MONETARY POLICIES AND INDUSTRIAL FLUCTUATIONS IN EAST EUROPEAN COUNTRIES

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Abstract: *Industrial fluctuations are closely related to the evolution of relative prices of produced goods and resources involved in production activity. Industrial fluctuations, as an expression of forces manifested in the real economy, are caused by changes in individuals' consumption and investment decisions, produced within expansionary monetary policies. The ease of obtaining a bank loan in the context of decreasing interest rates and of larger amounts of money caused an increase in individuals' demand for goods resulted from longer, capital intensive production processes. The rise in prices of intermediate and capital goods in a faster pace compared to the increase in prices of consumer goods is doubled by the increase of the share of higher order industries in the structure of production. The objective of this paper is to analyze changes in industrial structure of Eastern Europe countries within the policies of quick access to monetary resources. The analyzed states (Bulgaria, the Czech Republic, Hungary, Poland and Romania) are part of the European Union and have autonomous monetary policies, meaning that they have not yet adopted the common currency. In all economies analyzed, we find approximately the same patterns of monetary expansion and industrial fluctuations.*

Keywords: monetary expansion, business cycle, capital goods industry, consumer goods industry, East European countries

JEL Classification: E22, E23, E32, E43

Introduction

Production activities in different industries are the expression of necessary resources' availability and of consumers' demand for specific goods. The availability of resources involved in production, understood in the context of scarcity, is reflected through investors' actions that use their monetary resources to attract and hire factors of production. The demand for goods obtained in different industries is, in its turn, influenced by the preferences of individuals, their incomes and the prices of substitutable or complementary goods. The changing preferences of individuals, technical progress, the depletion of some resources and the discovery of others are obvious assumptions for changing the productive structure of an economy. Beyond these natural phenomena, an important cause of industrial fluctuations is the monetary expansion, easy access to monetary resources. Monetary resources are essential, both in terms of employing factors of production and in terms of consumption. The monetary growth boosts, in the same time, investments and consumption, intensifying competition between those bidding for hiring scarce resources. Therefore, the factors of production are requested both in production activities far away from final consumption and in activities that directly serve it. Monetary expansion increases the number of investments in economy,

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entrepreneurs' calculations being based on signals transmitted by changed prices. Change in relative prices is evidenced by growth of capital goods and intermediate goods prices, with a higher rate than the growth of commodity prices. Industries in the early stages of production intensify their pace of activity, being affected to a greater extent by the economic crisis. The same is true for the prices of capital goods, which recorded a more pronounced decline compared to the prices of consumer goods. The relationship between monetary growth and industrial activity, expressed through the structure production and the network of relative prices is a major component of business cycle theory. We intend to analyze this relationship in the case of five countries in Eastern Europe, since 2004 to 2015. We took into account their quality of emerging countries belonging to the European Union and their autonomous monetary policies.

1. Theoretical and methodological framework

The paper is built on the pillars of the Austrian business cycle theory. The relationship between goods of different order (Menger, 1871) and the role of capital in productive processes length (Böhm-Bawerk 1889) were completed by the theory of money and credit (Mises, 1912) and the structure of production of Friedrich von Hayek (1931), composing the business cycle theory. Growing money supply causes changes in terms of relative prices, stimulating investment processes. Many of these investment decisions would not have been taken in the absence of interest rate change, the latter being responsible for the relationship between preference for present consumption and preference for future consumption (Garrison, 1996). At the same time, easy access to resources will stimulate consumption, which will mean simultaneous lengthening and ascension of the triangle described by Hayek (2008, p. 231). The effect will be the occurrence of phenomena like overconsumption and malinvestments (wrong oriented investments), which will place the economy away from the production possibilities' frontier (Garrison, 2001). The threat of inflation and the central bank's decision to raise interest rates will head the economy to crisis, when it becomes obvious that monetary resources cannot substitute the real resources' scarcity (de Soto, 2011), (Rothbard, 2009). Contraction will eliminate erroneous investments, at the cost of significant loss of capital. The business cycle is in fact the reaction of the real economy's productive forces to monetary expansion. The mirage of social welfare is opposed by the contractionary forces of the real economy (Rothbard, 2009).

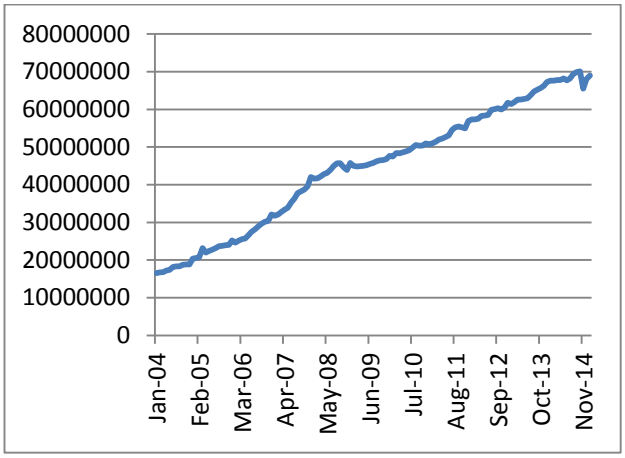
The paper combines elements of qualitative approach, based on economic logic and deduction, with quantitative elements, which have the role to illustrate the theory enunciated. The diversity of

national data sources, even in a context of relative assumed standardization involves the risk of heterogeneous information.

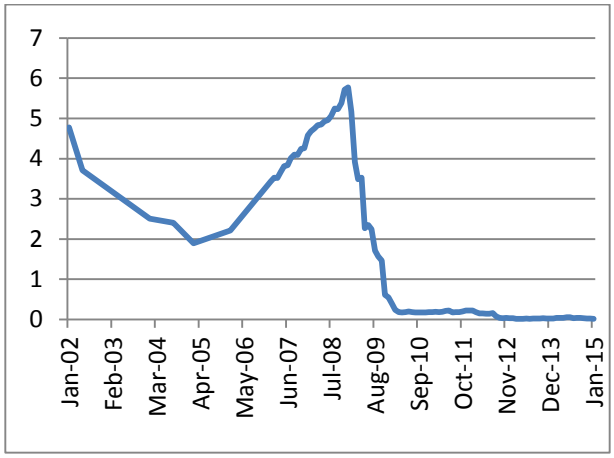
2. Monetary expansion in East European countries

Eastern European economies were aligned, since 2003, the expansionary trend of monetary policy adopted by most developed countries. This trend is visible through the upward evolution of monetary aggregates in the context of decreasing interest rates, as can be seen in the figures below.

Figures 1, 2 – Bulgaria, Broad Money Supply M3, thousands BGN, 2004-2015 and Base interest rate, 2002-2015



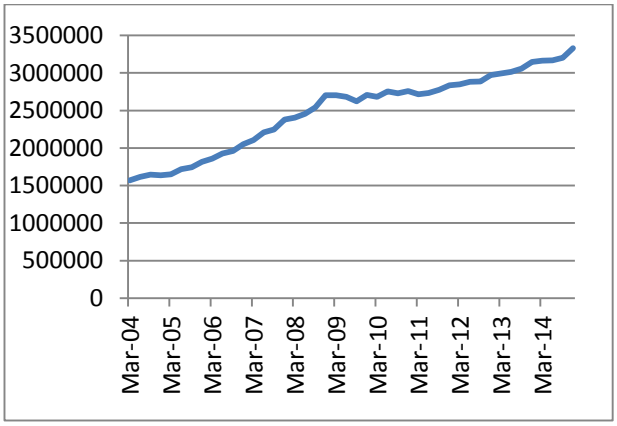
Source: author representation based on data drawn from Bulgarian National Bank, Monetary Statistics



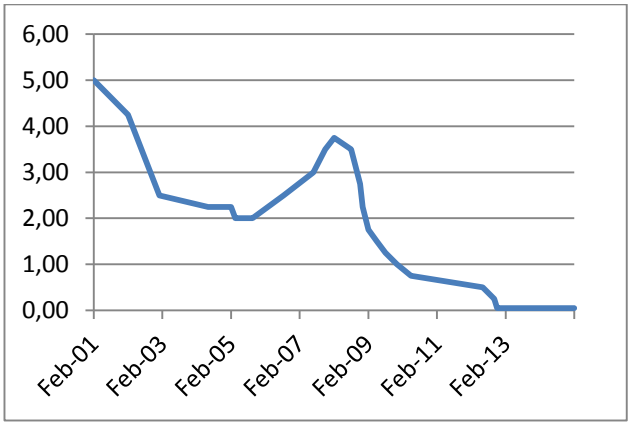
Source: author representation based on data drawn from Bulgarian National Bank, Interest Rate Statistics,

Since January 2002, the interest rate decreased in Bulgaria from 4.78% to 1.89% in February 2005. The increasing thereafter until the peak in December 2008, of 5.77%, prepared Bulgaria's entry into recession in the summer of 2009. The money supply continued to grow, although at lower paces, and after this time. Within a decade, the broad money supply rose in Bulgaria more than 3 times.

Figures 3, 4 – Czech Republic, Broad Money Supply M3, millions CZK, 2004-2015 and Key interest rate, 2001-2015



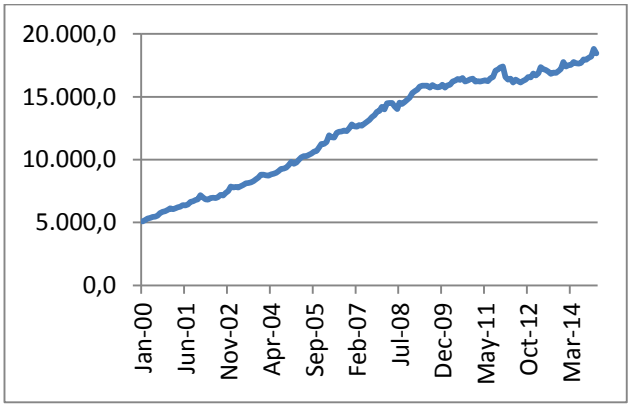
Source: author representation based on data drawn from Czech National Bank, Monetary aggregates and counterparts



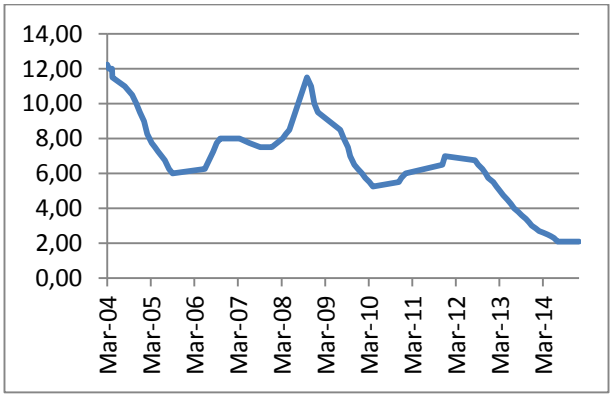
Source: author representation based on data drawn from Czech National Bank, Monetary statistics – Monthly Bulletin 2004-2015

The decreasing of the interest rate in Czech Republic started at the end of 1997, going from 18% on that date to 2% in 2005. As in the case of Bulgaria, since 2005, the interest rate returned on an uptrend, anticipating the economy entering into recession in 2009. The money supply decreased from 1,566,940.80 million CZK in March 2004 to 2,703,370.30 in December 2008.

Figures 5, 6 – Hungary, Broad Money Supply M3, billions HUF, 2000-2015 and Base interest rate, 2004-2015



Source: author representation based on data drawn from Magyar Nemzeti Bank, Monetary and other Balance Sheet Statistics

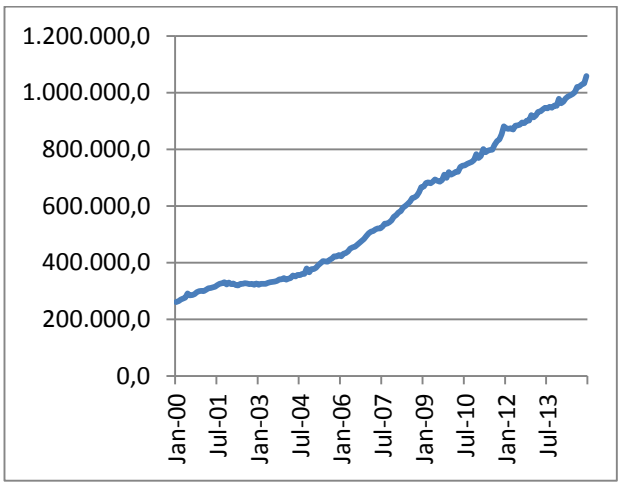


Source: author representation based on data drawn from Magyar Nemzeti Bank, Base rate history

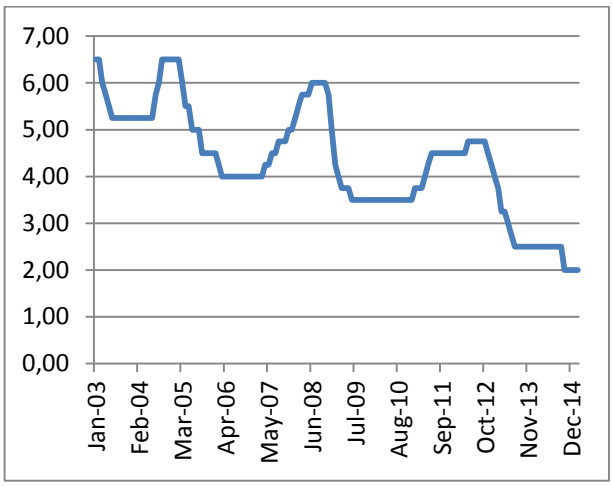
The money supply in Hungary tripled between 2000 and 2009, while interest rates reached a half between 2004 and 2006, with a peak of 11.5% in October 2008. Hungary recorded several episodes of recession after 2009, assigned by some economists to the reduction of the money supply.

For example, Steve Hanke (2012) pointed toward reducing of money supply by 4.2 percent in January 2012 to November 2011 as the cause of re-entry into recession. In fact, the entire 2012 has been characterized by increasing of interest rate, contrary to the tendencies to reduce it in other Eastern European countries (except Poland).

Figures 7, 8 – Poland, Broad Money Supply M3, millions PLN, 2000-2015 and Reference interest rate, 2003-2015



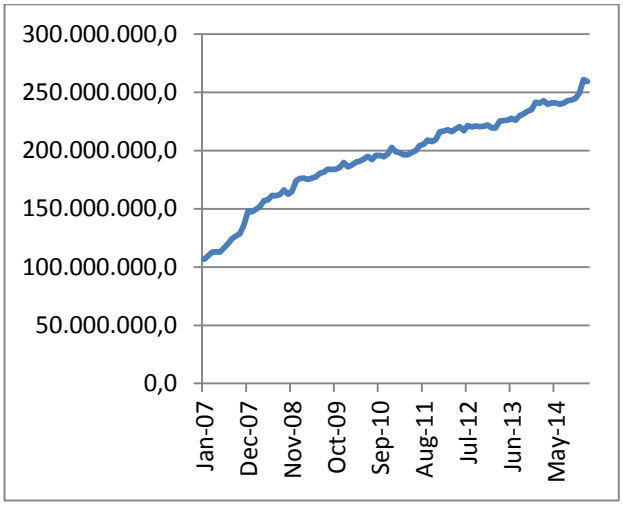
Source: author representation based on data drawn from Narodowy Bank Polski, Monetary and financial statistics



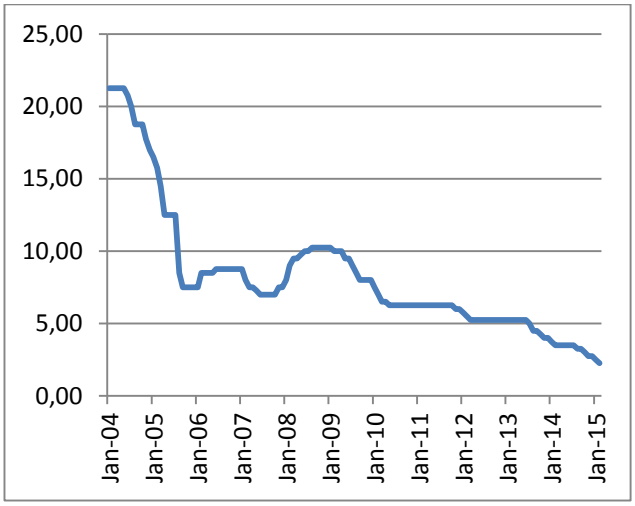
Source: author representation based on data drawn from Narodowy Bank Polski, Statistics Instruments

If, in terms of money supply, the uptrend was maintained in Poland throughout the analyzed period, the interest rate had a fluctuating evolution. Poland is the only EU country which has not entered a recession. Among the possible explanations, we mention that the Polish zloty (PLN) was never pegged to Euro and the growth of the private credit was relatively low, Polish institutions acting not very friendly with creditors (The Economist, 2012).

Figures 9, 10 – Romania, Broad Money Supply M3, thousands RON, 2007-2015 and Key policy rate, 2004-2015



Source: author representation based on data drawn from National Bank of Romania, Monetary financial institutions (MFI) - M3 and its counterpart



Source: author representation based on data drawn from National Bank of Romania, Statistics

In Romania, the interest rate registered a significant decrease, from 21.25% in May 2004 to 7.5% in December 2007. Similarly to the case of the other reviewed countries, the money supply had an upward trend, increasing by more than three times during the economic boom years.

Up to this point of our approach, we have an unified image of monetary expansion in all five countries analyzed, expansion accompanied by fostering access to monetary resources, both for consumption and investments. The result of flooding the economy with cheap money was the increase in demand, both for consumer goods and capital goods. In other words, the demand for present goods and for future goods had increased simultaneously, meaning the occurrence of distortions in the structure of production.

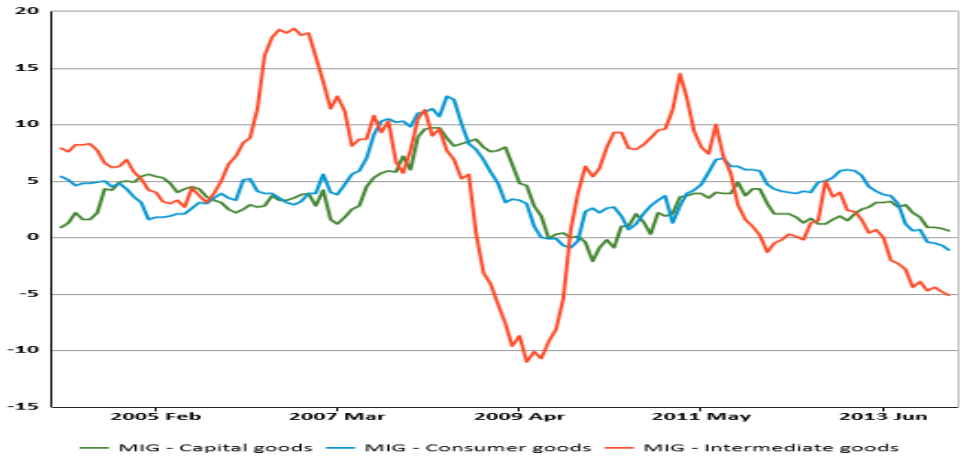
3. Beyond the money. The answer of real economy

Monetary growth cannot generate an increase in the amount of real resources in an economy, only their reallocation, by changing the ratio between prices. We know that economic agents make decisions about consumption and investment, based on price signals. Problems arise when decisions are based on signals transmitted by distorted prices that no longer reflect the relationship between desirability and scarcity of goods. The monetary growth changes the relationship between desirability and rarity, stimulating the first one, while the second is subject to natural obvious limitations. Easy access to monetary resources thus leads to higher demand for both current goods

sand future goods. Future goods, in order to be obtained, they need investments that can be made with the price of current consumption restraining. But monetary expansion seems to oppose the simultaneous use to alternative use. Obviously, we are talking about an illusion that can be maintained only as long as access to cheap money is stimulated. People borrow to buy homes and real estate developers borrow to build them.

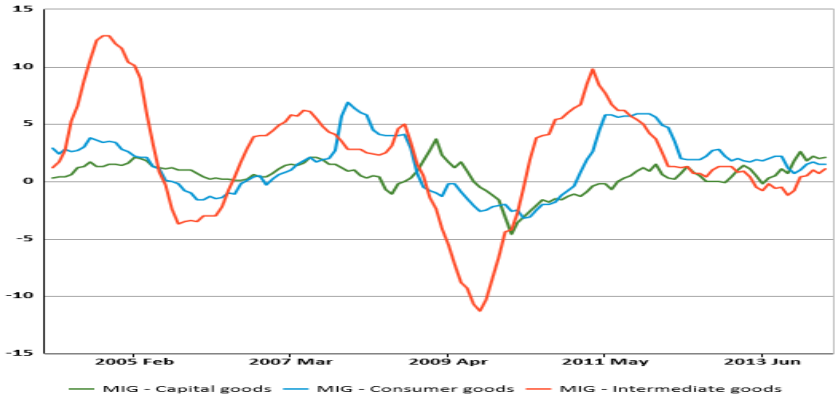
From the perspective of the industrial activity, the five countries analyzed recorded similar developments in the prices of goods classified by main industrial groups. Thus, as illustrated by the graphs below, prices of capital goods and prices of intermediate goods had the largest fluctuations compared to the prices of consumer goods. These fluctuations are obvious over the economic cycle. Thus, in the boom years, capital goods and intermediate goods recorded the largest price increases, these categories being also the ones that have recorded the strongest setback in recession. The only trend that deviates slightly from this model is that of consumer goods prices in Hungary, which in 2010 recorded a steeper decline compared to the goods from the other categories.

Figure 11 – Bulgaria - Output prices of the domestic market index (Producer price index)



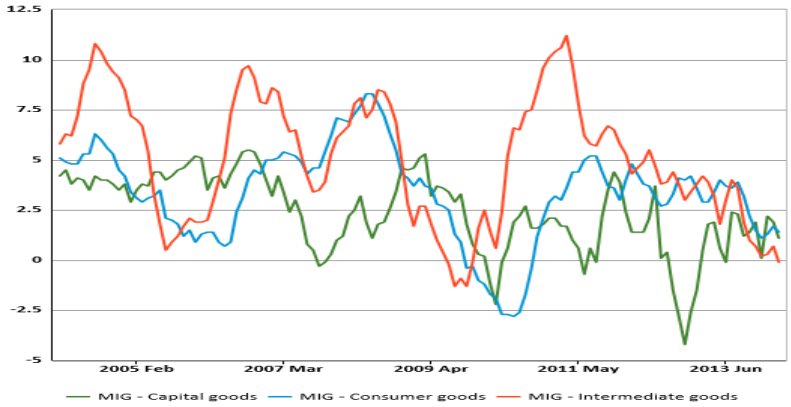
Source: Knoema representation based on data drawn from Eurostat,
http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

Figure 12– Czech Republic - Output prices of the domestic market index (Producer price index)



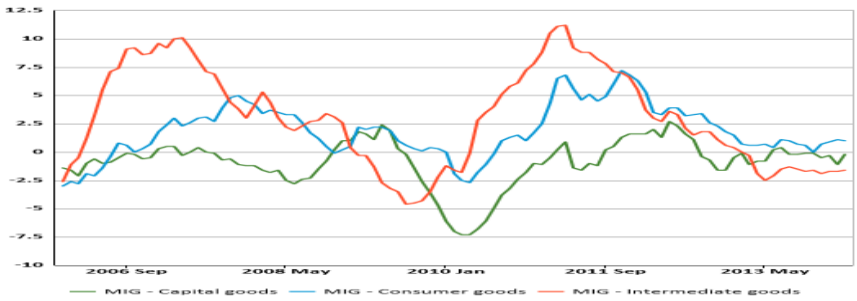
Source: Knoema representation based on data drawn from Eurostat, http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

Figure 13 – Hungary - Output prices of the domestic market index (Producer price index)



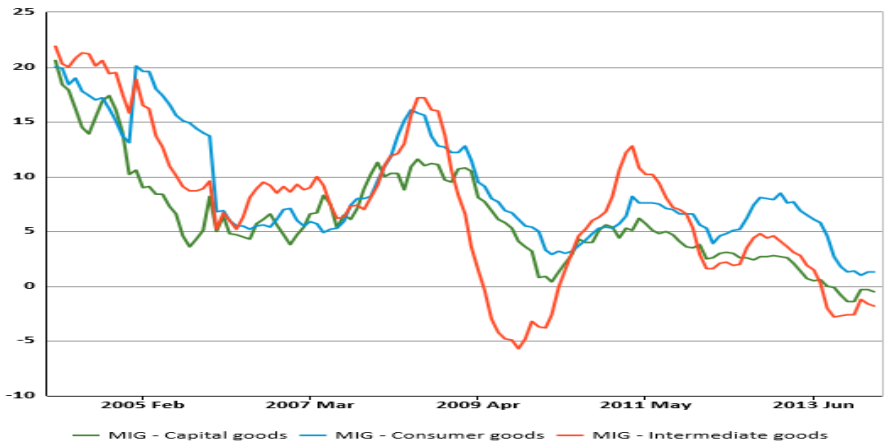
Source: Knoema representation based on data drawn from Eurostat, http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

Figure 14 – Poland - Output prices of the domestic market index (Producer price index)



Source: Knoema representation based on data drawn from Eurostat, http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

Figure 15 – Romania- Output prices of the domestic market index (Producer price index)



Source: Knoema representation based on data drawn from Eurostat, http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

As regards the industrial products, the most visible decreases after 2008, in Hungary, were recorded in steel and cement groups. After a positive trend during the years 1991-2008, these industries experienced an obvious contraction since 2009. From 2.16 million tons in 2008, the steel production dropped to 883 tons in 2013. The same contraction was recorded in the cement production, from 3.544 million tons in 2008 to 1,350,000 tons in 2013 (Hungarian Central Statistical Office). Construction cost base index was 151.2% in 2007 (2000 = 100). In 2008, there were 145,504 housing loans approved in Hungary; in 2013 that number dropped to 40,663. The stock of housing credits was 838,805 in 2008 and 726,050 in 2013.

The industrial production that has experienced the steepest increase between2004 and 2008 was coal and refined petroleum products, with a value of 217%. Significant increases occurred in sub-section „production of rubber and plastics" and "other non-metallic mineral products" (170%), "mining and quarrying" (140%) and "basic metals" (138%). These industries, besides significant growth rates recorded during the boom, have some other common features. All industries are located at a great distance from the final consumer (so-called higher order goods producing industries) and all known significant setback once the economic crisis broke out. Thus, in 2009, the production of coal and petroleum products declined by 29%, base metals production declined by 35% and production of chemicals by 19%. This, considering that the industries closer to final consumption (here are included the production of food, beverages and tobacco, pharmaceuticals, computers), with a more moderate growth rates in the boom years, recorded steeper cuts in production value in 2009 (Hungarian Central Statistical Office, 2015).

In Poland, mining and quarrying production fell by 11.6% in 2009 compared to 2008, while the manufacturing industry fell by only 3.9 percent. The evolution of industrial production is more evident when we analyze the main industrial groups. The capital goods group with an increase of 49.3% between 2005 and 2008, declined by 10.8% in 2009. The group of intermediate goods, with an increase of 26.3 percent between 2005-2008 declined by 7 percent in 2009, while the group of durable consumer goods, with a slower growth in 2005-2008, of 19.2%, recorded in 2009, during the economic crisis in Europe, an increase of 2.5 percent (Central Statistical Office of Poland, 2015).In the Czech Republic, the car and equipment industry and non-metallic mineral products industry recorded a significant increase during the boom years, with rates of 121.4% in 2008 (2010 = 100),respectively 128.9%. Both industries recorded a decline of over 25 percent in 2009 (Czech Statistical Office, 2015). In Romania and Bulgaria, after 2004, the highest increases were recorded in the building materials industry and metallurgy, trend reversed after 2008. The food industry maintained its upward trend throughout the analyzed period, which reveals a clear option of individuals for present consumption and only a contextualized (by monetary increase) option for goods that require longer production processes, for more capital intensive goods.

Conclusions

The crisis of 2008-2009 is an eloquent lesson about distortions created by monetary growth in the structure of production. Industrial production development in Eastern Europe countries and their price indices reflect the effects of monetary expansion. The individuals 'preference for current consumption is evidenced by the relatively smooth development of consumer goods 'prices. Sharp swings in capital goods' prices, as well as significant fluctuations in industries that require longer production processes indicate the action of a triggering factor. Trapped in monetary expansion race, emerging economies from Eastern Europe have experienced industrial growth "mirage". Growth in "on credit" domestic demand stimulated industrial activity, especially in remote from consumer industries. The unsustainability of these investment projects became evident with the tightening of access to bank loans, which argues the artificial nature of growth.

The main problem of the emerging economies is the lack of capital. Capital is the key resource of a sustainable industrial structure. Monetary growth can not compensate the lack of capital, it does nothing more than reallocate productive resources in combinations that turn out not to be supported by individuals' preferences. Moreover, the artificial orientation of resources based on distorted prices is responsible for loss of capital. The chance for healthy growth of these economies is the attraction

of investment, of capital in order to boost production processes supported by consumers' preferences, and not artificially stimulated by increasing the supply of money.

Acknowledgement

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