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DETERMINANTS OF ECONOMIC CRISES IN THE AUSTRIAN SCHOOL OF ECONOMY

1. A matter of a market conditions changes in Austrian economy

In the real economy, changes related to access to factors of production, technology, changes in demand and consumer tastes are a natural phenomenon. The impact of such phenomena on the volume of production or prices is a consequence of actions undertaken by economic subjects and leads to changes in the monatery relations concerning goods or services. Changes in monetary aggregates will therefore result in fluctuations in the entire economy. A business cycle phenomenon will occur.

The characteristic feature of a market conditions cycle is repeatability of individual phenomena that appear in it: recovery, boom, crisis, depression. The course of the cycle allows for a relatively unequivocal interpretation of factors that cause the following phases and assessment of effects of each of them.

An explanation of functioning of a market mechanism is only possible with the assumption that there is no inflation problem and it is devoid of incorrect expectations of enterprises' activity interrupted by recession periods. The market system is based on a properly working price mechanism which influences matching and complimentary actions of market participants when they face different types of market changes.

The issues concerning crises in the Austrian school are mostly coupled with accomplishments of Friedrich von Hayek. His "*Monetary Theory and the Trade Cycle"* (1929) and *"Prices and Production"* (1931) characterise processes of market cyclicity. Both publications should be treated as complimentary, though the first concentrates

on "monetary reasons initiating cyclic fluctuations," the second covers "the following changes in a real production structure, which are a constitutive element of these fluctuations" (Hayek, 1966, pp.119-120). The works of Hayek are a huge contribution of the Austrian school into the theory of cycles but to have a full assessment of its achievements it is recommended to look into works of Ludwig von Mises: *"The Theory of Money and Credit"* (1912), *"The Causes of the Economic Crises"* (1923) and his opus magnum "Human activity" (1949). Mises presented a general theory of cycles and formulated conditions of the origin of economic crises.

Mises's theory is a combination of the natural percentage rate theory developed by a Swedish economist Knut Wicksell and the Austrian theory of capital by Carl Menger, broadened by Eugen von Bohm-Bawerk. Mises's views were influenced by British Currency School, which similarly to him saw the causes of economic fluctuations in a monetary expansion.

We owe Hayek a methodological approach to market condition cycles that explain the matter of money oscillations and the ties between balance and market condition changes. The second aspect included in works of Hayek dealt with the role of changes in the structure of production during the changes in market conditions and their ties with the credit system.

The Austrian theory of market conditions formulated by Mises and developed by Hayek is a theory of an unbalanced boom. Mises's approach to the characteristics of economic crises exposes the infirmities of the market as far as time, money, capital structure and coordination (Snowdown, Vane, Wynarczyk, 1998, p. 373) are concerned. He indicated that the cause of economic fluctuations is an excessive credit expansion which artificially lowers the market percentage rate below a level set by voluntary savings (Mises, 2006, pp. 115-116).

The monetary policy, which does not consider gold standard, for which the central bank is responsible, causes wrong information to appear on the market. Entrepreneurs make decisions about investments or abandonment of the idea based upon untrue premises. If interest rates fall, entrepreneurs decide to increase their investments in more sophisticated production processes.

Yet, the problem of a money market is that banks set the interest rate below the natural rate (higher time preference[2]) (Hoppe, 2004, pp. 15-20).

It leads to a credit expansion (boom). The amount of capital is limited though, because economic entities prefer consumption to saving. The banking system creates substitutes of money supply creating a kind of a financial pyramid

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2 *Time preference* – Is a measure of how much the current satisfaction is more desired than the same satisfaction in the future. Hight time preference means a desire for immediate consumption of available goods, whilst low time preference indicates willingness to restrain from consumption of current goods in favour of higher consumption in the future.

through combinations concerning loans and deposits. It replaces a part of production investments which otherwise would be realised by entrepreneurs.

Many entrepreneurs will not be able to realise their investments because such a situation limits access to production means. In the macroeconomic scale it will result in a decrease in the speed of economic development and smaller accumulation. Such state is called a bust and is characterised by dynamic changes in the structure of capital. They lead to a decrease in a difference between natural and money interest rate.

Mises's theory is a complete theory in this sense that it connects the money, interest rate and capital theories and it explains the fluctuation of market conditions (Cholewiński, 2007, p. 41).

2. The role of interest rate in the theory of cycle of market conditions

The category of interest plays a tremendous role in the theory of cycle of market conditions. According to Mises interest is not a specific income from capital goods. Attributing to work, capital and land three different classes of income respectively: salary, profit and pension done by classic economists was wrong (Hoppe, 2004, pp. 32-41). Consumption goods are present goods whereas capital goods are means of future production. Capital goods or production goods derive their value from the value of consumption goods to which production they will be used. If the present goods are more valuable than future goods of the same kind and quantity, so what follows from this fact is that value of production goods never reaches the value of goods, to which productions they were used, but their value is usually lower. The discount, by which the value of capital goods falls below the value of expected goods is the interest, which lies, as we mentioned, in a natural value difference between present and future goods (Mises, 2007, p. 446).

Thus, interest is not a price, it is a relation of future prices in relation to present ones. In a market economy this difference in present goods assessment in relation to the future ones is known as a discount or deduction in price. In financial transactions this discount is called interest rate (interest). The amount of prime interest does not determine a balance point between demand and supply of money loans on a capital market. The function of the loan market is to adjust interest rates of money loans to the difference between the value attributed to present market goods and the value attributed to future goods. This difference of value assessment is a real determinant of the amount of the primary percent (Mises, 2007, p. 447).

The natural interest rate guides investing actions of entrepreneurs. It determines a waiting period and average production time in every branch. Entrepreneurs' activities tend towards establishment of a uniform natural rate for the whole economy. If in one

sector the difference between the value of future and present goods increases, the entrepreneurs will become involved in activities in this sector and avoid entering branches where this difference is smaller. In an evenly rotating economy the final effect of capital relocation between sectors will be establishment of uniform rate of natural interest. In such a situation, the exchange rate on a loan market will be convergent with natural rate. (Mises, 1981, p.19). However, uniform natural interest rate can appear only in an evenly rotating economy, i.e. which assumes neutrality of money. In Mises's opinion, money can never be neutral (Mises, 2007, pp. 449-450).

If there are changes in proportion between money supply and demand for it, caused by purely monetary determinants, the prices of all products and services also change. However, the way the increased amount of money affects prices and income depends on a way in which cash flows into the economy. An increase in the amount of money alters the price structure depending on who the new receivers of new cash resources will be and their relative demand for goods. A diversified impact of money surge, defined by the nature of the surge, is called Cantillon's effect (De Soto, 2009, pp. 84-86). A more modern equivalent of this concept can be found in Keynes in his analysis of "price level diffusion". In the seventh chapter of "Treatise on Money" Keynes states: "It is a fact that money changes do not affect all prices in the same way, to the same degree and at the same time." The Cantillon's effect has become a central element of the Austrian theory of market condition cycles (Cholewiński, 2007, p. 42).

If changes in money supply influence the prices of consumer and production goods in different ways (they change the ratio of prices of present goods to future), they lead to changes in the amount of interest rate (natural interest rate) (Mises, 1981, p. 22).

Changes in the amount of money have an impact on real volume. They cause redistribution of income to the profit of emitents and the first receivers of additional money, at the expense of the later receivers and persons who do not receive additional money at all. Because time preference rate depends on income of an individual and it decreases with its increase, every change in an individual's income shall result in a change of the time preference rate which entails a change of natural rate in the whole economy.

"If an additional amount of money increased supply for consumer goods and corresponding goods of higher grade in the same proportions, and if a particular amount of money withdrawn from circulation decreased the above-mentiond demand in equal proportions, there would not be a problem whether such changes had lasting influence on interest rates." (Cholewiński, 2007, p. 44).

However, a situation in which changes in the amount of money would influence all prices in the economy, in equal proportions and, at the same timedid, did not disturb the structure of prices is impossible to arise in the real world. Hence, every change in the amount of money produces changes in the natural rate. It cannot be as-

certained that an increase in money supply always results in reduction of the natural rate, and an increase in supply results in an increase of the natural rate. What consequently appears, depends on whether new redistribution of income is more or less favourable for capital accumulation (Cholewiński, 2007, p. 45).

According to Mises, the phenomenon of forced savings, when the buying power of money falls, has an influence on a decrease in the natural rate. The phenomenon of forced savings can appear in a situation when additional amount of money first causes an increase in prices of products and after some time a rise in salaries of hired employees. It means a situation in which the prices of goods rise faster than salaries what, obviously, causes redistribution of income to the benefit of entrepreneurs. Consumers are forced to limit their shopping because their real pays are lowering. Since the entrepreneurs are a group of higher income, their inclination to save is higher (they have lower time preference) than in the case of hired employees. Thus, the phenomenon of forced savings creates favourable conditions for an acceleration in capital accumulation. (Cholewiński, 2007, p. 45).

Hayek, in turn, claims that contrary to what the advocates of the underconsumption theory think, the crisis is a consequence of lack of savings and excessive consumption. Overinvestment is caused by forced savings; a slump results from the fact that the consumption cannot be kept at a level reduced by forced savings. Crises could be avoided if people did not increase consumption, if they could be encouraged to further savings. Then, it would be possible to continue longer processes because the stream of money (its division into consumption and savings) would reflect the production structure. The only effective solution to the problem of cyclical fluctuations is elimination of bank credit elasticity, and thus forced savings. In other words, it is necessary to neutralise money. The neutral money does not ensure a stable level of prices; it requires a stiff money supply policy, which can cause changes both in a general level of prices and changes in the price structure (Garrison, 1989, p. 8).

Market gross interest rates appearing in the Austrian theory are characterised by taking account of a few elements influencing their amount.

Borrowing money and other credit transactions and delayed payments are never fully safe operations. Debtors or guarantors can become financially insolvent. Indemnity and mortgage can lose their value. Creditor is always a partner of a debtor, an owner of pledged immovables. Changes of market data concerning the prices of goods given in pledge may influence its situation. Capital as such does not bring profits. It has to be properly invested to avoid using it up. Gross interest is gained by the borrowers whose transactions were successful. If they earn their interest, it is included in the income which consists of not only the net interest. The component connected with entrepreneurship is included in all kinds of credits and it has a form of a bonus. This bonus constitutes ' entrepreneurial component' of market gross interest rate and increases its quantity (Mises, 2007, pp. 458-459).

Another instrument creating the market gross interest rate is a price premium. It exists together with deferred payments. Since repayments of credit occur in future periods, both the borrower and the lender anticipate, at the moment of closing a business, and deciding on the amount of the interest rate, future changes in the purchasing power of money. The borrower who predicts an increase in prices in the future, will be able to accept higher gross market interest rate, whereas the lender who predicts a rise in prices, will demand higher interest rate. A price bonus can be positive or negative in character. In the case of strong deflation, the price bonus can "swallow" the whole initial interest and even lead to a fall in market gross interest rate below zero (Mises, 2007, pp. 460-462).

The market net interest rate, i.e. an interest rate not taking into consideration an "entrepreneurship component" and a "price bonus" has a tendency to approach the level set by the initial interest rate. It results from the relations between individual sectors of the loan market (Cholewiński, 2007, pp. 45-46).

According to Knut Wicksell's approach, the category of "natural interest rate" *(natürliche Kapitalzins)* defines the interest rate, which would be set by supply and demand, if goods were lent in nature without using money. The term "money interest rate" *(Geldzins)* is used for the interest rate which is required for loans in money or its substitutes (Mises, 1978, p. 127). Changes in money relations caused by monetary determinants can influence the amount of natural interest rate. Apart from this phenomenon, an inflow or outflow of money or its substitutes from the loan market influences changes in the money interest rate (market gross interest rate). As such, inflow or outflow firstly affects the loan market, in such a situation there must be a divergence between the money interest rate and the natural interest rate (Cholewiński, 2007, s. 48).

Analysing the process of credit expansion, let us assume that the market process, aimed at adjusting the market net interest rate to the primary interest rate, is disturbed by additional amount of fiducial funds, available on the loan market. Since additional loans may be granted only at lower interest rate, the monetary interest rate falls below the natural rate of interest (assuming a zero effect of premium pricing). Our task will be to trace the consequences of differences between the natural interest rate and the money interest rate. According to Mises, we need to consider only a situation in which banks reduce the cash rate below the natural rate of interest. If the bank acted contrary, i.e. if it increased the money rate above the natural rate of payment, it would be eliminated by competition which would grant cheaper credits, and thus it would disappear from the market (Mises, 1978, p. 129).

3. The course of the business cycle phases

The business cycle begins when the central bank lowers interest rates, starting its expansionary monetary policy. In the absence of a monetary policy, lowering the interest rate would mean an increase of the time preference (increased propensity to save), but the central bank reduced the rate by responding to the needs of operators. This requires an increase in money supply, but without additional savings.

The reaction of business to lower interest rates will, however, be due to market conditions. Namely, they will expect higher profitability of investments in capital goods. *"They will have the illusion that investments, especially in time-consuming projects which had so far appeared to be unprofitable, have become profitable thanks to falling interest rates. Entrepreneurs behave as if they behaved if savings had really increased: they allocate them for investments. They invest in assets, in capital goods, raw materials for production [...] instead of investing in the production of consumer goods"* (Hultberg, Hoppe, Rothbard, Salerno, 2004, p. 106). Money spent on capital goods result in an increase in wages of workers producing them.

However, a real problem is the stability of time preference, i.e. lack of interest in savings. Employees are starting to consume directing their profits to companies producing consumer goods. A crisis begins (because of lack of savings and capital investment) in the capital goods industry (monetary overinvestment theory). Traders believed in the artificial reduction of interest rates and invested their limited savings in a off-the-point manner (monetary theory of failed investments).

Companies will submit further demand for credit. Economy is in its heyday and, in combination with rising prices (mainly capital goods) and wages, tends straight toward inflation. Growing consumption needs more and more money, which leads to increased emissions. Satisfying the expectations of customers, the central bank keeps lowering interest rates (sometimes leading to their real negative value). If such a situation becomes a long-drawn-out process, it accumulates the number of off-the-point investments.

The flowering phase is becoming broader in scope. Capital markets achieve windfall profits, wages rise, the unemployment falls, consumption increases rapidly, real estate becomes one of the most desirable goods. However, the accumulation of false information leads to erroneous results. The economy is not very predictable, and the situation that has occurred does not allow accurate determination of real consequences. Profits are based on questionable foundations, but from the monetary point of view they are very real. The most important thing is that it happens as a result of the State intervention and the use of economic policy instruments.

Inflation causes the price system to be distorted. To remove wrong decisions and their consequences, there must appear a phase of crisis and depression. They allow return to an appropriate balance between investment and consumption. As Rothbard

claims, it is an inevitable and recuperative phenomenon (Hultberg, Hoppe, Rothbard, Salerno, 2004, pp. 107-108). For the economy not to recede to the initial state, the government must stop interfering in the market and not create false economic information.

The crisis will result in a reversal of the situation. Money supply will decrease and there will be a balance between the price ratio of consumer and manufacturing goods. However, the central bank, having the right to issue money, will not limit the supply. It produces long-term persistence of erroneous price ratio and continuous inflation (growing faster or slower, but still growing)[3]. However, even a continuous process of increasing of the amount of money will not eliminate the economic cycle because its roots cause lie in the decisions of individuals (individual preferences).

A crisis slows down the economy. Individual elements of the economy are beginning to adapt to the preferences of economic entities. However, it does not last too long because there is a government and its economic policy. Recession ruins its ideas concerning the economic situation, so the government wishes to change it at any price. Thus, it starts the monetary policy to provide cheap money to people and the process begins anew.

The course of the cycle presented above shows that any change in the quantity of money in circulation causes changes in the price structure, which cause devastating economic structural changes. Therefore, if we seek to have the neutrality of money, it should be expected rather in terms of a constant supply. An argument for a fixed money supply is the assumption that the withdrawal of currency flexibility will make monetary factors no longer cause price changes. Any changes in the level and pricing structure will come from changes in real factors: technical progress and population growth. Since the volume of production in industrialized countries are growing normally with the constant money supply, prices would have to drop. Hayek does not see any danger in this, as he does not see any benefit from a fixed price level. What is important is that manipulation of money supply should not lead to interference in the ratio between the demand for consumer goods and the demand for good production resulting from real factors.

Although the monetary overinvestment theory implies that neutral money would avoid the cyclical production, but an analysis of the concept of "money supply" leads Hayek to the conclusion that the stability of money supply, and thus its neutrality is unattainable. The very diversity of forms of money and its substitutes makes the maintenance of stability in money supply extremely difficult. To illustrate the problem, Hayek compares the monetary system of a country to an inverted pyramid. The lowest part of the pyramid is a cash database of the entire system, a slightly higher part

[3] Since World War II, inflation has become an immanent phenomenon typical of most economies. There appeared opinions that it is an integral part of economic development!

represents central bank credits, the next part are commercial banks' loans, and the highest part are private loans granted outside banks. Only in relation to the two lower, i.e. the cash database and the central bank credits, can direct control by the central monetary authority be performed.

It seems therefore that Hayek deliberately emphasizes the absurdity of the concept of neutral money to show how difficult it is to manage money and to prove that manipulation of the money supply leads to massive disruption in the real sphere and, consequently, ruins the natural regulating mechanisms.

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The Austrian business cycle theory contains several highly characteristic features which allow a proper assessment of the course of business cycle phases. This approach strongly emphasizes the role of money supply, natural interest rate and natural changes in the production structure. In addition, the Austrian approach points to a very important role of the market and the need to reduce the use of economic policy by the state.

The Austrian economy as yet well explained the reasons, the course and consequences of economic crises (Robbins, 1934; Rothbard, 1975). Also under conditions of the current economic crisis, it is not possible to abandon the Austrian approach which largely confirms the circumstances of its creation and impact.

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