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INVESTMENT CYCLE IN THE ECONOMY OF SLOVAKIA AND IN THE EU-27

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Fluctuations in investment and consumption expenditure often give rise to the business cycle.Older theories or approaches to business cycles found the causes of cyclical fluctuations in investment, underconsumption, psychological factors as well as climatic factors.The aim of the article is to evaluate the development of investment and consumption expenditure in the economy of Slovakia and the EU-27 economy. In the period 2003-2022, which is the subject of our interest, the Slovak economy as well as the EU economy experienced two major economic recessions.The first was caused by the global financial crisis, and the second was due to the coronavirus pandemic.Investment expenditure was subject to significant fluctuations throughout the reporting period, butthe fluctuations were larger in the Slovak economy.Consumer spending also experienced cyclical fluctuations in both Slovak and the EU-27 economies.Consumption growth in the SR during the period of high GDP growth (2004-2008) exceeded consumption growth in the EU-27countries.During the global financial and economic crisis, consumer spending declined only slightly in both economies.Consumption fell more during the economic crisis caused by the coronavirus pandemic (2020).In the EU-27, consumer spending decreased by -4.8%, in Slovakia by -1%.

Keywords: economic crisis; investment; investment cycle; consumption

Introduction

Economists began to realize the existence of the business cycle only in the 19th century. At this time, however, business cycles were not understood in today's sense as cycles of economic development, but rather as crises that disrupt a smoothly developing economy. Only later did economists learnt the regularity of the occurrence of such crises and began to analyze them.

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From the empirical data of the US economy, throughout the 19th century the price level fluctuated significantly, while the national economic product fluctuated much less. Therefore, the first analyses and theories of business cycle were based on the definition of the business cycle as fluctuations in the price level rather than the national product.

In the 20th century, the situation changed. The national economic product began to fluctuate significantly and, as a result, the business cycle was defined as fluctuations in the product over time. In recessions and depressions, the national product declined, in the recovery and boom phases, the national product grew. From this we see that defining the business cycle as national product fluctuations is a relatively new phenomenon.

The aim of the article is to draw attention to approaches to economic cycle in which investments and consumption play an important role and to evaluate the course of the investment cycle in the Slovak Republic and the EU-27 countries over the last twenty years.

Literature review

One of the first economists who drew attention to the problem of economic crises was the Swiss economist and historian J.-C.-L. Simonde de Sismondi (1773-1842). He assumed that economic liberalism was the root of problems in the economy. In his opinion, overproduction and the crisis are caused by three reasons:

- competitive nature of production, which does not allow a producer to know the market;
- production is determined not by the needs of consumption but by the requirement of return on capital;
- separation of property from labor, which leads to an increase in the incomes of capitalists, but not of workers, who constitute the main mass of consumers (Sirůček, 2017).

Therefore, he demanded state intervention in the economy. The aim of economic policy should be to establish a balance between production and consumption, to combine ownership and labor, and to manage distribution fairly. The state is supposed to protect citizens from the consequences of unlimited free competition.

Business cycle analysis was at the heart of the early National Bureau of Economic Research (NBER) in the USA (Romer & Romer, 2019). W. C. Mitchell paid great attention to systematic analysis and measurement of business cycles during his work at the US National Bureau of Economic Research. In this institution, a large amount of data on business cycles in the USA is recorded (Burns &Mitchell, 1946).

Macroeconomic fluctuations are complicated. Downturns vary in speed, size, length, and periodicity, in the relation between different variables during the downturn, and more. Periods of growth exhibit similar variation. Given this, it is natural to wonder if a simple recession chronology like that of the NBER is useful (Romer & Romer, 2020).

Causes of cyclical fluctuations in the economy

Climate theories of the business cycle

In early theories, economists saw the causes of the business cycle in nature, such as weather, which they believed could also be influenced by astral phenomena. These were therefore mostly exogenous causes of the business cycle. These phenomena can affect both material things, such as good or low harvests, and intangible objects, such as human behavior, which can subsequently cause economic fluctuations. If these natural phenomena are cyclical in nature, they can also trigger cyclical fluctuations in the economy.

Among the proponents of these views was W. S. Jevons, according to him the formation of business cycles occurs during the period of the appearance of sunspots. H. L. Moore saw the cause of the business cycle either in weather cycles or in the position of the planet Venus.

Theories of overinvestment

The main representatives of this theory include C. Juglar, K. Wicksel, M. I. Tugan-Baranovsky, A. Spiethoff and others. The theory of overinvestment is based on the hypothesis that a decline in economic activity, or recession, is triggered by a decline in demand for investment. At the beginning of the expansion phase, when there is a low interest rate, high liquidity and investment optimism prevails, there is a high demand for investments. As a result of the high demand for capital goods, their producers will increase prices, and their profit margins will also increase.

The favorable situation in the capital goods production sector motivates other entrepreneurs to enter the sector and produce the same capital goods. Consequently, there is a surplus of these goods on the market. The supply of consumer goods will increase significantly, and, at the same time, the production of capital goods will decrease. This theory is based on the assumption of flexibility in the supply of credit, which will allow entrepreneurs to increase investments according to their wishes. So investment can increase rapidly, creating overcapacity in certain sectors. On the other hand, there may be a shortage of consumer goods in the economy.

Another version of overinvestment theory is also based on the assumption of flexibility in the supply of credit. When the interest rate is below equilibrium, investment grows faster than aggregate demand, and there is a surplus of investment goods in the economy.

If investments exceed its equilibrium level for a long time, an imbalance accumulates in the economy, which, depending on the saving rate, can transfer into a current account deficit. Such a situation can be described as an external economic imbalance. In addition to external imbalances, internal economic and financial imbalances may also arise from an excessive (non-equilibrium high) capital stock created by excessive investment growth and from corporate over-indebtedness resulting from the debt financing of these investments (Pour, 2020).

Psychological theories of the business cycle

Representatives of the psychological business cycle theories include A. Aftalion, J. M. Clark and A. C. Pigou. According to these theories, feelings of optimism or pessimism influence the investment decisions of entrepreneurs. Profit expectations encourage entrepreneurs to expand production, and conversely, expectations of low profits lead companies to limit investment. Thus, the psychological factor plays an important role in the decisions of economic subjects.

Even small positive changes in expectations regarding the development of demand and profit will cause companies to increase production to maximize profit. This can trigger an overheating of the economy and a consequent wave of pessimism. The pessimism of entrepreneurs and the associated restrictions on investment will push the economy into recession.

Economic subjects' expectations are the main cause of business cycles. According to A. Aftalion, entrepreneurs do not increase investment only on the basis of real factors, such as technological change and "excess loan capital", but rather on the basis of what companies' expectations are regarding the future development of consumer demand and the expected profits. The expected growth in consumer demand is driving investment by firms. But consumer demand fluctuates according to the level of oversaturation of needs, which results from the operation of the law of diminishing marginal utility. The more relevant goods are produced, the lower the demand will be. Therefore, companies need to monitor what phase of the business cycle the economy is in.

The reason for the emergence of the business cycle is the fact that investment and the production of goods do not take place at the same time. Firms choose to invest when there is a high demand for consumer goods. Therefore, the production of capital goods, which serve to produce the consumer goods for which there is demand, increases. The economy is in expansion phase. However, at the time of the cessation of investment in the production of capital goods, there is an overproduction of consumer goods.

However, at the time of the end of investment in the production of capital goods, there is an overproduction of consumer goods. Demand is saturated and a phase of economic recession begins. An important fact, according to Aftalion, is that capital is fixed.

Therefore, until such time as capital goodswearout and production capacity falls below consumer demand, firms' incomes and profits will not increase. Only when such a situation occurs will the economy recover. Then again, the whole economic cycle will repeat itself. Aftalion formulated the principle of the accelerator: investment in the economy leads to an increase in income, which causes a growth in consumer demand for consumer goods.

This growth in consumer demand, in turn, will trigger an increase in investment by firms. J. M. Clark came to similar conclusions about the action of the accelerator mechanism.

A.C. Pigou argued that expectations of profit are the drivers of investment. Such expectations may also arise due to mistakes and miscalculations of entrepreneurs. Mistakes can be the result of, for example, long waves of optimism or pessimism, or small mistakes grow in to large ones during a long production process. In any case, these mistakes will cause a large increase or, on the contrary, a significant fall in investment, creating an economic cycle.

In his theory, Pigou proceeds from the assumption of major shocks (mistakes), which cannot be eliminated in time, since they are usually not detected in time. Also, banks and a large credit system can encourage the persistence of these mistakes, all the more so as everyeconomicsubjectisaffected by a wave of optimism or pessimism. Mistaken decisions by firms can be transferred to banks and the credit system and from there again to other firms.

Economic growth, triggered by a wave of optimism, ends when there is a surplus of consumer goods on the market and these goods become un saleable. The wave of optimism ends and turns into a wave of pessimism. Enterprises are cutting back on production and investment, national economic product is falling and the economy is entering a phase of recession.

Psychological factors also play a role in other economic theories, e.g. J. M. Keynes' theory. Keynes explains business cycles as consequences of alternating waves of optimism and pessimism, which provoke changes in aggregate demand and thus fluctuations in the development of national economic product.

Theories of under consumption

In economic science, there are several versions of the under consumption theory. These theories are based on the hypothesis that, as a result of technological progress, supply exceeds demand. The most famous representatives of the theory of under consumption include J. A. Hobson and G. Haberler.

J. A. Hobson argues that too much differentiation of incomes in the economy prevents the growth of consumption expenditure. Recessions are caused by unequal distribution of income, which makes consumer spending insufficient (and therefore aggregate demand).An increase in income is accompanied by an over proportional growth in savings, which leads to overinvestment and later to overproduction.

Another version of the theory of under consumption formulated by G. Haberler considers excessive household saving to be the main cause of under consumption. In conditions of growth in both supply and incomes, consumers may prefer to grow savings. If households' saving rate rises, then consumers spend less of their income on consumption. A decline in the consumption rate causes a recession in the economy.

Theories of the shock-induced business cycle

This theory is associated with the name of R. Frisch and E. Slutsky, who created the theory of stochastic cycles. According to them, there are many phenomena that can trigger and subsequently transmit to the economy various kinds of real shocks. These shocks occur randomly and spread to the economy. Most of them are relatively small. About half of them have positive effects and the other half have negative effects.

However, major shocks are rare. If there is a large negative shock, it is unlikely that its effect on the economy will be immediately offset by a large positive shock. Therefore, such individual negative shocks can also cause a long-term decline in national economic output. Later, when there is a positive shock, the effect of the previous negative shock in the economy fades. These may not always be large negative shocks, but they can be clusters of small negative shocks that will have the same negative effect on the economy and on national product decline as large negative shocks.

The stabilising forces of the economy are not sufficient to stop the spread of large shocks to the economy. When the balance in the economy is disturbed and measures are taken to correct the consequences of negative shocks, these measures often have a delayed effect in various sectors of the national economy. Therefore, the coordination of anti-shock measures is often unsuccessful, which can aggravate and prolong the negative development of the economy. Various institutional rigidities in wages, prices, interest rates, etc. also contribute to delays.

Any strong random negative shock or cluster of small shocks, additionally fuelled by such rigidities and mistakes in measures, can cause cyclical fluctuations in the economy to be much larger than those caused by the initial negative shocks. However, the negative side of this approach to the business cycle is that the authors do not define the specific causes of shocks triggered by such cyclical fluctuations in the economy.

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Investment and consumption expenditure in the Slovak and EU-27 economy

Gross private investment in the Slovak Republic recorded a rather volatile development over the period under review. Even outside the period of economic downturn, there have been large fluctuations in their increase or decline in some years.

In 2005, investment increased by 16.9% year-on-year. In 2008, their growth was only 3.7% and in 2009, the year of the strongest manifestation of the consequences of the global financial and economic crisis in Slovakia, they fell by -19.7% year-on-years. Capital formation was hampered by a decline in foreign demand as well as household consumption and uncertain economic prospects for enterprises.

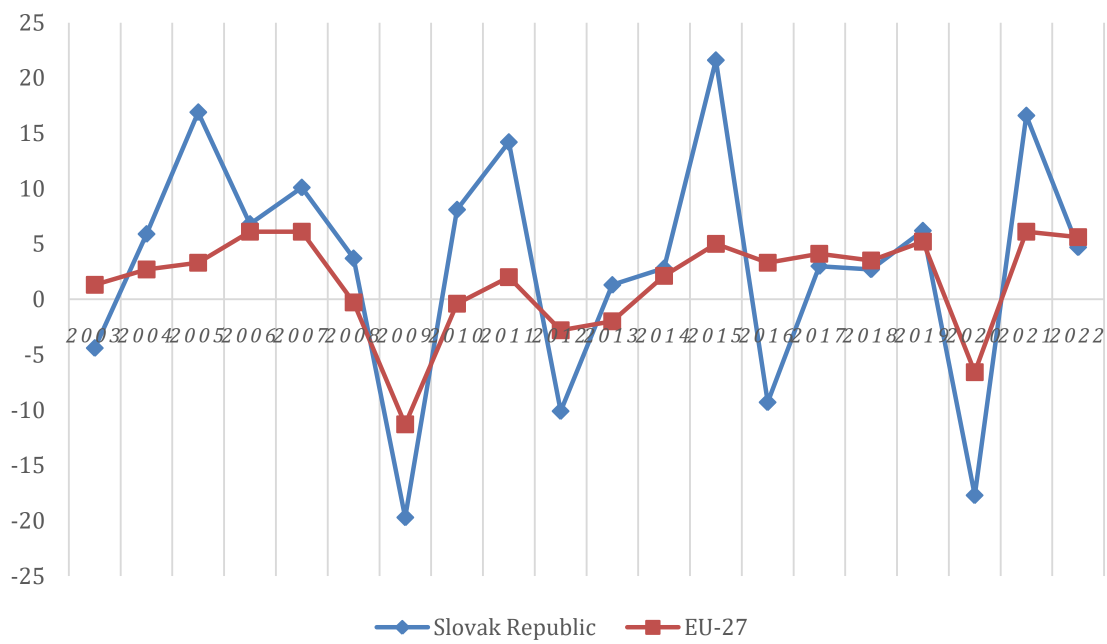

Figure 1 - Gross fixed capital formation in the Slovak Republic and the EU-27 (year-on-year change in %)
(Source: own processing based on OECD data)

There was already a recovery in private investment in 2010 and then especially in 2011, when gross private investment increased by 14.2% year-on-years. In the following years, due to uncertainty about the further development of the world economy and especially the EU economy, as well as due to the debt crisis in the euro area, gross private investment in Slovakia decreased by -10.1% year-on-years in 2012. Even after 2014, gross private investment developments continued to be characterized by considerable fluctuations, including in the economic growth phase (e.g. their growth of 21.6 % in 2015 and subsequently their decrease of -9.3 % in 2016).

This confirms the well-known fact that private investment is the most volatile component of aggregate demand. They are very sensitive to all circumstances of macroeconomic developments in the domestic economy and in the current globalized world. The coronavirus pandemic had an impact on the renewed decline of gross private investment in the Slovak Republic, by -12% in 2020.

In the first phase of economic growth within the reviewed period of the business cycle in the Slovak Republic, i.e. in the years 2004-2008, the average annual growth value of gross fixed capital was 8.7%. During the second phase of growth after the effects of the global financial and economic crisis, in 2013-2019, it averaged only 4.1% per year. The decrease in the capital formation rate was reflected in a slowdown in economic growth and stagnation of the real convergence of the Slovak economy to the level of original, more developed EU-15 countries.

In the area of gross fixed capital formation, the similarity of the course of the business cycle in the Slovak economy and in the economy of the EU-27 can be noted in the period under review. The year-on-year growth in gross fixed capital formation in the expansion phase before the global financial and economic crisis was replaced by a significant decline at the time of the peak manifestations and impacts of the economic recession in Europe (year 2009). After a brief period of moderate recovery, gross fixed capital formation declined further in 2012 and 2013, both in the Slovak Republic and in the EU-27.

This was due to fears of a return of economic recession and uncertainty about debt growth in euro area countries.

Since 2014, there has been a recovery in real capital formation in both the Slovak Republic and the EU-27.The coronavirus pandemic with the subsequent closure of many enterprises to protect people's health led to a decrease in investment in the Slovak economy as well as in the EU-27 in 2020 (-12% SR; -7.4% EU-27).

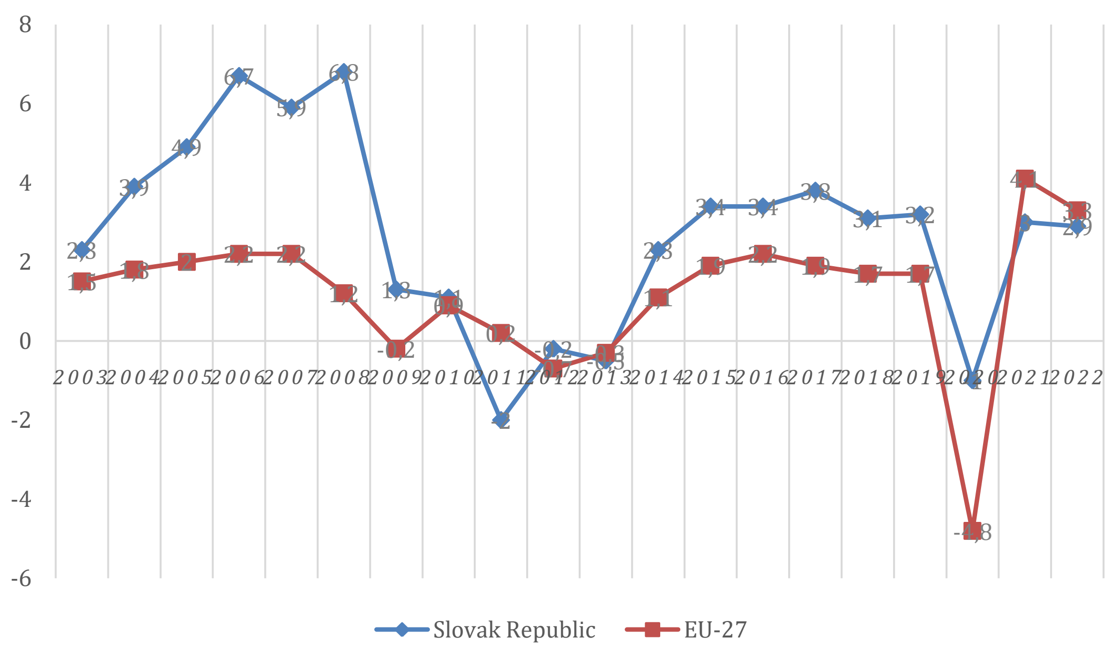

Figure 2 - Household final consumption in the Slovak Republic and the EU-27 (year-on-year change in %)
(Source: own processing based on OECD data)

In the period of economic growth – until the emergence of the economic recession caused by the global financial and economic crisis – the year-on-year development of household consumption in Slovakia and the EU reached positive values. In the Slovak economy, compared to the EU countries, household consumption growth was significantly higher, so there was also convergence with the EU countries in the area of household consumption. During the economic recession phase of 2009-2012, household consumption decreased or its growth rate decreased in both Slovakia and the EU-27. Falling real incomes, job losses, as well as fears of further economic developments dampened household consumption.

Fig. 2 shows that, in the reference period, in both phases of economic growth, household consumption increased at a lower rate in the EU-27 than in the Slovak Republic(e.g. Slovakia by 6.7% and the EU-27 by 2.2% in 2006; similarly the SR by 3.8% and the EU-27 by 1.9% in 2017). However, the outbreak of the economic crisis caused by the coronavirus pandemic caused a deeper year-on-year decline in household consumption in the EU-27 (by -4.9%) than in Slovakia.

Conclusion

Economists began searching for an answer to the question of why fluctuations in economic activity occur in the economy as early as the beginning of the 19th century (e.g. J.C.L.S. Sismondi), even before the business cycle became a regularly recurring and immanent fact in a market economy. Gradually, more and more approaches, opinions and theories arose, in which economists tried to justify the emergence of fluctuations in national economic product. Many of them can be inspiring today, at a time when the explanation of the causes of the business cycle may seem has reached an impasse.

In our opinion, the theories of under consumption and theories of overinvestment can be considered inspiring. Too much inequality in the distribution of income in the economy can cause consumer spending to be insufficient. Concentrating the decisive part of wealth in the hands of a small number of people and possibly prioritizing savings will reduce aggregate demand. A decline in consumption rates can cause a recession in the economy. On the other hand, according to the theory of overinvestment, investment optimism, high demand for investments, flexibility of the supply of credit to investors can lead to an excess of investment goods in the economy. Such imbalances can be corrected spontaneously in economies.

However, correction can be costly in different ways. In the case of an overinvested economy, there may be either a gradual decline in the investment rate, but there may also be a sudden bursting of the investment bubble and the emergence of an economic recession (Pour, 2020).

In our research, we monitored and evaluated the development of investment and consumption expenditures in the Slovak economy and the EU-27 economy over the last twenty years. These economies experienced two major economic recessions over the projection horizon. The first was caused by the global financial crisis in the world, and the second was caused by the coronavirus pandemic and health protection measures.

Investment expenditure in both the SR and the EU-27 was subject to significant fluctuations throughout the reporting period, but during both economic crises the decline in investment was greater. Fluctuations in investment activity were greater in the case of Slovakia, both during the positive and negative development of the economy.

Consumer spending also experienced fluctuations in both economies. Consumption in the phase of high economic growth in the SR (years 2003-2008) exceeded the growth of consumer expenditure in the EU-27. During the global financial and economic crisis, consumer spending declined only slightly in both economies. A larger decrease in consumption occurred during the economic crisis caused by the coronavirus pandemic when consumption in the EU decreased by -4.8% (in Slovakia by -1%).

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References:

Burns, F. & Mitchell, W. C. (1946). *Measuring business cycles*. New York, NBER.

Final consumption expenditure (2023). Available online: https://data.oecd.org/gdp/gross-domestic-product-gdp.htm

Gross fixed capital formation (2023). Available online: https://data.oecd.org/gdp/gross-domestic-product-gdp.htm

Pour, J. (2020). *Analysis of relative over-investment und under-investment of economies on panel data for 122 countries of the world*. Available online: https://polek.vse.cz/artkey/pol-202003-0003_analyza-relativni-preinvestovanosti-ci-podinvestovanosti-ekonomik-na-panelovych-datech-122-zemi-sveta.php?back=/magno/pol/2020/mn3.php?secid=1

Romer, C.D. & Romer, D.H. (2019). *Business cycle dating: retrospect and prospect*. Available online: scholar.google.sk/scholar?q=Romer+and+Romer+NBER+business+cycle+dating:+ret

Romer, C.D. & Romer, D.H. (2020). *NBER recession dates: strengths, weaknesses, and a modern upgrade.* Available online: https://eml.berkeley.edu/~dromer/papers/NBER%20Recession%20Dates.pdf

Sirůček, P. (2017). *Half-forgotten personalities of economic thought – J. C. L. S. Sismondi*. Available online: https://aop.vse.cz/pdfs/aop/2017/02/07.pdf

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