MARGINALIZED THEORIES OF BUSINESS CYCLE BASED ON STRATEGIC BEHAVIOR

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ABSTRACT

The aim of this paper is to recall selected theories of business cycle, both old dated and new ones, which are marginalized by the mainstream economic theory although these theories carry often inspiring ideas to economists and politicians. The paper brings some new approaches to business cycle causes, especially marks strategic causes. These a subsequently divided in two categories - strategic institucional and strategic individual. Strategic cycles are caused by strategic behavior of different economic subjects while interacting. The cause of economic cycle is strategic behavior of institutions or strategic behavior of individuals. The paper treats in detail with the Goodwin´s model based on the Marxists´ theory of economic cycle, next, with the H. George´s theory, with the Minsky´s financial instability hypothesis and I. Fisher´s debt deflation presented through the Keen´s model. The common feature of the mentioned theories is strategic behavior of economic subjects which is the base of business cycle.

KEY WORDS: Business cycle, strategic behavior, business theories

JEL CLASSIFICATION: E3, B00

Introduction

Under the term "business cycle" we understand fluctuation of the GDP in time, e.g. periodical alternation of booms and recessions; the time period, in which the alternations take place, does not have to be perfectly regular. The period of the cycle also has to be appropriately long so that it was worth studying for the economists. Therefore the only business cycles we consider suitable for studying are those whose period is longer than a year. In most cases, the economic literature presents the following classification of cycles according to the length of their period:

- Kitchin cycles (1923) with a period of ca. 3–5 years, which are related to time lags of information that influence decision making in companies,
- Juglar cycles (1862) with a period of ca. 7–11 years, which are derived from inflexibility of investment in the fixed capital,

- Kuznets cycles (1930) with a period of ca. 14–25 years, which are mostly related to demographic processes, and
- Kondratiev cycles (1935) with a period of ca. 50–60 years, which are connected with major technological and social changes.

Although in world literature as well as textbooks of economy one can find other ways of classification of business cycles, we believe that it is possible to take a different approach to explain them. A different approach will lead us to another suitable differentiation of cycles. The aim of this article is to present a new way of classification of business cycles and to mention some neglected theories of the business cycle which are worth economists' attention. We also want to describe what is called strategic business cycles, both institutional and individual.

A New Perspective on Classification of Business Cycles

In this part of the article we will classify business cycles according to the following basic possible causes:

1. Exogenous cycles, i.e. cycles whose causes lie beyond economy. They come from the natural environment that surrounds the economy. A classic example is the agricultural cycle.In the context of economy the term exogenous usually refers to cycles that are caused by cyclic changes in natural conditions as well as cycles, the causes of which are social, but not economic – they can be for example political. However, in our article we consider all cycles that are caused by human behaviour or human institutions as endogenous.

2. Endogenous cycles, i.e. cycles whose causes lie within the behaviour of economic entities or within the parameters of the economic or social system. This group can be further divided into two basic subgroups, whose substances differ. The subgroups are:

   a) Real business cycles, which are caused by the activity of economic entities but not primarily by the interaction among them. These cycles would apply even to the model economy of Robinson Crusoe, which consisted of a single economic entity. An example of a real cycle is the innovative cycle. The theory of an innovation cycle was introduced to the economic theory by J. A. Schumpeter (1939). A modern version of the theory of the real cycle can be considered for example the theory of F. Kydland and E. Prescott (1982,1990). The cause of the innovation business cycle are innovations. Implementation of technological innovations by one company requires investment. Implementation of investments triggers more investment activities of other companies and then these companies give rise to more investment and so forth. This process generates a boom wave. Nevertheless, over time it will get exhausted and be followed by recession. But after some time there will be another innovation which will require new investments that will cause another boom wave, which will again get exhausted over time etc. As we can see, innovations create investment boom, characterized by a boom at the beginning and a recession at the end of the wave. The more significant the innovation, the bigger the investment wave and therefore also the economic boom. This can serve as an explanation of the fact that phases of the cycle are irregular both in product fluctuation size and in occurrence in time. And as innovations are the cause of economic growth, i.e. increase in production capacity, the theory of innovation cycle connects the business cycle with economic growth. In growing economy the business cycle will not show as product fluctuations but only as fluctuations in the growth rate of the product.

b) It is important to realize that since we are talking about an investment cycle, what fluctuates is not prosperity but performance. Prosperity does not have to fluctuate at all or it can also develop in the opposite way than performance. The period of investment boom rather takes its toll at prosperity in the form of increased savings, which leads to decrease in the current consumption, higher work effort and therefore to decrease in free time. The period of boom is usually seen as the positive phase of the cycle and the period of recession as the negative one. However, Robinson Crusoe with his one entity economy would think of it

> the other way around. We do not live in an economy created by a single economic entity, though. In our society there is a high degree of specialization and division of labour and different phases of the cycle have different impact on various economic entities. The economic recession following the exhaustion of the investment wave will not result in equal decrease of the amount of work among all members of the society: it will result in loss of jobs of entities whose work was related to the investments that have just come to an end. The fact that the amount of work in the society is on the decrease and therefore the amount of free time rises could be positive for the society as a whole (just as it was for the economy of Robinson Crusoe). For Robinson Crusoe the (investment) recession of the economy does not mean a total loss of his incomes, which is the case of the group of people in the specialized modern society, who lose their jobs as a result of declining investments and therefore they see it as a clearly negative phenomenon. With the unemployment rate continuously rising during the recession, the fear of losing a job is also passing on to the employed which leads to negative expectations of the future development. Instead of perceiving the investment recession positively as an opportunity to have more free time, the society sees it as negative because it makes people worry about losing their income, which is the most important element of prosperity. The issue of the innovation (investment) cycle arises only in the specialized modern economy and it is a structural problem. Recession as a rise of prosperity caused by reduction of sacrifices necessary to investments -- that is savings and work effort and therefore higher consumption rate and increase in free time – can only be attributed to the innovative (investment) cycle. A recession caused by other types of cycles does not have this quality which is why it usually represents not only decline in performance but also decrease in prosperity.

Just like exogenous cycles, real cycles are also not caused by social institutions.

c) Strategic business cycles that are caused by strategic behaviour of various economic entities during their mutual interaction. Again, we can divide them into two basic subgroups:

b1) Institutional, or collective cycles, where the business cycle is caused by specific social institutions. If there was a different social order, these cycles would not exist at all. This category includes for example monetary and budgetary cycles.

When talking about the monetary cycle, “Austrian cycle theory” is sometimes mentioned. The reason for that is the fact that works which established the monetary cycle theory were written by Austrians – F. A. Hayek (1933), L. Mises (1953) and K. Wicksell (1936). Monetary policy makers usually hope for investment caused by monetary expansion to have the effect of creating capacity. That means there will be increase in production capacity which will lead to increase in potential economic product. In other words, the recession that will follow will be smaller than the induced boom. Moreover, according to the popular theory of rational expectations, the monetary cycle will not even take place, because nowadays economic entities are able to “read” the behaviour of the central bank and therefore they are not influenced by monetary illusion. They do not interchange inflation for increase in microeconomic demands and decrease in nominal interest rate for decrease in real interest rate. This means they do not react to monetary expansion by increasing investments. According to this theory, money have no influence on real values. However, this theory is purely macroeconomic. Monetary expansion does not have only macroeconomic consequences but also microeconomic ones – it has structural impacts, which the theory of rational expectations does not take into account. And because of these changes of economic structure there will be changes in investments which means the aforementioned investment cycle will take place. In this case the cycle will of course be smaller than if microeconomic entities read the behaviour of the central bank incorrectly. The central bank cannot issue additional money in a microeconomically neutral way – it has to give it to specific microeconomic entities. Usually the central bank buys bonds of specific entities or makes loans to them. As we can see, due to the monopoly on printing money, a very small number of central bankers have an excessive influence on what will or will not be produced in the economy. If their decisions do not meet wishes of millions of other people – which is very likely – scarce resources are used ineffectively. That is because additional money is used for implementation of projects in which the society is relatively less interested compared to projects that would be implemented without the activity of the central bank. When the central bank prints new money, it does not necessarily mean that there will automatically be a larger product. What actually happens is that those who get the additional money will buy a part of the current amount of products, which has so far been bought by current holders of money. Whether the monetary expansion will lead to increase in production capacity of the economy – which is what the monetary policy makers expect – depends on the fact whether the newly issued money are obtained by companies that will make sensible investment creating capacity. That means investing in making production more efficient by reducing production inputs and producing goods and services that are needed. If they do not do that, there will only be a shift of sources from one group of entities in the economy to another one. Central bankers do not make decisions about their own money and their motivation for efficiency is therefore doubtful. Because of that there is unfortunately no reasonable grounds to assume that the central bankers should be more successful in choosing projects better than economic specialists in the private sector, who are existentially dependent on the success of their activities. The central bank is much more influenced by political factors, i.e. by the pressure of various interest groups. It must be stated that monetary policy of the central bank rather decreases efficiency of the economy, because it distorts price signals about real benefits and costs of various projects. It supports what is called moral hazard and moves sources to entities, which probably would not get them based on their economic efficiency.

The budget cycle is often referred to as a political cycle or an electoral one in economic literature. It is based on ideas of the theory of public choices. W. D. Nordhaus (1975) and E. R. Tufte (1974) are usually considered pioneers of this field. This cycle is a result of periodically regular cycle of elections. Its period corresponds to the length of the election period in a particular country. It turned out that both right-wing and left-wing governments tend to "buy" their voters before elections. They make fiscal expansions by increasing the volume of public expenditures. In short time it leads to fiscal inclusion and consequently to increase in the GDP and decrease in the unemployment rate. Governments finance such expenditures by loans from abroad or from the central bank, which makes the government debt grow. If they financed it by increasing taxes or by borrowing money from domestic entities, there would not be the desired effect of growth of product and decrease of the unemployment rate, as the government would only spend money that would be spend by someone else in the economy anyway. The only effect would be getting more publicity for the government. The government concentrates resources so that they were highly visible. They put it into big projects which allow medialisation of jobs and the product created. Jobs that will be lost in various companies because of increased taxes and the product which these companies will not create is not that medially visible. It is not concentrated in one locality but spread across the whole country. An as we all know, in a long period (with time delay, from the government's point of view ideally after elections) rise of inflation comes. Therefore after elections the government makes fiscal restrictions which make the GDP fall and unemployment rise in a short period of time. And as a large part of the country's product goes through the state budget, these governmental measures can destabilize the whole economy. The electorate cycle is therefore a result of politicians' effort to be re-elected by increasing public expenditures before elections which leads to the necessity of austerity measures at least shortly after the elections, when citizens as voters are the least sensitive to them. However, the theory of economic policy shows that destabilization of the business cycle is harmful for the economy and that the government should not make cyclical but anticyclical fiscal policy. It would mean that in elections voters would want to give their voices to those, who promise economic stability than those who cause the business cycle. But as practice shows, the opposite is true. Destabilizing the cycle pays off to politicians. People do not really vote for stability, even though the politicians might actually like them to think in this way. The reason for this is that voters are rationally ignorant and are not interested in politics very much. The only time they pay politics a little more attention is before elections. If voters really evaluated performance of the government, that is to the state of the economy, during their whole term in office, then the policy of business cycles would definitely not be advantageous. At the moment of elections voters evaluate only the current state, which is in the given term better than if the government strove for stability.

b2) Natural or individual cycles, the cause of which is strategic behaviour of individuals in the society. Under the theory of natural strategic cycles we can also list some older theories, which are nowadays seen as marginal in the context of the economic theory, because their formal apparatus does not provide very good opportunities for formulating strategies by means of the game theory, which was not yet developed at the time of their creation. In particular, this concerns the following 4 theories: the Marxist cycle theory, in a modern form represented by the Goodwin model; the speculation cycle theory, introduced to economy by Henry George, explaining the business cycle based on land speculation; the theory explaining the business cycle based on the credit cycle, built on Irving Fisher’s hypothesis of debt deflation, and the financial instability of Hyman Minsky.

The theory of Karl Marx (1909) is probably the oldest endogenous theory of the business cycle, even though what Marx talked about were not cycles but crises. According to Marx, capitalism is unstable and prone to periodical crises, which are not primarily caused by external or random reasons, but which stem from systemic elements of capitalism as a way of production and social order organization.

Marx’s theory of crisis is based on the law of “falling profit rate” in combination with various countertendencies, which can slow down or change its impact. In short, capitalists invest more and more in new technologies and less and less in work. Considering that the surplus value gained from work is a source of income, the rate of profit will decrease even if the economy is on rise. This leads to decrease in capital accumulation and thus to recession. The economic crisis is a crisis of overproduction and impoverishment of workers.

The original Marxist model of business cycles was formalized by an American mathematician and economist R. M. Goodwin (1967). According to Goodwin's model, the cycle in the performance of the economy is caused by division of income between corporate profit and wages of employees. Fluctuations of wages are almost on the same level as fluctuations of the employment rate (the wage cycle lags behind the cycle of employment by one period). If there is a high level of employment in the economy, employees are able to ask for higher wages. On the other hand, in the period of low employment level (or high unemployment), wages tend to fall. The recession is caused by enhanced bargaining power of employees, which increases the share of wages in the national income, suppresses profits and leads to reduction of capital accumulation. As a result of recession, unemployment starts rising, the share of wages then starts to decrease and the share of profits rises. Accumulation of capital is restored and performance of the economy starts to increase again. This distributional cycle can have short as well as long periods. The long-term cycle of distribution is caused by periodical changes of the "social structure of capital accumulation", which is a set of institutions ensuring and stabilizing capital accumulation.

As an example of a cycle theory working with changes of the social structure we can name the theory of partisan cycle of the Marxist/Post-Keynesian economist Michal Kalecki(1971). This theory relates such changes with changes of political regimes caused by alternation of governments with different ideological orientation. This theory is sometimes considered to be the first theory of what is called political cycle, as compared to modern theories of political cycle, which are focused on changes of government within the same (democratic) regime. Kalecki's theory is not elaborate enough, because actual changes of regime happen very rarely.

As we can see, the essence of the business cycle as described by Marxists, is the strategic cycle presented here. This cycle is reflected in the choice of various strategies of individual entities during wage bargaining; the shares of various strategies they choose fluctuate depending on how changes the expected profitability for the entities in question. The long-term cycle is determined by periodical changes of the social structure, e.g. the set of institutions which influence the choice of strategies of individual entities in specific situations.

Henry George's theory (1935) sees land speculations as the primary cause of most business cycles. George observed that the price of land, which is essential for all types of production, has an inherent tendency to rise together with rising economy. The reason is that the amount of land is fixed. Given that residential and commercial properties provide security for a significant part of credits, prices for properties grow in the rising phase of the business cycle faster than the inflation rate, which is motivation for land speculations. These speculations thus take economic sources away from production, which is carried out on the land. This means that profits are taken from the hands of producers, who invest in fecund production, are given to hands of land owners, who invest in unproductive speculations. Land speculations therefore create an immanent supply shock, because they draw off sources from productive economy in a great disproportion to rise of the economic output. This systemic slowdown of the economy is a drag for further economic expansion and it creates basic tendency toward inflation and recession in the late growth phase of the business cycle. According to George, land speculations are always a cause of economic decline. It is interesting that this theory is generally neglected today, despite the fact that the two biggest economic depressions in last 100 years (1929–1933 and2008– basically present) were accompanied by speculative bubbles on the real estate market.

It's evident that the essence of the business cycle as described by the Georgists is again the strategic cycle presented in this article. The cycle is reflected in the choice of various strategies of individual subjects when making investments, e.g. when they decide where to allocate their capital – whether into production or into land speculation. The boom phase is characterized by increasing share of speculation investment strategies, because for investors investments in land speculations have, or seem to have, more advantages than investment in production. However, such increase in speculations draws off sources from production and at the same time it increases the risk of speculative investments. That leads to recession during which the speculative bubble bursts and speculative investment strategies are no longer more advantageous for investors than production investment strategies. The share of production investment strategies starts to grow, up to the point when the speculative strategy is again so low, that speculative risks are considered to be small, which once more makes speculative strategies more attractive than production strategies.

The Post-Keynesian theory of the business cycle sees finance and banking as the central cause of the business cycle. It says that the cause of business cycles is the credit cycle, during which the pure expansion of credits (increase in private credits and the consequent increase in indebtedness as a percent of the GDP) leads to economic expansion. In contrast, pure concentration of credits causes economic recession and if it lasts it can even develop into depression. Bursting of the speculative bubble is seen as the immediate cause of depressions. During the period of economic expansion interest rates are low and therefore it is easy for companies to borrow money from banks for investment. Banks are willing to lend them money, because thanks to the increase in economic activity, companies' cash-flow grows beyond what is needed for repaying debts. Companies can easily pay their loans back and this gives rise to speculative euphoria. However, over time this leads to excessive indebtedness of companies and that brings about financial crisis. Banks gradually increase interest rates and reduce the amount of credits, companies reduce their investments and the economy falls into recession. Speculative investment bubbles are therefore a common part of functioning of financial markets.

This theory has been introduced into modern economy by Hyman Minsky (1974)and it is known as the "hypothesis of financial instability". This hypothesis is complementary to an older theory known as theory of debt deflation, conceived by Irving Fisher (1933). Both these theories are combined in Steve Keen's model (1995). We can see that the essence of the economic cycle as described by Post-Keynesians, is again the strategic cycle we present here. It is reflected in how individual entities choose the share of various strategies, or rather how the share fluctuates when the entity decides how to finance their investments. This theory does not differ much from the aforementioned theory of Henry George. They only differ in what they see as the primary cause of speculative bubbles – whether it is land speculation or speculation in financial assets. Nevertheless, according to the theory of natural strategic cycle presented here, this question is of secondary importance, because both the types of speculation are a consequence of changes in strategies chosen by individual entities. It is also proven by the anatomy of the current crisis that speculation in lands and speculation in financial assets can intertwine with each other, follow one another or determine one another.

Conclusion

The last economic depression began in 2008 with the burst of the speculative bubble on the real estate market. Business on the real estate market mostly took the form of transactions of financial derivatives. After all, a few years earlier it was preceded by another financial crisis, known as the dotcom bubble. However, the influence of the dotcom bubble on the GDP was not as striking at the moment of its bursting as it was during the last crisis, because the relevant speculative investments from the new technologies market spilled over to the real estate market. We can thus say that the depth of the recent crisis is partly a result of delayed impacts of the older dotcom bubble. A lot of what has happened will happen again, but economist pay little attention to recurring events. Because of that they probably do not qualify as homo racionalis.

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