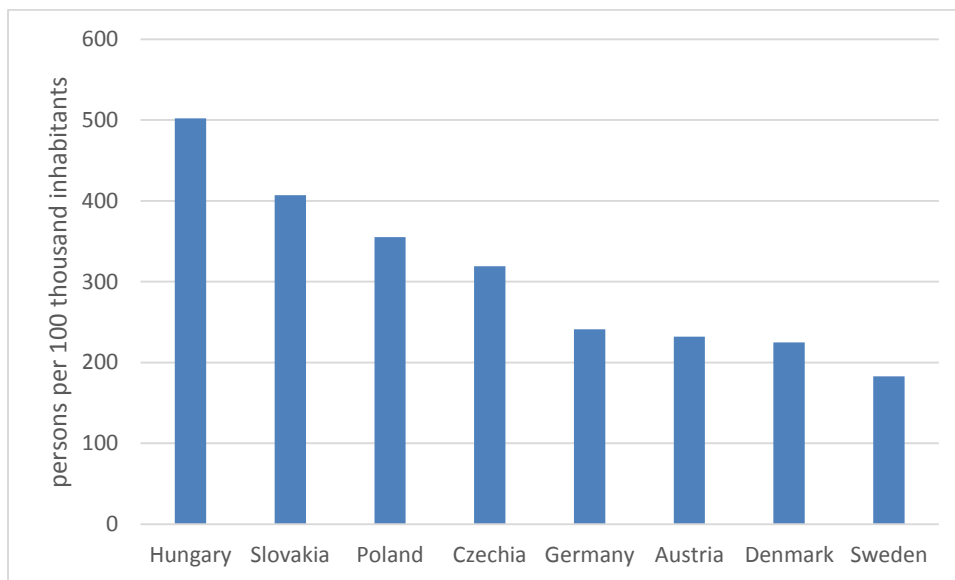


Fig. 4. Standardized death rates for treatable and preventable diseases for persons aged less than 75 years, 2018 (per 100 thousand inhabitants) (Eurostat, 12.10.2021)

Figure 4 illustrates the number of persons per 100 thousand inhabitants, less than 75 years old, who died from treatable and preventable diseases. This calls attention to the tragic human development problem stemming probably from several reasons, such as polluted air, poor working conditions, unhealthy diet, the quality of the public health system, etc. This indicator is an important one from the development point of view. Human beings with their knowledge and health are the sources of economic and social development, as well. This indicator should warn policy makers that the country does not properly value a key element of national wealth, a source of development, resilience and adaptability: human beings. Health status also strongly influences productivity which is an economic development indicator. We will come back to this a bit later.

Table 1. Life expectancy, years 2015-2020

Country	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Change from 2011 to 2020
Sweden	81.9	81.8	82.0	82.3	82.2	82.4	82.5	82.6	83.2	82.4	+0.5
Denmark	79.9	80.2	80.4	80.7	80.8	80.9	81.1	81.0	81.5	81.6	+1.7
Germany	80.6	80.7	80.6	81.2	80.7	81.0	81.1	81.0	81.3	81.1	+0.5
Austria	81.1	81.1	81.3	81.6	81.3	81.8	81.7	81.8	82.0	81.3	+0.2
Czechia	78.0	78.1	78.3	78.9	78.7	79.1	79.1	79.1	79.3	78.3	+0.3
Hungary	75.1	75.3	75.8	76.0	75.7	76.2	76.0	76.2	76.5	75.7	+0.6
Poland	76.8	76.9	77.1	77.8	77.5	78.0	77.8	77.7	78.0	76.6	-0.2
Slovakia	76.1	76.3	76.6	77.0	76.7	77.3	77.3	77.4	77.8	76.9	+0.8

Source: Eurostat, 28.04.2021.

Table 1 highlights another important feature of human capital: life expectancy. As the numbers show, a major gap can be found between the V4 countries and the four developed ones in terms of life expectancy. Again this points to an important human development phenomenon: how long people are expected to live, be able to work, and enjoy family and friends. The year 2020 brought a decrease in life expectancy in all surveyed countries with the exception of Denmark. It is also noticeable that from 2011 to 2020 it was Denmark where the life expectancy increased the most (+1.7 years). We will see later that Denmark spends the second highest percentage of GDP on health, among the surveyed countries. In Poland however life expectancy has decreased by 0.2 years. Summarizing the results we can conclude that the V4 countries are lagging behind the four developed countries for their human development status/stock indicators.

We have found weaknesses related to knowledge, skills and health which are all typical human development indicators. These weak positions may contribute to a lower level of productivity and innovativeness, as well.

Productivity indicators

Apparent labour productivity

Productivity measures how efficiently resources are utilized. If they are not utilized efficiently it will cause development loss. There are many types of methods for measuring productivity. One approach is the one which indicates the knowledge content level: this is called apparent labour productivity.

The Eurostat measures the apparent labour productivity as the gross value added per person employed in thousand euros. This is a very important structural indicator which throws light on the innovative content of products produced and services offered in the business economy. The gross value added (GVA) indicator is therefore equally important at the corporate and national level, too. Table 2 shows the latest available Eurostat data for the different sizes of businesses.

Table 2. Apparent labour productivity in the total business economy, 2018, thousand euros

Country	Total	From 0 to 9 persons	From 10 to 19 persons	From 20 to 49 persons	From 50 to 249 persons	From 250 persons
Czechia	29.7	19.7	24.1	27.2	32.5	39.3
Denmark	92.8	109.1	–	–	88.8	100.7
Germany	59.7	43.1	42.7	48.0	57.2	76.2
Hungary	25.2	15.6	22.7	23.9	27.5	35.1
Austria	68.9	45.6	–	–	–	–
Poland	25.2	12.2	22.4	26.2	28.4	37.3
Slovakia	24.3	13.0	23.4	27.8	28.5	38.1
Sweden	70.7	56.1	55.5	61.5	74.5	80.5

Source: Eurostat, 18.03.2021.

A few data are missing for Denmark and Austria. What is evident though, is that apparent labour productivity is far lower in the V4 countries for all sizes of businesses. If we calculate the values as a percentage for Germany, we will be able to better sense the productivity gap.

Table 3. Apparent labour productivity in the total business economy, 2018.
German value = 100

Country	Total	From 0 to 9 persons	From 10 to 19 persons	From 20 to 49 persons	From 50 to 249 persons	From 250 persons
Czechia	49.7	45.7	56.4	56.7	56.8	51.6
Denmark	155.4	253.1	–	–	155.2	132.2
Germany	100.0	100.0	100.0	100.0	100.0	100.0
Hungary	42.2	36.2	53.2	49.8	48.1	46.1
Austria	115.4	105.8	–	–	–	–
Poland	42.2	28.3	52.5	54.6	49.7	49.0
Slovakia	40.7	30.2	54.8	57.9	49.8	50.0
Sweden	118.4	130.2	130.0	128.1	130.2	105.6

Source: author's calculation based on Eurostat, 18.03.2021.

It is interesting to see that smaller companies employing 10 to 49 persons are more productive than the large companies employing 250 or more persons in all V4 countries. One reason is probably the nature of operations in large companies in the V4 countries. They are typically assembly operations with low value added. Referring to the famous research of Maslow it is very probable, too, that these assembly operations, which embody a Fordist division of labour, reducing an individual's scope of activity, learning and innovation, do not support improved productivity either (Maslow, 1943). This is illustrated in Figure 5.

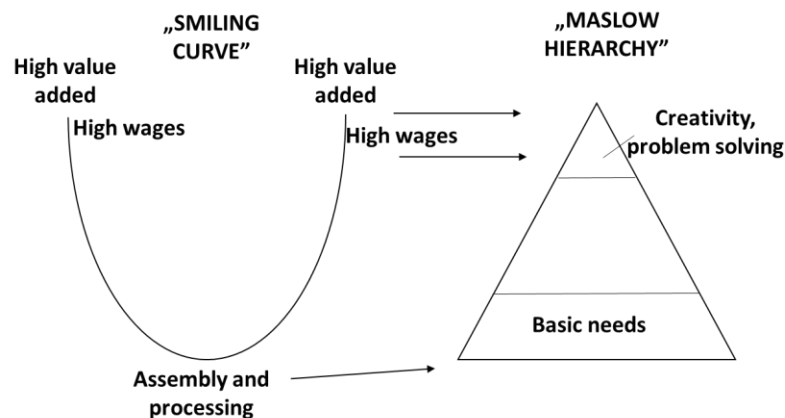


Fig. 5. The relationship between the economic structure and work satisfaction (author's own design)

The low level of apparent labour productivity can also be explained by the low percentage of innovative businesses.



Fig. 6. Innovative enterprises (%) during 2016-2018 (Eurostat, Community Innovation Survey, 8.07.2021)

The share of innovative enterprises is especially low in Hungary and Poland. Innovative activities create high value added, therefore they increase the level of apparent labour productivity.

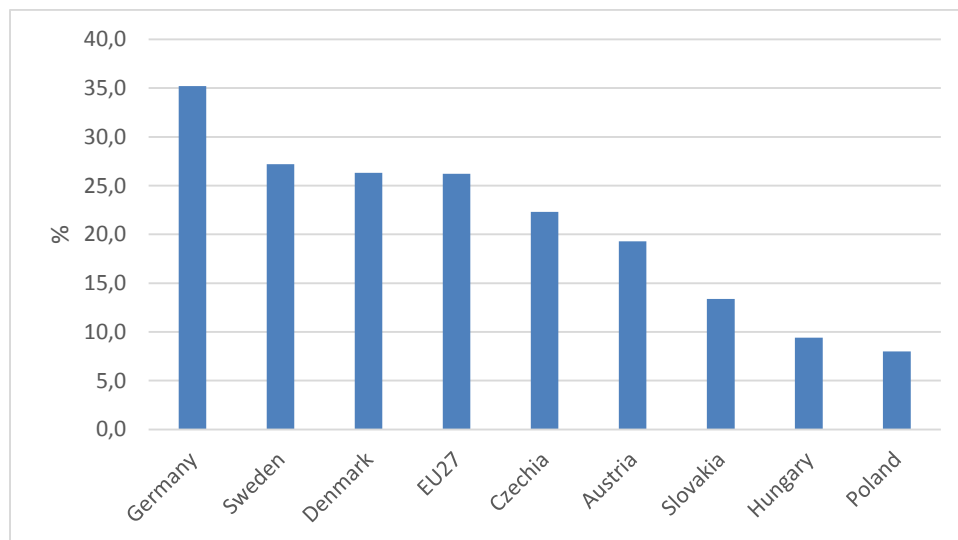


Fig. 7. Enterprises with on-going innovation (%) during 2016-2018 (Eurostat, Community Innovation Survey, 8.07.2021)

It is even more striking to observe that the proportion of those businesses in the V4 countries in which innovation is an ongoing activity is even lower. Again the lowest percentage characterizes Poland and Hungary.

The low percentage of innovative enterprises means low local value added, which can also be proved by the high percentage of important content for export. When analysing human development status/stock data and their connection to productivity and innovation we have to think about the reasons why their value in the V4 countries is so low. As mentioned before, the poor health status of the population is also a development indicator having an impact on productivity. One factor which can explain the reasons for the poor performance can obviously be the level of investment into these fields. Investments are dynamic, flow types of indicators having a strong impact on the value evolution of the analysed status/stock indicators.

The import content of exports

The import content of exports is defined as the share of imported inputs in the overall exports of a country, and reflects the extent to which a country is a user of foreign inputs. The measure is also referred to as the “foreign value added share of gross exports”. It is a reliable measure of international “backward linkages” in analyses of global value chains (OECD definition).

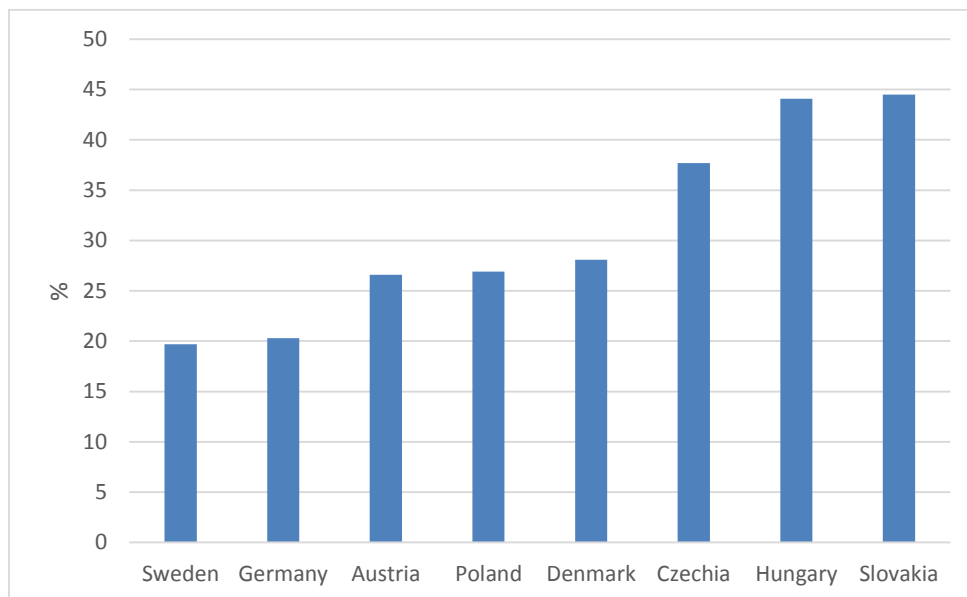


Fig. 8. Import content of exports 2016 (OECD data base)

Although the available data are not very fresh, it is probable that structural indicators have not changed too much since the time of data availability.

Figure 8 indicates a high level of foreign value added, which equals low local value added in 3 of the V4 countries, which is related to lower local knowledge and skills levels. This may also be one explanation for the low apparent labour productivity levels in these countries.

5. ANALYSIS OF DEVELOPMENT INDICATORS: DYNAMIC/FLOW INDICATORS

The most important dynamic/flow indicators impacting knowledge innovation and health are knowledge, education and health investment indicators.

Knowledge investment indicators

Government expenditure on education is an important flow indicator contributing to the development of human capital stock in the long run.

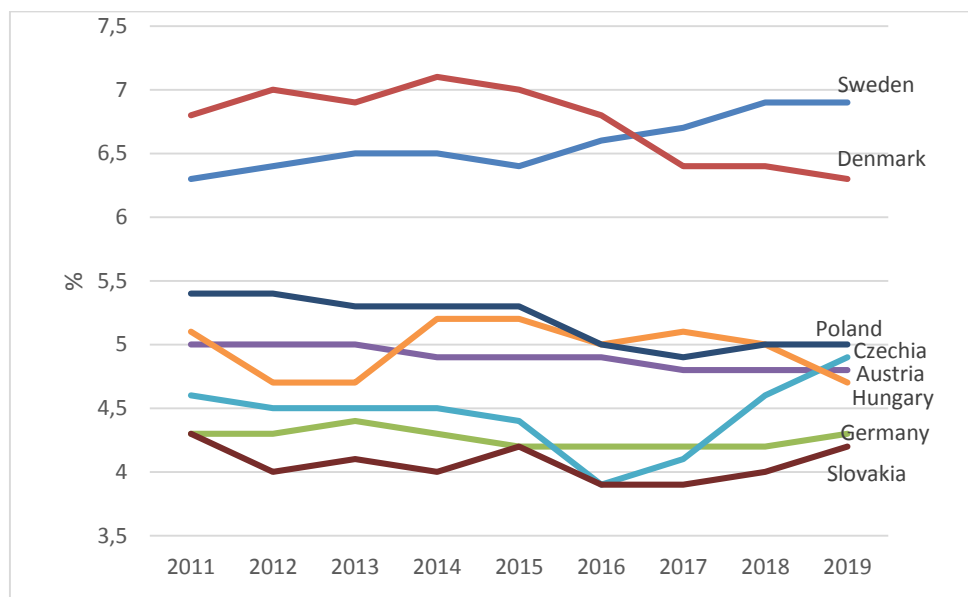


Fig. 9. Government expenditure on education (% of GDP) (Eurostat, 2.12.2021)

Figure 9 shows a higher percentage of GDP invested into education in Sweden, Denmark and from among the V4 countries, in Poland. The low German data for all

years analysed is surprising. So is the rather high, but decreasing over time value in Poland. We can observe a continuously decreasing value for the last three years in Hungary, too, which may partially explain the low proportion of the population with a tertiary education. In Poland, however, this proportion is rather high (Fig. 1).

Adult participation in education and training

Continuous human development is supported by adult education, lifelong learning.

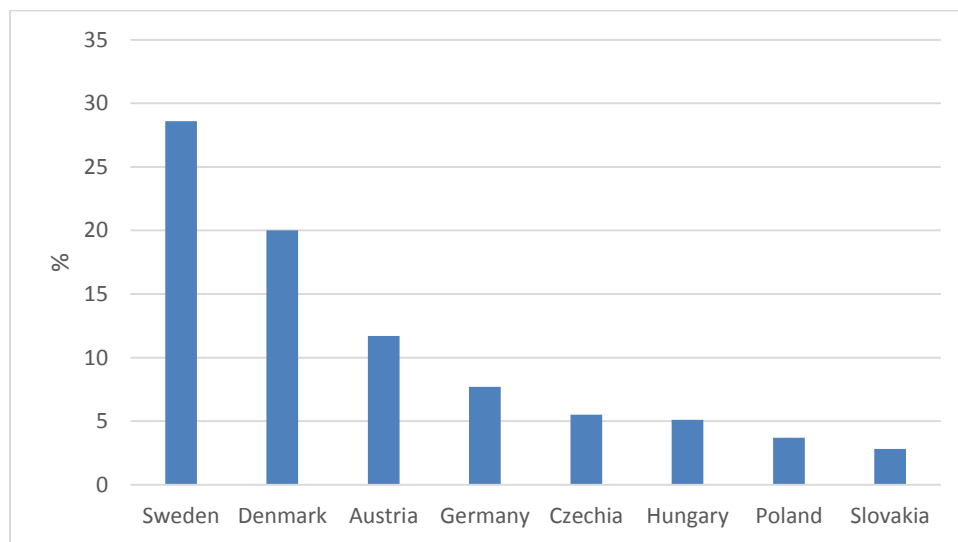


Fig. 10. Adult participation in education and training, last 4 weeks, 2020 (persons aged 25-64, %) (Eurostat, 18.10.2021)

Figure 10 illustrates a large gap for this indicator between the V4 countries and the four developed ones. Again, surprisingly among the developed countries the German value is the lowest. The low level of adult participation in learning inhibits human development which is necessary to avoid the development gap.

Research and Development (R&D) investment indicators

Beyond the total expenditure it is also crucial to analyse R&D in the higher education sector, because it has an important contribution to human development in the long run.

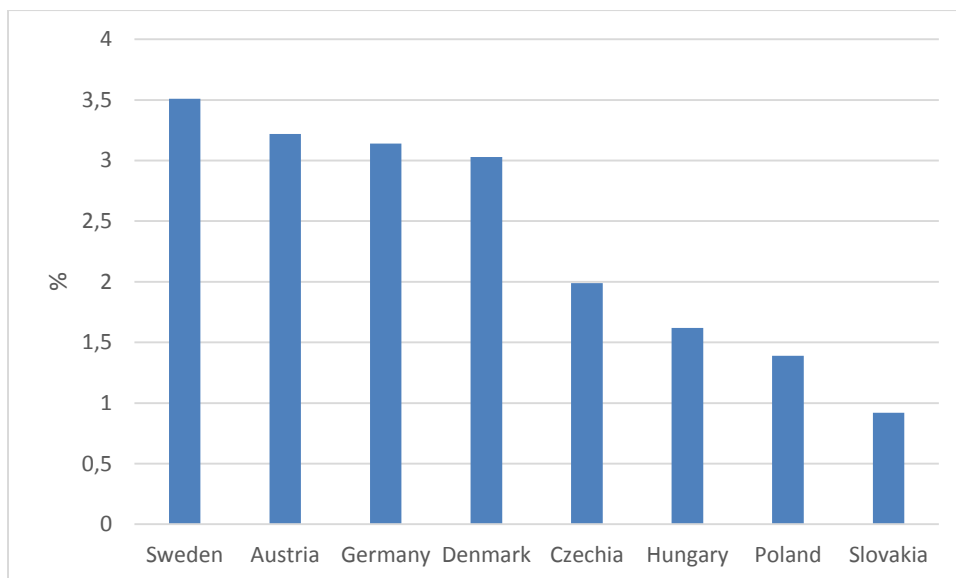


Fig. 11. All expenditures on R&D in all sectors 2020 (Eurostat, 19.12.2021)

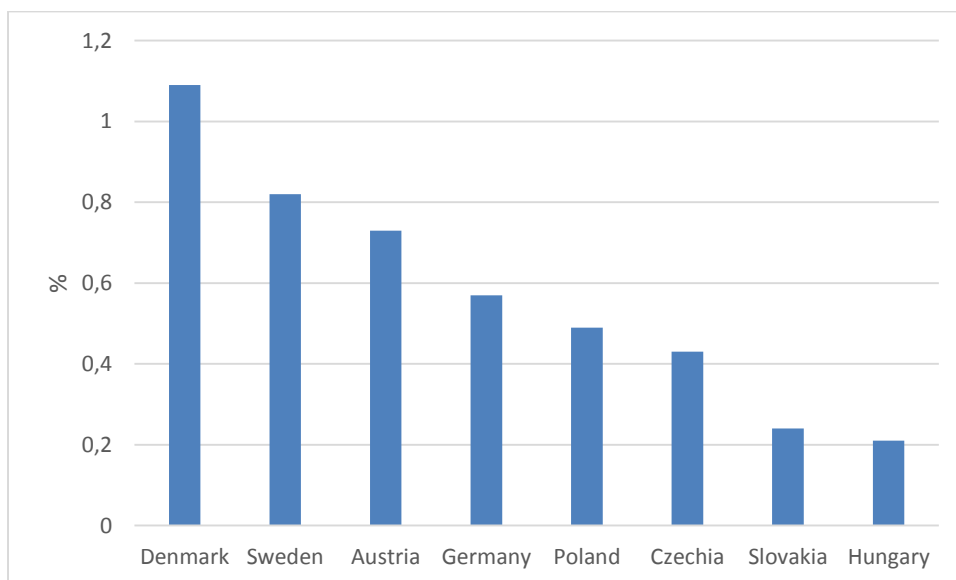


Fig. 12. All expenditures on R&D in the higher education sector 2020 (Eurostat, 19.12.2021)

Figure 11 and 12 call attention to a low R&D investment level for the entire business economy and in the higher education sector in the V4 countries. These values underline what we experienced related to the proportion of innovative businesses (Fig. 6, 7) and also to the low percentage of locally created value added (Fig. 8).

Low investments do not strengthen the value of the status/stock indicators. The poor values for the status/stock and dynamic/flow indicators combined warn about the possibility of a development gap.

Health investment

The health status of the population, as indicated earlier (Fig. 4, Tab. 1) is influenced by the health expenditures. Because of the significant differences in GDP-s in the observed countries, euro per capita indicators are also analysed.

Table 4. Healthcare expenditures, euro per capita, percentage of GDP (2015-2019)

	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
	Euro/capita					% of GDP				
Sweden	5022	5100	5147	5061	5042	10.80	10.85	10.79	10.94	10.87
Denmark	4913	5014	5134	5256	5355	10.23	10.14	10.04	10.07	9.96
Germany	4143	4277	4468	4636	4855	11.18	11.24	11.33	11.45	11.70
Austria	4130	4237	4360	4497	4672	10.37	10.35	10.38	10.32	10.43
Czechia	1157	1193	1309	1493	1644	7.20	7.11	7.14	7.52	7.83
Hungary	785	823	876	910	949	6.86	7.00	6.76	6.55	6.35
Poland	718	731	807	830	906	6.34	6.50	6.56	6.33	6.45
Slovakia	999	1043	1052	1100	1198	6.79	6.99	6.77	6.71	6.96

Source: Eurostat, 1.12.2021.

Table 4 demonstrates the striking differences in the amounts spent on health in euro per capita and as a percentage of GDP in the V4 countries and in the four developed countries. If we compare the life expectancy numbers (Tab. 1) and the health expenditure numbers (Tab. 4,) the correlation among the data is absolutely indubitable. This raises the question why are there not enough resources available for investing into knowledge, R&D or health? Let us analyse how much the V4 countries spend on growing the economy!

Government expenditure on economic affairs

This indicator reflects how much countries spend directly on strengthening the economy in order to grow it. Of course this is an input indicator, so we do not know directly how efficiently and effectively the amount of money is spent. We may be able to judge it depending on how the GDP is growing.

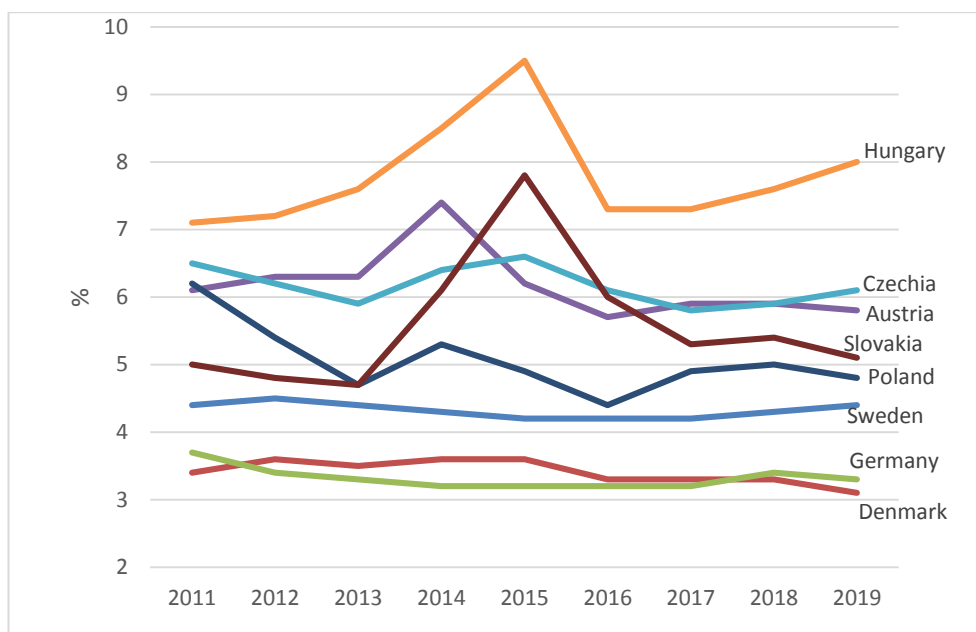


Fig. 13. Government expenditure on economic affairs (% of GDP) (Eurostat, 2.12.2021)

Figure 13 proves that three V4 countries – Czechia, Hungary and Slovakia, and one developed country, Austria, have spent a considerable amount of money on economic affairs, i.e. on boosting economic performance. Denmark, Germany and Sweden do not spend too much on the economy. Poland is in between.

Investing into gross fixed capital formation

Spending on capital formation is supposed to be an important contribution to creating new jobs and growing the economy. Again, the outcome of the investments depends on the effectiveness and efficiency of how the investment purpose is selected and implemented.

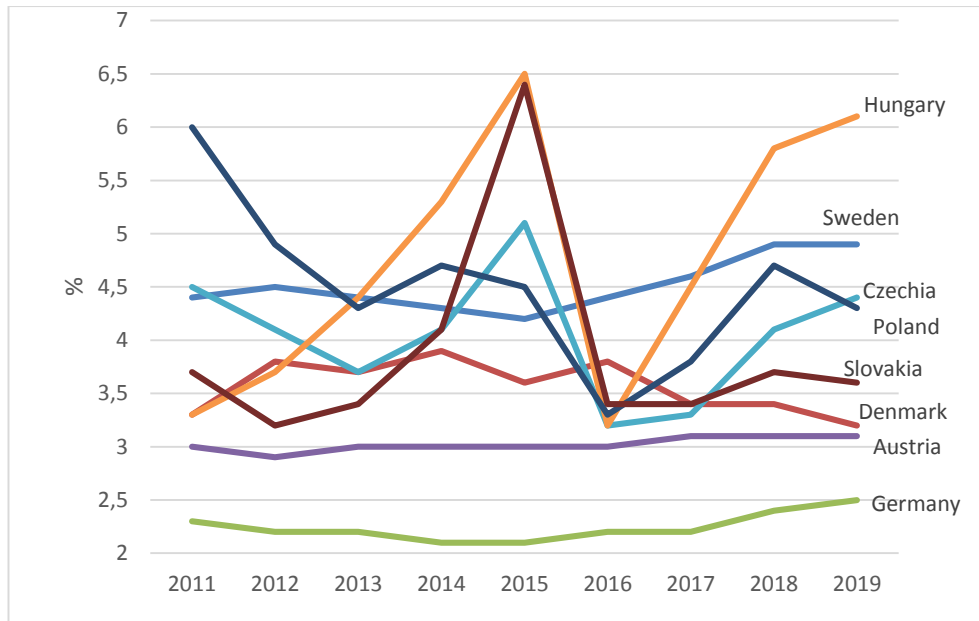


Fig. 14. General government expenditure on gross fixed capital formation as percentage of GDP (2011-2019) (Eurostat, 2.12.2021)

Figure 14 shows changing levels of government spending as a percentage of the GDP. Since 2017, the Hungarian and Swedish expenditures are rapidly growing. The Swedish, Austrian and German values show consistency, they are not changing very much during the observed period, while in the case of Czechia, Hungary and Poland interesting variability can be observed. The explanation of this phenomenon would need deeper analysis of data which are not available.

Investment grants

Another important element of supporting the economy is how many government grants are offered for investing in businesses.

Figure 15 underlines the importance of grants in Germany and Hungary. The two most competitive economies, Sweden and Denmark do not use this government promotion instrument in order to grow the economy. Poland also spends very little as a percentage of the GDP on investment grants. Promoting the economy through all kinds of government expenditures is supposed to grow the economy, provided the money is spent effectively and efficiently. The government's efforts, in other words, should be manifested in the per capita GDP numbers.

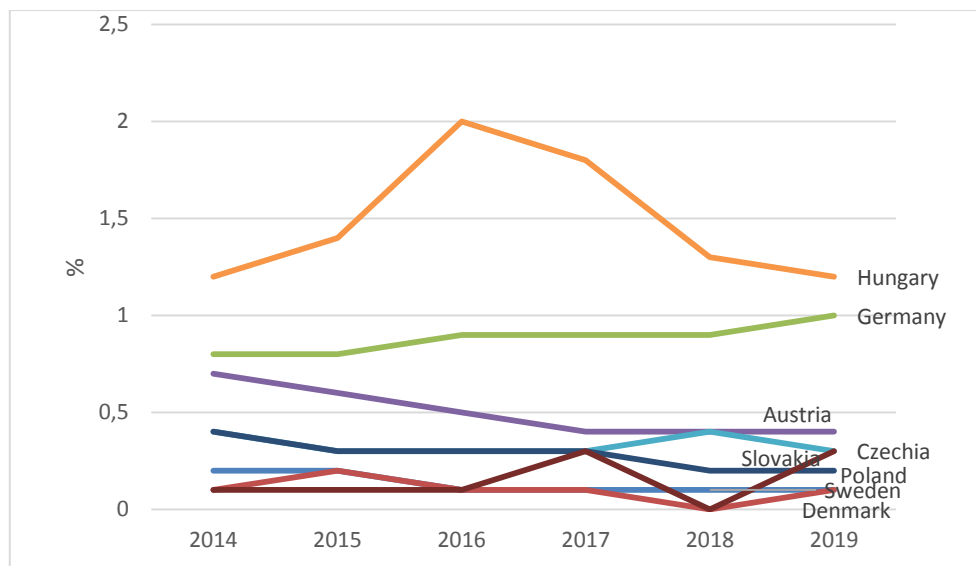


Fig. 15. General government expenditure on investment grants as a percentage of the GDP (2014-2019) (Eurostat, 2.12.2021)

GDP per capita

Figure 16 shows the change in the GDP per capita values for the selected 8 countries, and the change in percentage points.

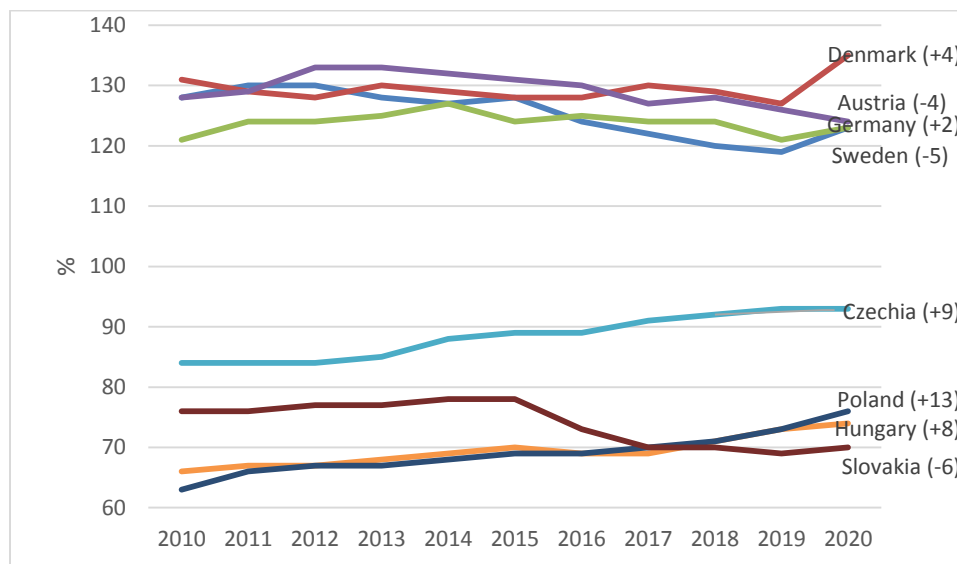


Fig. 16. GDP per capita, EU27 = 100, 2010-2020 (PPS) (Eurostat, 17.12.2021)

Figure 16 proves that Poland has improved the GDP per capita value from 2010 to 2020 the most: 13 percentage points. In spite of this, Czechia has the highest value within the V4 countries, very close to the EU average measured as 100. It is worth noting, that 11 years have not been enough for the other three V4 countries to close the gap with the developed countries, to fasten convergence, in spite of the heavy government support of the economy. The reason for this is apparently the low level of development values. Spending more on knowledge, innovation and health would have a greater contribution to accelerating convergence, than spending government money directly on the economy, capital formation or investment grants. This argument should of course be better founded by more correlation analyses and other convincing modelling approaches. In spite of this, of course the analysed numbers speak for themselves.

We have to refer finally to another important, intangible element of development: the strength of social cohesion. Social cohesion is a social development indicator. We can observe the social cohesion and competitiveness rank of the eight surveyed countries in Table 5.

Table 5. Social cohesion positions (IMD, 64 countries)

Country	Social cohesion	Competitiveness
	position	
Denmark	1	3
Sweden	14	2
Germany	23	15
Austria	17	19
Czechia	37	34
Hungary	48	42
Poland	62	47
Slovakia	51	50

Source: IMD, 2021a.

We can observe a slight correlation between the two ranks. Also social cohesion – as can be seen from the rank – is much weaker in the V4 countries. There are many possibilities available for a government to strengthen social capital. Spending on education, health, family, children and the elderly are among them.

Mayer-Foulker (2004) warns that, as Figure 17 indicates, conditions in early childhood strongly influence health conditions and educational performance later.

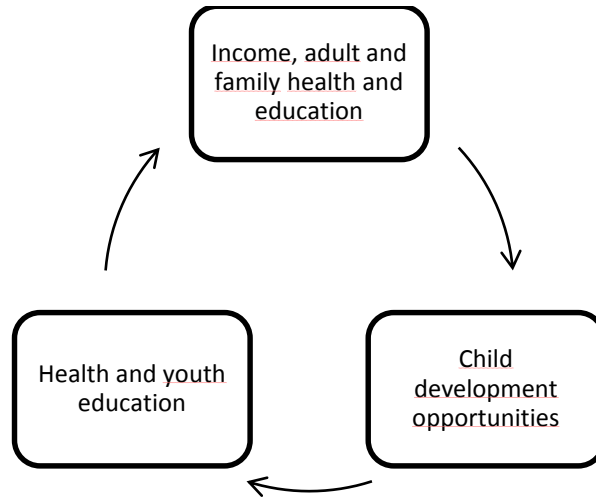


Fig. 17. Intergenerational Cycle of Human Capital Formation (Mayer-Foulkes, 2004)

Let us examine how much the surveyed countries spend on family, children and the elderly.

Government expenditure on family and children

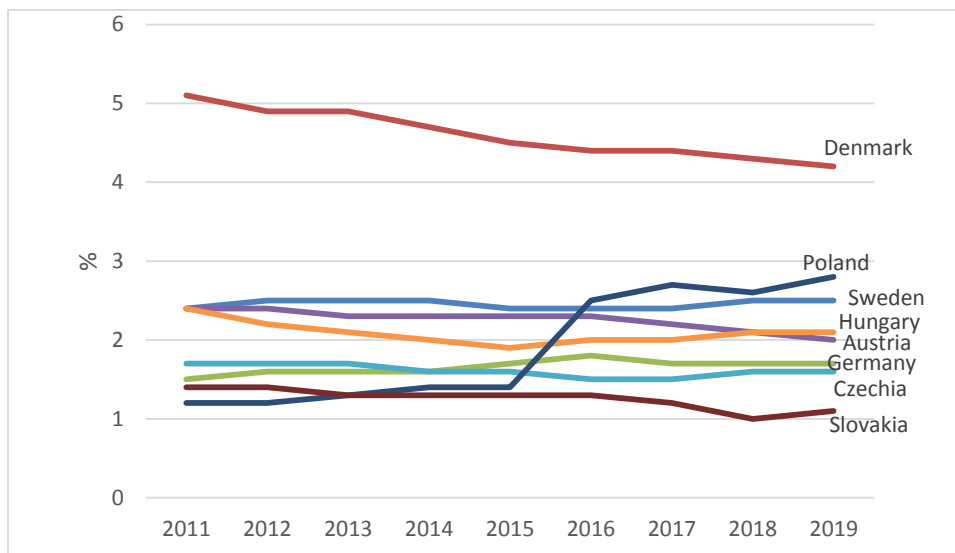


Fig. 18. Government expenditure on family and children (% of GDP) (Eurostat, 2.12.2021)

Figure 18 shows that Denmark which is the first on the social cohesion list spends the most on family and children. For the last three years Poland comes second, and Sweden third.

Again the German value is low for each year. Slovakia spends the least on family and children, especially in the last two years. The 62nd position of Poland on the social cohesion rank needs further investigation.

Government expenditure on the elderly

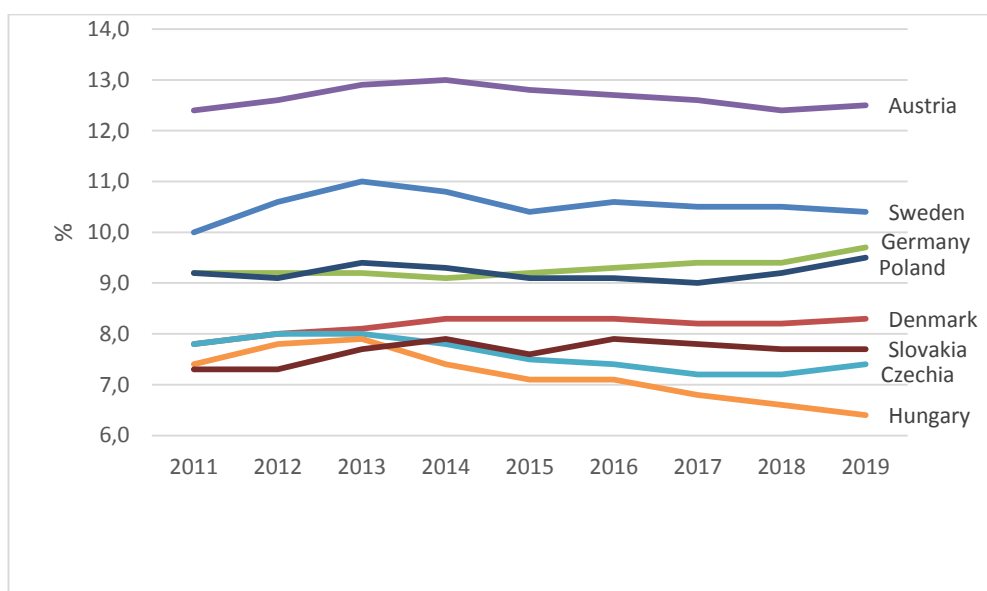


Fig. 19. Government expenditure on the elderly (% of GDP) (Eurostat, 2.12.2021)

As seen in Figure 19, Austria and Sweden spend the most on the elderly. Within the V4 countries Poland takes the lead, and Hungary spends the least (6.4% of the GDP). Again the German value is low compared to that of the other two developed countries. As we could observe in Table 5, Germany is in the worst – 23rd – position within the developed countries group in terms of social cohesion.

Summarizing the results of the selected social indicators, developed countries, on average, spend more on social cohesion than the V4 countries. Social cohesion is a crucial social development indicator, the value of which contributes to the general wellbeing, resilience and adaptability of the society and – in the long run – to its sustainable economic success, too.

6. BRAIN DRAIN AND THE DEVELOPMENT TRAP

In the context of human capital it is also important to mention another issue: the effect of brain drain on the development trap. Brain drain is a consequence of the lack of opportunities, poor living standards, safety problems, policy circumstances, such as a high level of corruption and bureaucracy, or a combination of more of these reasons. Very often well qualified people leave their home country for better opportunities and life elsewhere. Brain drain is a serious human capital loss for one country, and a gain for another country. Srivastava warns: “human capital flight, more commonly known as brain drain is a problem faced by many parts of Europe” (Srivastava, 2020).

Poland, Hungary and Slovakia are especially affected by brain drain, while other countries such as Sweden, Denmark, Austria and Germany are experiencing the opposite effect, brain gain. The numbers analysed in this paper suggest a human development problem in the V4 countries, which can become the driver for looking for opportunities “in the west”. Brain drain reduces human capital, limits the capacity for innovation, and damages social capital. To summarize: it is a national wealth loss. It could therefore further push the affected V4 countries towards a development trap.

7. SUMMARY AND CONCLUSIONS

The main objective of this article is to draw attention to the less researched but very important contradiction between the two sides of national performance, the economic and the human, knowledge and societal ones. For a country to be really successful it is not enough to achieve excellent economic results, unless the results of economic growth driven by government spending on the economy and fixed assets are combined with the necessary human development, knowledge and social investments. It cannot be accepted that the less developed countries have to spend first on growing the economy, and only later can they spend more on education, innovation, health or social cohesion. The truth is the opposite: as the statistical data have proven, the countries that are economically more successful are those which invest continuously in human and social development improving knowledge, skills and health which are all important elements of national wealth.

Researchers have been analysing the reasons why growth is slowing or stagnating in some countries. Growth was measured by GDP or GDP per capita. Growth is however not equal with development. It was less researched why countries which produce good economic achievements present poor human and social development results. This article therefore suggests to concentrate on development, which would improve the overall development status of a country. The article analyses the situation of the V4 countries compared to that of four developed and competitive ones.

It includes the most important knowledge, skills, innovation, health and social development indicators, and arrives to the conclusion that while the economic performance of the V4 countries does not present any danger of falling into a middle income trap, their development results are worrying: lagging far behind those of the four developed countries.

As a new research perspective, the development indicators were grouped into status/stock (static) and dynamic/flow ones to illustrate the present situation and the investment levels which could potentially improve the present situation. The statistical data suggest that with the given level of investments the present human development, knowledge and social status cannot be improved, and a quick convergence to the developed countries cannot be achieved. It is also important to note that development requires a higher apparent labour productivity level which cannot be guaranteed without more knowledge and skills investments. Although at this stage of research the indicators are not summarized either in a model or in a composite form, it can still be concluded, that at least three out of the V4 countries may fall into a development trap if they continue underinvesting in human capital. Based on the data the most probable country to fall into the development gap is Slovakia, the second is Hungary. The development data of Poland are mixed with good educational achievements but poor innovation and health ones. The least endangered country could be Czechia. Of course further research is needed to better support this argument. The impact of the large scale assembly operations on development, especially in Slovakia and Hungary, also needs further investigation. It is known that these assembly operations create high profits based on cheap labour and the offered high level of grants (Fig. 15) while a large proportion of profit – which is an element of GDP – is repatriated. The latest data issued by the Eurostat (Eurostat, February 2022) proves that the proportion of machine operators and assembly workers in the 20-64 age range is high in the V4 countries: it is 22.2 percentage points in Hungary, 19.1 in Czechia, and Slovakia and 15.4 in Poland, while it is only 9.1 percentage points in Sweden, and 13.4 in Germany. This presents an additional development risk: these jobs could be quicker and easier if robotized leaving around 60-70 percent of workers unemployed unless a lot of money will be spent early enough on retraining and upskilling their knowledge and skills (PricewaterhouseCoopers, 2018). It is also worth mentioning that in the case of Hungary a very low – only 9 percentage points – corporate tax is applied and a considerable amount of financial support is granted for attracting foreign investment even if they are simple assembly operations. This means lower budget sources to be spent on human and knowledge development. This means that while growth of GDP is supported by different initiatives, the produced GDP growth will not necessarily support local development.

Obviously the economies of the V4 countries are weaker than those of the developed countries for several historical, political and social reasons. Recently however tremendous changes are happening, which offer opportunities or threats. In order to exploit the opportunities and avoid the threats the V4 countries have to change development policies and start concentrating heavily on development rather than on

higher growth. Mindset change is needed and should include focusing on enhancing the most important elements of national wealth: human capacity, knowledge, skills and health status. These countries have to break away from the historic path of competing for foreign investments by cheap labour and different subsidies. They have to accept what Spence suggested: turn to a system change which creates a new growth model based on human and social development, based on knowledge, skills, innovation, health and strong social cohesion (Spence, 2022). Otherwise they may become trapped in a situation, described by Thucydides, the Greek historian (460 BC-400 BC) the following way: “The strong do what they will the weak suffer what they must”.

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ODBUDOWA OPARTA NA ROZWOJU, A NIE NA PRZYROŚCIE

Streszczenie

Aby kraje słabiej rozwinięte mogły dogonić te bardziej rozwinięte, nie wystarczy wzrost gospodarki mierzony wg PKB per capita. Po pierwsze, typowe jest, że w krajach słabiej rozwiniętych często umiejscowione są zakłady realizujące niskopłatne prace montażowe – mniej wartościowe w długim łańcuchu kreowania wartości produktu. Również często odprowadzany za granicę zysk może być duży i choć stanowi część PKB, to nie może być przeznaczony na rozwój lokalny. Mierzenie rozwoju w krajach słabiej rozwiniętych za pomocą PKB per capita może być zatem mylące, a decyzje podejmowane są na podstawie korzyści płynących ze wzrostu PKB.

Celem artykułu jest udowodnienie, że stosowanie wskaźników wzrostu gospodarczego, takich jak PKB per capita, nie jest wystarczające do pomiaru rzeczywistego postępu i konwergencji. Jak dowodzą prezentowane dane, wskaźniki wzrostu mogą wyglądać obiecująco przy jednoczesnym niewielkim rozwoju w zakresie kapitału ludzkiego i wiedzy. Szczególnie istotne są wskaźniki jakościowe, takie jak poziom wartości niematerialnych i prawnych oraz wskaźniki inwestycji niematerialnych: stanowią one trzon przyszłego sukcesu narodowego i konkurencyjności. Jest to ważne, ponieważ wzrost gospodarczy jest zawsze zorientowany na przeszłość, wyraża rezultaty przeszłych decyzji, natomiast inwestycje w wartości niematerialne budują podstawy przyszłego rozwoju.

Słowa kluczowe: pułapka średniego dochodu, pułapka rozwoju, bogactwo narodowe, aktywa niematerialne, inwestycje niematerialne, odporność, modele wzrost

