
THE BUSINESS CYCLE AND ITS CONTEMPORARY CHARACTERISTICS

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Abstract: The article aims to present the business cycle phenomenon and its contemporary characteristics. Understanding the business cycle theory will allow for more in-depth research on this subject for the Bulgarian economy, through which to increase the macroeconomic efficiency of the country's economic policy

Key words: business cycle, Bulgaria.

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1. The essence of the business cycle

Cyclicity exists everywhere around us. There is a change in the annual seasons and the everyday life of the people. Examples for cyclicity can be found in the history of mankind and the planet as a whole. Cyclical economy has been observed since ancient times. There is an alternation of economic crises and economic growth in Greece, the Roman Empire, Egypt and other ancient countries.

The business cycle is conditioned by the economic activity of society. It impacts on countries' economic policies, the business plans of different companies, and household spending plans.

Business cycles represent an alternation of periods of upward and downward economic activity. The study of business cycle developed in the period after the Industrial Revolution, as the business cycle required the existence of sufficient trade relationships. '... in the pre-industrial societies, crises are mainly the result of natural disasters, cycles of agricultural production, wars, disease outbreaks, etc. ... in the era of industrialization, the main factors influencing the fluctuations in aggregate production, prices, etc., are largely related to and derive from the economic activity of people and the peculiarities

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of the economic organization of society '(Ganev, 2015, p.2). In pre-industrial society, crises are of no economic interest because of their nature. If an event or phenomenon is of a one-time nature and there are no signs of its manifestation in a future period, it is likely to be missed or given little attention by the scientific community. Another significant reason is the lack of sufficient quantitative and qualitative data.

The study of the business cycle began in the 18-19th century. At first, due to the economists' understanding of that time, only the crises and their causes were considered and described. Only after years of accumulation of information, the study of periods of economic expansion started. There is a need for broad and deep monitoring of the rapidly industrializing economies in order to identify cyclical changes in the development of production. Gathering a sufficiently large volume of information requires much time. Systematic historical and statistical observations are necessary for the discovery of regularity

Determining the business cycle requires the availability of a set of metrics. The changes in their values are considered to be a clear indicator of changes in economic dynamics over a period that can coincide with the assumed business cycle. In order to prove the existence of the business cycle, the repetition of phenomena that characterize the changes in the set of indicators and the changes in the economic dynamics must be established. Once the set of specific indicators is defined and sufficient statistical information is gathered, a quantitative and qualitative analysis of the phenomenon that is selected for observation can be made, i.e. the business cycle.

There is no commonly accepted definition of 'business cycle' in economic literature. Individual authors offer different definitions that overlap. According to Carlgren (2015), the business cycle is defined as the fluctuations of the average economic activity that moves in a cyclical pattern with varying frequency and amplitude. It has two turning points (top and bottom) and two phases (expansion and recession) that are connected to each other. Burns and Mitchell (1946) define business cycles as '... a type of fluctuations inherent in the aggregate economic activity of nations that organize their work mainly in business enterprises: a cycle consists of expansions occurring at about the same time in many economic activities, followed by similarly general recessions, contractions, and revivals which merge into the expansion phase of the next cycle; in duration, business cycles vary from more than one year to ten or twelve years; they are not divisible into shorter cycles of similar characteristics with amplitudes approximating their own.'

The business cycle covers the entire economy, not just individual sectors. It is a macroeconomic phenomenon that affects the whole of society. For this reason, it is subject to the economic policy of the state. Its very name implies that the business cycle is not a random one-time occurrence, but a periodically

recurring phenomenon. The difficulty in predicting it is due to its variable amplitude and duration. The adaptation to the economic cycle is complex. According to Burns and Mitchell's definition, the business cycle differs from other periodically recurring business phenomena.

Events that last less than one year are not part of the business cycle, they are considered seasonal fluctuations. They are not part of the business cycle of phenomena that last over ten or twelve years (the so-called 'growth cycles' or 'Kuznets cycles'). They last for 15-25 years and are due to demographic dynamics of the population and investments in infrastructure, as well as the 'long waves'. The latter are also known as 'Kondratiev cycles', lasting from 40 to 60 years, and are associated with technological advances, population dynamics, credit cycles, debt burden, and so on.

2. Types of business cycles

According to the Fourier Theorem, each periodic function can be represented as a combination of simple periodic functions. Each economic cycle consists of smaller business cycles. There are several basic types of economic cycles, and the main difference between them is their duration. After excluding phenomena lasting less than one year due to their seasonal nature, there are basically three types of cycles: long waves, economic growth cycles, and short-term business cycles.

Economic growth is defined as a long-term process in which, over a long period of time, there is a real increase in the level of the aggregate product. According to Kuznets (1971, p. 1), 'a country's economic growth can be defined as a long-term increase in the capacity to offer the population more and more diverse economic assets; this growing capacity is based on the advances in technology and the required institutional and ideological adaptation.' The long-term upward trend of economic growth is the result of growing production opportunities.

It is possible for the long-term trend of the economy to be downward. 'It may result from a series of subsequent lower maximum (peak) and minimum (bottom) GDP growth rates over the period covered. Thus, the downward trend may be a reflected result of the increased absolute parameters and economies of scale in which the relative expressions of the observed growth may be smaller or decreasing', Pirimova (2014, p. 26) The long-term economic cycle tracks the results of the development of various processes whose effects become visible when observing longer periods of time, namely, population growth, efficiency of production factors, the emergence of new markets and

new sources of raw materials, structural transformations in the economy, and others.

Short-term economic cycles reflect the monthly, quarterly or annual economic circumstances, depending on the time interval analysed. There is the possibility that real GDP may change at different rates - positive, negative or zero. With short-term economic cycles, the trend may be formed in different directions. It may be ascending or descending, or horizontal. This distinguishes it from the long-term one, which is usually unidirectional and ascending. The trend follows the changes in the growth rate of GDP as well as the fluctuation intensity.

2.1. Long waves (Kondratiev cycles)

Long waves or the so-called Kondratiev cycles bear the name of their discoverer (Garvy, 1943). In his studies, Kondratiev discovers the existence of fluctuations in economic activity lasting from 40 to 60 years which arise from technological advances, population dynamics, various social cataclysms, credit cycles, the debt burden, the renewal of capital goods, and others.

The theory of long waves is not accepted by the majority of economists, but is gaining popularity and is used for studying the economy in the past as well as analysing the stock markets.

The name 'long waves' originates from their graphic representation which resembles waves. Kondratiev divides each cycle into four phases - prosperity, recession, depression and improvement (Kondratiev, 1935). Literature may also include a three-phase division of Kondratiev cycles – stagnation, recession and expansion. Kondratiev made his conclusions based on the study of a huge amount of statistical information on the interest rate, nominal wages, prices, and the foreign trade turnover of developed countries for the period from the end of the 18th century to 1920.

According to Kondratiev, long waves are caused by crises emerging in cases where the outdated economic structure is contrary to modern technologies and the new, more efficient organization of production. The inability to make the necessary changes in the structure of the economy leads to a slow and painful change that results in a slowdown in economic development and production stagnation. It is only after the inconsistencies between the economic structure and the new technologies have been overcome that there is a revival and the conditions for the conjunctural development are improved. An important role for entering the upward part of the cycle play the changes in the policy area (the creation of new countries or the outbreak of revolutions) and the improvement of the conditions for the development of the economy (the

penetration of new inventions, improvements in scientific and technological progress and the optimization of the productive activity).

According to Schumpeter (1939), the causes of long waves are rooted in the way development of technical and technological innovation. Every major technological breakthrough gives new opportunities for capital investment. Accumulation of innovations which takes place under certain conditions, leads to the formation of the upward part of the cycle. The rate of profitability and return increases, which results in the accumulation of capital. Over time, market saturation occurs, and the realization of new production is hampered by declining aggregate demand. The result is a shrinking of production and a drop in the profit rate. The accumulated capital cannot be realized, and it becomes redundant, which gives rise to the downward phase of the cycle, the outcome of which is the next technological breakthrough.

2.2. Economic growth cycles (Kuznets cycles)

Kondratiev cycles and Kuznets cycles are considered long-term cycles in economic science. Kuznets cycles are called cycles of economic growth because Kuznets analyses the link between the rate of economic growth and the changes in the leading industries in the economy (Kuznets, 1930). The duration of the Kuznets cycles is between 15 and 25 years, the major factors for them to occur being the changes in housing, demographic change and infrastructure investment. The Kuznets Cycles have three phases (Kuznets, 1929):

- first phase - prosperity lasting from 3 to 6 years;
- second phase - stable full-time growth of 7 to 11 years;
- third phase - depression or stagnation lasting from 4 to 7 years, with the level of unemployment being high throughout almost the entire period of the phase.

2.3. Short-term business cycles

Two types of short-term cycles are known in the economic science. These are the Kitchin cycles (lasting between 3 and 5 years) and the Juglar cycles (lasting between 7 and 11 years).

Kitchin's cycle is caused by changes in available stocks (Kitchin, 1923). It is associated with time lags in information movements affecting the decision making of commercial firms. Companies respond to the improvement of the commercial situation by increasing production through full employment of the production capital. Within a certain period (ranging between a few months to two years) - the market gets 'flooded' with commodities. The decline in

demand and prices, and the accumulation of produced commodities force entrepreneurs to reduce output. This process takes some time because of the time lags in information movements from the market to the business representatives. It takes time for entrepreneurs to analyse the obtained market information and decide on their future actions. The very materialization of the decision made also takes time. It is exactly these time lags that give rise to Kitchin's cycle. Once the decision to reduce production is implemented and the market gets back to normal, conditions are beginning to be observed for the start of a new upward phase of demand, prices and output, i.e. of the cycle itself.

Within the Juglar cycle, fluctuations in fixed capital investment can be observed, and not just changes in the level of fixed capital and the stock levels, as it is in the Kitchin cycle (Juglar, 1862). Often, the Juglar cycle is defined as the main economic cycle.

Kitchin, Juglar, and Burns and Mitchell cycles have a duration of three to seven years and meet the business cycle definition.

There are two alternative types of business cycles caused by the ability of the economic situation to be variable and divergent - irregular fluctuations in growth and economic growth cycles. These varieties of the short-term economic cycle can alternate and exist within a longer cycle (Pirimova, 2014, p. 28). Irregular fluctuations in growth are caused by the volatility of the growth rate of GDP, by chaotic, consistent and frequent changes in its level.

On the other hand, the economic growth cycles arise from a relatively regular, non-chaotic and periodically recurring wave change in the growth rate of aggregate production over several years. During this period there is a slowing of growth and a shift towards its acceleration or vice versa.

3. Characteristics of the types of economic cycles

Economic cycles have several characteristics that occur in all types. An important feature of business cycles is that they are synchronous. This means that they do not cause changes in an industry or a sector but are predominant in nature. Depression occurs in all industries and sectors of the economy at the same time. The recession is shifting from one industry to another, and this chain reaction continues until the entire economy is affected. Similar is the process of growth. Prosperity is spread through the various input-output links or through the relationships between the different sectors and industries of the economy.

The types of cycles are determined by their duration, and the first of their characteristic is their intensity. When economic growth is positive, its rate may be rising, falling or remaining relatively stable. When the growth rate of real

GDP is positive and higher than the growth rate for the previous year, there is expansion of growth. Where there is a decline in the positive real GDP growth rate compared to the previous year, there is a slowdown or growth recession. Growth stagnation occurs when the realized economic growth has approximately the same, usually relatively low growth rates of real GDP. This also applies to periods when the level of GDP remains stable, i.e. when there is zero real GDP growth. The duration of the periods in which these processes take place may be different. There is also the possibility that 'the dynamics of growth is stable - carried out with successively increasing rates, or unstable - accompanied by some more frequent fluctuations and transitions between the three processes of acceleration, slowing down and growth retardation, or wavy (cyclic). '(Pirimova, 2014, p. 28). The same processes can also occur in the case of a negative trend of real GDP growth.

An important characteristic of the cycles is their phases. With the Kondratiev's cycles, four phases are distinguished - prosperity, recession, depression and improvement, and in economic literature a three-phase division of the 'long waves' can be found - stagnation, recession and expansion. Kuznets cycles are divided into three stages - expansion after depression (lasting between 4-6 years), steady growth at full employment (between 7 and 11 years), and stagnation or depression with high unemployment (lasting between 4 and 7 years). Short-term cycles have two phases - a phase of expansion that ends at a peak, and a phase of recession that ends at the bottom.

Cycle dynamics is measured by real GDP growth, with the turning points (tops and bottoms) being plotted graphically as the highest and lowest points, above or below the flat trend line and the abscissa. Depending on the nature of the changes, especially at the bottom, the graphical images of the economic cycles can take V-shaped, W-shaped and U-shaped forms. The L-shaped and J-shaped formations are much less common, respectively in the phase of contraction and the growth phase.

It is typical of V-shaped economic cycles that only one bottom is formed within their borders, after which the conditions for growth of the economy are restored and it again enters the expansion phase.

W-shaped economic cycles form two bottoms due to stronger recessionary tendencies that are more difficult to overcome. The first bottom is followed by a short-term, usually one-year increase in real GDP, with a subsequent second decline in the indicator. A lasting trend of growth and recovery only occurs after the second bottom is passed.

U-shaped economic cycles are characterized by protracted periods of crisis turbulence and depressive state of the economy. There are several years of absolute downturns of close relative value, with the bottom period being smooth and prolonged.

The L-shape is formed in a recessionary phase, and it is characterized by the fact that after a large decline in the economy over a long period there is little or no growth possibly followed by years of stagnation, such as the situation in Japan over the 90s.

The J-shape is due to a slight decline in economic growth as a result of reforms that later on lead to strong and sustained productivity growth.

4. Causes of business cycles

According to various economics schools, the cause of business cycles can be searched in various places. According to the classical school, a business cycle cannot exist because imbalances are quickly overcome by changes in prices and wages. 'Classical economists claim that prices and wages adapt rapidly to changes in supply or demand' (Todorov, Iv., 2016, p.). 'This opinion suggests that shocks in aggregate demand only have a short effect on actual variables such as real GDP' (Ibid., p. 84).

The early theories of the business cycle assume that over a long period of time aggregate production may deviate from the level that corresponds to full employment in the economy. These early theories focus on the causes of fluctuations and on the occurrence of crises, and not on the cyclical development of the economy as a whole.

William. S. Jevons assumes that changes in solar activity are the cause of cycles (Jevons, W. S., 1884), and according to Henry Moore, economic crises are caused by climate changes (Moore, H. L. 1914). John Mills does not accept the assumption that economic cycles are caused by economic factors. He thinks that the main cause of crises lies in the human factor, namely the human psyche, and it is the loss of belief in value (Mills, J., 1868). Arthur Pigou also considers psychological factors as the main cause of economic cycles. In his theory, the mood of investors and entrepreneurs is the main driving force of cyclicality. Pigou describes investors' behaviour as that of a herd, as it is guided by the moods of the group (Pigou, A. C., 1923).

According to the Swiss economist Jean-Charles Sismondi, the cause of the crises is endogenous and is in production that remains unrealized, i.e., the so-called overproduction, which is a loss for investors because these are costs against which no revenue is generated (De Sismondi, J.-C.-L., 1819). Thomas Malthus points out the two-way dependence between demographic cyclicalities and production cycles as a cause of the business cycle. The more the population grows, the more the poverty and the shortage increase (Malthus, T. 1798).

Gustav Kassel, the representative of the Stockholm School of Economics, describes the economic cycles initially as changes in production, subsequently,

their influence on the factors of production, especially on their dynamics, then on price and income fluctuations, and finally, on the dynamics of capital markets. According to Cassel, economic cycles have an endogenous character and their cause is rooted in processes and factors on the economy and those that are the product of human behaviour (Cassel, G. 1967).

According to the Austrian economist Josef Schumpeter, cyclicity in the economy can be triggered by a number of exogenous and endogenous factors for the economy. Schumpeter considers only the internal factors for the emergence of economic cycles due to the fact that external factors are not of an economic nature. He systematizes endogenous factors into three groups:

1. Changes in preferences - utility functions of consumers change;
2. Changes in the quantity of factors of production - this group includes the increase in labour force and investments;
3. Changes in the methods of offering products - this group includes the introduction of new technologies, the opening of new markets, etc. (Schumpeter, 1939).

For the famous Swedish economist and founder of Stockholm School of Economics, Knut Wicksell, crises and macroeconomic fluctuations are casual, and they cannot be a cycle.

Wicksell defined as causes of macroeconomic fluctuations ‘... external circumstances belonging to economic life ... and partly ... the internal structure of the economy viewed from a material and psychological stand-point, namely the period of time necessary for completing large economic undertakings, and the time that is required before a general, optimistic outlook on the market is changed to a pessimistic one, and vice versa’ (Wicksell, K. 1953 [1907] p. 224).

The representatives of the Austrian School of Economics assume the cause of business cycles lies in the natural interest rate and the deviations from it. According to Ludwig von Mises, the increase in the amount of money in circulation leads to changes in the natural interest rate, which generates cyclical fluctuations (Mises, L., 1953). Friedrich Hayek adds the role of monetary authorities to the analysis and more precisely, the uncontrolled printing of money by the central bank (Hayek, F. A. (1935 [1931])).

John Maynard Keynes determines the marginal efficiency of capital, a specific type of interest rate introduced by him, as the main factor generating cyclical fluctuations. As a result of a sudden loss of confidence that cannot be accurately determined, there is a crisis leading to a collapse in the values of that factor. The other two psychological factors - the liquidity preference and the marginal propensity to consume - are simply additional circumstances complicating the situation as a consequence of the increase in the interest rate and the decline in consumption (Keynes, J.M., 1993)

Unlike the Keynesians, monetarists assume that the fluctuations in the economy are caused by changes in the amount of money, and the reason for the increase of the amplitudes of the business cycle is rooted in the erroneous expectations and slow adaptation of economic agents to the changes in the economic environment. Milton Friedman's views differ from those of the early monetarists. According to Friedman, money supply as an aggregate macroeconomic magnitude rather than credit is the basis of fluctuations. Friedman's theory is also contrary to Keynesian theory, according to which investment and generally real factors are the cause of fluctuations in the economy (Friedman, M. and Schwartz, A., 1965).

The representative of rational expectations school, Robert Lucas, views the business cycle as an erroneous expectation of economic agents about relative prices. Economic agents mistakenly assess changes in price levels, confusing them with changes in relative prices, and therefore make changes in their own production (Lucas, R.E., 1973).

According to Kydland and Prescott, the initial impulses of the business cycle arise from the development of technology, and the need for a long period of time to build up production capacities acts as a mechanism for distribution of cycles and amplifies cyclical fluctuations (Kydland, F. E., and Prescott, E. C., 1988).

According to the new Keynesian theory, prices and wages are inflexible. In the short term, money and monetary policy are not neutral and there is monopoly competition (Gali, J., 2008). These peculiarities lead to a strengthening of fluctuations in the short and medium term and are an obstacle to the rapid restoration of balance. They create inefficiency. Therefore, from a dynamic perspective, the business cycle is an inefficient state of the economy. The lack of money neutrality in the short term is the main impetus that leads to the generation of fluctuations in the economic system.

Stanley Fisher agrees with neo-classics that the change in the amount of money is the cause of business cycles. Instead of the forecast errors made by economic agents, he accepts long-term contracts relating to certain nominal variables (wages) as the main cause of the long-term mismatch of real variables from their equilibrium states due to money impulses (Fischer, S., 1977). According to Christiano, Eichenbaum and Evans, fluctuations in aggregate production and inflation, which are inherent in the business cycle, are caused by monetary shocks (Christiano, L., Eichenbaum, M. and Evans, C., 2005).

The conclusions that can be drawn from the study of Richard Clarida, Jordi Gali and Mark Gertler, which is fundamental to the New Keynesian models, are that both demand and supply factors can be an impulse to generate business cycles, and many of these factors can be identified as shocks. Also, for the better impact of economic policy on economic fluctuations, it is

necessary to have a better knowledge of the processes taking place in a given economy as the economic policy potential for stabilizing production and inflation around their equilibrium level is not reached. The third conclusion which can be reached is that the current knowledge does not allow short term stabilization of the production and inflation via economic policy instruments (Clarida, R., Gali, J. and Gertler, M., 1999).

Macroeconomic theory has to go a long way to be able to give a satisfactory explanation of the cycle. At present, the New Keynesian models are the best alternative to allow both forecasting and analyzing macroeconomic indicators and assessing economic policy options, taking into account their combination of empirical feasibility and theoretical endurance.

5. Conclusion

Analyzing and predicting the business cycle is a relatively new part of economic science, which is becoming more and more important to modern economists. Estimating the business cycle phases contributes to the successful forecast of the economic environment. An opportunity is given for the prior compilation of an economic strategy to mitigate upcoming economic shocks or to enhance the impact of expected positive economic policy outcomes.

There are few studies on the Bulgaria's business cycle. Good knowledge of the theoretical formulation of business cycles allows for more in-depth research in this area to the economy of Bulgaria. There is a necessity to increase the efficiency of the economic policy in Bulgaria in the years after the transition. Proper business cycle analysis can provide the answers that Bulgarian macroeconomic strategists need in order to address the economic difficulties faced by the country.

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