THE PROBLEM OF MIDDLE INCOME TRAP IN THE CONTEXT OF THE POLISH ECONOMY

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ABSTRACT

Middle income trap is a phenomenon that occurs at the time of entry of the economy in the cycle of overheating, which in turn leads to economic stagnation or even recession in developing countries. This phenomenon is most common among the developing countries aspiring to catch up with developed countries in economic development. The purpose of this article is to analyze the degree of risk of the Polish economy of middle income trap. Furthermore, in the article it has been indicated action of the economic authorities in Poland, which are unavoidable in order not to fall into middle income trap. To achieve this objective the following research methods were used: a review of the scientific literature and methods of statistical presentation of economic phenomena. The paper identified a number of factors which pose a real threat of falling into the middle income trap in Poland. The originality of this study lies in noticing and highlighting the significance of the middle income trap problem for the Polish economy.

Keywords: economy; emerging markets; middle income trap, economy authorities

INTRODUCTION

Poland is considered to be an example of successful transformation as a country which has successfully introduced the institutions of a market economy. In addition, during the last financial crisis, Poland was seen as a country with a stable financial and economic system. On the other hand, Poland faces the risk of falling into what is known as "the middle income trap", the essence of which is based on a long-term slowdown in economic growth after a period of relatively rapid development. As a result of the slowdown, the countries that achieve economic success can not be matched to the highly developed countries. The literature indicates that most often middle income trap occurs in the economy, which reached the level of GDP per capita of about 17 thousand USD [1]. Looking at the economies of countries that have entered the middle income trap, we note that they are characterized by generally smaller increments factor productivity, which are associated with a lack of innovation and the inability to create competitive industries in the economy. Often has been noticed that the countries that have fallen into the middle income trap are characterized by the fact that their countries do not create new technology and only import foreign technologies by making them less innovative. Following what the economy trapped in middle income trap is mainly based on the production of goods less technologically advanced, and companies do not offer products at the highest level, basing its competitiveness on low cost [3]. Lissowska indicates a problem "trap of the middle level of development", which appears in a situation when a given country moves from medium to high level of development should strive to improve the quality of work, education and competence [2]. Hence the purpose of this article is to analyze the degree of risk of the Polish economy of middle income trap.

Middle income trap in the literature

Eichengreen et al. pointed the several factors that increase the probability of entering the country into the middle income. Among the determinants that increase the probability they pointed out exchanged high investment rate before reaching the critical level of development; a relatively low share of high technology goods in exports and undervalued national currency, which artificially maintained in the long run can become a factor for entry into the middle income trap. On the other hand, among the factors that reduce the likelihood of entry into the middle income trap Eichengreen et al. indicated a high proportion of people with secondary and higher education in the population of working age; a relatively high proportion of high technology goods in exports and undervalued national currency, which is often conducive to economic growth in the period of catch-up. They also stressed that the middle income trap may involve not only maintaining a GDP growth rates at a low level but also the sharp slowdown in economic growth [7].

Felipe et al. among others named the factors that increase the likelihood of entry into the middle income trap: exchanging low level of diversification of the economy; poor diversification of exports and low-processed goods, insufficient saturation of human and physical capital and weak legal and institutional conditions. Among the factors that reduce the risk of entry of the country into the middle income trap Felipe et al. indicated a high level of diversification of the economy, significant variation in exports and exports of goods advanced, high saturation of human and physical capital, and good conditions for legal and institutional [8]. Ayiar et al. also pointed several factors that increase the risk of entry into the middle income trap. Among those factors, they mentioned the poor quality of the legal system and problems with the enforcement of contracts and property rights, excessive growth of the public sector as well as over-regulation of labor markets, product and credit markets and a high demographic dependency ratio. Ayiar et al. named the factors that reduce the likelihood of entry into the middle income trap: the high quality of the legal system and enforcement of contracts and property rights, a lower degree of regulation of labor markets, products and credit markets, reducing the share of public sector in GDP and the low value of the demographic dependency ratio [9].

Radło and Ciesielska-Maciągowska emphasize that an economic policy and a certain degree of government intervention play an important role in strengthening the economic growth, an example of which is even South Korea and other industrialized Asian countries. On the other hand, in the case of less developed countries of Latin America, which got stuck in the middle income trap they observed that it was inappropriate economic policies as too far reaching intervention in the structure of the growing economy has contributed to the economic downturn [1] [11].

In the literature, there are views that the so-called Baumol's disease is one of the reasons of the entrance of the economy into the middle income trap. Baumol's disease lies in the fact that a growing share of the service sectors in the economy due to the lesser possibility of substitution of labor by other factors manufacturing services. This is due to the fact that labor productivity in services is growing more slowly than in other sectors with evenly increasing wages throughout the economy and its sectors which contributes to the fact that the prices of services are rising faster. As a result, it contributes to the economic slowdown as increasing employment in low-efficient services. Hence the greater the chances of stable development have countries where rising employment in sectors with above-average labor productivity, e.g. in the sectors of high-performance knowledge-based services [10].

Indicators of Polish economy related to the problem of the middle income trap

Other important factors that could indicate a threat to the middle income trap is even GDP per capita and GDP growth in the economy. On the basis of the data presented in Table 1, it can be stated that Poland's GDP per capita over 16 years has increased significantly. Comparing it to the GDP per capita in the European Union, we see that GDP per capita in Poland is 68% of GDP per capita in the EU in 2014 (in 2000 this ratio was 47%). On the other hand, GDP growth in Poland slowed down considerably, especially during the crisis and after the crisis (with the exception of 2011 when the growth was 4.5%).

Table 1. GDP per capita in Poland and in UE in years 2000 – 2015

Years	PPP GDP per capita in Poland in current international $	PPP GDP per capita in EU in current international $	The ratio of GDP per capita in Poland to GDP per capita in the EU (in %)	GDP growth in Poland (in %)
2000	10608	22559	47	4.30
2001	10967	23752	46	1.20
2002	11592	24662	47	1.40
2003	12045	25291	48	3.90
2004	13050	26499	49	5.30
2005	13807	27738	50	3.60
2006	15144	30050	50	6.20
2007	16890	31838	53	6.80
2008	18046	33153	54	5.10
2009	19140	32365	59	1.60
2010	20883	33252	63	3.90
2011	22520	34559	65	4.50
2012	23599	35161	67	2.00
2013	24494	36136	68	1.60
2014	25262	36922	68	3.30
2015	N/A	N/A	N/A	3.60

Source: World Bank, International Comparison Program database: http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD (access: 29.06.2016).

Compared to other EU countries Poland is the only country recorded during the financial crisis with positive economic growth. However, it was associated with a significant loosening of fiscal policy as reflected in the increase in the budget deficit and public debt (Table 2). Thus, in recent years, the Government aimed to reduce the debt ratios of the economy which could weaken economic growth.

From 2013 low inflation (or even deflation in 2014) promotes the economic decisions of the government and stimulates the economy [14].

Table 2. Selected indicators of the Polish economy in years 2000 - 2015

Years	**CPI (December previous year = 100)**	**Deficit/PKB in %**	**Debt/GDP in %**	Internal expenditure on R & D (research and development) in relation to GDP, in%	Gross fixed capital formation in Poland (% GDP)	The working age population (18-59/64 years)in Poland, in%
2000	8.50	-2.97	-36.5	0.64	23.7	60.8
2001	3.60	-4.78	-37.3	0.62	20.5	61.5
2002	0.80	-4.85	-41.8	0.56	18.4	62.2
2003	1.70	-6.08	-46.6	0.54	18.2	62.9
2004	4.40	-5.15	-45.3	0.56	18.3	63.5
2005	0.70	-3.99	-46.7	0.57	18.9	64.0
2006	1.40	-3.59	-47.1	0.55	20.4	64.2
2007	4.00	-1.85	-44.2	0.56	22.5	64.4
2008	3.30	-3.63	-46.6	0.60	23.1	64.5
2009	3.50	-7.32	-49.8	0.67	21.4	64.5
2010	3.10	-7.63	-53.60	0.72	20.3	64.4
2011	4.60	-4.90	-54.80	0.75	20.7	64.2
2012	2.40	-3.74	-54.40	0.89	19.8	63.9
2013	0.70	-4.02	-55.70	0.87	18.8	63.4
2014	-1.00	-3.20	-50.10	0.94	19.7	63.0
2015	N/A	N/A	N/A	N/A	20.1	62.4

Source: World Bank, International Comparison Program database: http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD (access: 29.06.2016).

The essential factor influencing positively economic growth is spending on research and development (R & D). In Poland in 2000, internal expenditure on research and development amounted to 0.64% of GDP, in turn, in 2015 is 0.94%. Comparing expenditure on R & D in Poland in 2014 (0.87 % of GDP) and in the EU28 (1.95 % of GDP) it should be emphasized that in Poland these expenditures despite the increase are still much lower than the average in the European Union. Alarming is the fact that investment (gross fixed capital formation) in Poland in 2000 amounted to 23.7 % of GDP and in 2015 fell to 20.1 % of GDP. This is not a factor contributing to GDP growth.

According to Pokrywka the European funds remain an important instrument for accelerating the long-term economic growth in Poland . EU funds will to a greater extent, contribute to economic growth if they are devoted to efficient and renewable tools such as guarantee funds and hedge funds, seed capital , credit tools for innovative activities co-financed by the government. According to the research, EU funds improved GDP growth by 0.6 percentage point per year in the period 2005-2016, only through indirect measures [12]. European funds and foreign trade with EU countries promote economic growth and reduce the unemployment rate [13]. In Table 3 were presented data on unemployment in Poland and the EU as a percentage of the economically active population In Poland, on the background of the EU it is not as alarming as the population of working age (18-59/64 years) which had been declining (Table 2). A positive phenomenon in Poland is to improve indicators of labor productivity per person employed of 60.8 % of the EU average in 2004 to 74.3 % of the EU average in 2015. In turn, the rate of labor productivity per hour worked increased in Poland with 49 % average EU countries in 2004 to 59.3 % of the EU average in 2015 – continuing this rate is just over half the level of efficiency in the EU (Table 3).

Table 3. Nominal labour productivity per person employed, nominal labour productivity per worked hour in Poland and unemployment in EU and Poland in years 2004 – 2015

Years	Nominal labour productivity per person employed (EU28 = 100) in Poland	Nominal labour productivity per worked hour (EU28=100) in Poland	Unemployment annual average- percentage of active population in EU	Unemployment annual average- percentage of active population in Poland
2004	60.8	49.0	9.3	19.1
2005	60.5	48.9	9.0	17.9
2006	60.0	48.4	8.2	13.9
2007	61.1	49.4	7.2	9.6
2008	61.2	49.6	7.0	7.1
2009	65.0	52.3	9.0	8.1
2010	69.5	56.0	9.6	9.7
2011	71.7	58.0	9.7	9.7
2012	73.6	59.1	10.5	10.1
2013	73.7	59.0	10.9	10.3

2014	73.8	58.9	10.2	9.0
2015	74.3	59.3	9.4	7.5

Source:Eurostat:http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tec00116&plugin=1 and http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do (access: 30.06.2016) [5].

An important indicator describing the social development and the standard of living is the Human Development Index (HDI) developed by the United Nations Development Programme (UNDP). This is the geometric mean of the three elements which reflect the gross national income per capita, life expectancy at birth and level of education. It is assumed that these three measures represent the three basic dimensions of human development: a long and healthy life, education and a decent standard of living. Index values are in the range of 0 to 1 and the higher the value the higher the level of development. According to a recent report, Human Development Report (UNDP, 2015) based on data from 2014 Poland has achieved HDI of 0.843 giving a result close to the average Central and Eastern Europe. Among the EU 28 countries, Poland is ahead of only Lithuania, Portugal, Hungary, Latvia, Croatia, Romania and Bulgaria. However, in the world ranking HDI Poland takes the 36th place among 185 countries [6]. Thus, Table 4 presents the data of the higher education of the population aged 30-34 and higher education workers aged 25 - 64 years in Poland and the EU. In Poland, since 2010 the number of citizens and employees with higher education exceeds the figures of the EU as a factor reducing the risk of middle income trap.

Table 4. Tertiary educational attainment and employees by educational attainment in UE and in Poland in years 2000 – 2015

Years	Tertiary educational attainment – total in EU28* (population aged 30-34)	Tertiary educational attainment – total in Poland* (population aged 30-34)	Employees by educational attainment level in EU28– from 25 to 64 years	Employees by educational attainment level in Poland– from 25 to 64 years
2000	n.d.	12.5	N/A	N/A
2001	n.d.	13.2	N/A	N/A
2002	23.6	14.4	N/A	N/A
2003	25.0	17.2	N/A	N/A
2004	26.9	20.4	27.2	24.4
2005	28.1	22.7	27.8	26.2
2006	29.0	24.7	28.1	27.1
2007	30.1	27.0	28.7	27.3
2008	31.1	29.7	29.2	27.8

2009	32.3	32.8	30.6	30.0
2010	33.8	34.8	31.4	31.8
2011	34.8	36.5	32.4	32.6
2012	36.0	39.1	33.4	34.0
2013	37.1	40.5	34.2	35.3
2014	37.9	42.1	34.7	36.6
2015	38.7	43.4	35.5	37.4

Source:Eurostat:

* The indicator is defined as the percentage of the population aged 30-34 who have successfully completed tertiary studies (e.g. university, higher technical institution, etc.).http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tsdsc480&plugin=1 (access: 30.06.2016).
http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do (access: 30.06.2016)

In conclusion it is worth mentioning that in the World Bank report Doing Business 2016, which assessed business environment, Poland is on the 25th place among 189 countries. For comparison, in the ranking of Doing Business 2009 Poland took the 76th place. Poland improved its position among others: in terms of procedures related to the payment of taxes (58th position - the promotion of the 87th place in 2015); obtaining building permits (52nd position - the promotion of the 137 places in 2015), while in terms of the conditions of international exchange Poland took first place (in 2015- 41st). In the category of paying taxes Poland is on the 58th position, in the category of starting a business Poland takes 85th place, while when it comes to the economic judiciary 55th position and solving the problem of bankruptcy – 32nd place [4].

CONCLUSION

The purpose of this article was to analyze the degree of risk of the Polish economy of middle income trap. The result, in the article indicated a number of factors, which pose a real threat of falling into the trap of Poland's middle income trap. After the recent financial crisis, the lower economic growth than before the crisis has been noticed . Despite low interest rates (decisions of the monetary authorities) improving the situation of public finances, increasing GDP per capita, improving the quality of education, increasing spending on R & D (although too slow), improving productivity and better business conditions there are still indicators pointing to threat of falling into the middle income trap.

In Poland, among the barriers of long-term economic growth it should be mentioned inter alia: complicated tax system, low levels of innovation and expenditure on research and development and investments, unfavorable demographic trend, still too low labor productivity and GDP per capita below the EU average. Therefore, there is a certain degree of danger of Polish economy of middle income trap, however, reforms, especially in the respect of the risks of long-term economic growth should prevent Polish economy from stagnation.

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