University of Sopron

Alexandre Lamfalussy Faculty of Economics

PROTRACTED GROWTH SLOWDOWNS AND INCOME TRAPS IN THE DEVELOPMENT PATH OF EMERGING ECONOMIES

Comparative Analysis of the BRICS and CEE Economies

Theses of the PhD Dissertation

Krisztina Sőreg

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Doctoral School: István Széchenyi Management and Organisation Sciences

Head of the Doctoral School: Prof. Dr. Éva Kiss DSc

Program: International Economics

Head of the program: Dr. Balázs István Tóth

Scientific supervisor: Dr. Annamária Artner

1. Motivation for the research topic

There is no doubt that the fast economic growth of emerging countries is playing a vital role in the development of our world economy. Periods of significant growth and slowdown have considerable effects on global economic tendencies – and also, peripheries depend on the business cycles of the centre – and market processes in both more and less developed regions. Over the last decade, the average growth rate of GDP per capita has been almost double that of the developed economies. It is also a well-known fact that in case of latter countries, the financial crisis of 2007-2008 has had quite devastative impacts, especially regarding the protracted recession period of 2009-2014 in the European Union. However, developing economies have been much more devastated by recent crisis due to the 'crisis accumulation' process going on within the region for decades.[1] In addition, recessions tend to be much more severe in emerging economies after the previously experienced higher growth rates.

In frames of the Thesis, the issue under scrutiny is the overall economic development of two selected groups of emerging economies: on one hand, the analysis is carried out regarding the so-called BRICS country group (Brazil, Russia, India China and South Africa) and on the other, two selected groups of the Central and Eastern Economies (CEECs) countries is examined – the Visegrad Four economies (the Czech Republic, Hungary, Poland and Slovakia in a narrow approach) and an extended combination of CEECs defined by the Author. Despite the geographical distance as well as

[1] see Annamária Artner (2014): Capital, Labour and Crisis in the Era of Globalization.

significant socio-economic differences, both sets of countries have managed to produce relatively high growth rates and also, episodes of protracted slowdowns could have also been detected in these dependent market economies. Also, the phenomenon of the middle-income trap (hereinafter referred to as 'MIT') is serving as a common element regarding the economies analysed and thus latter combined with the dependence based growth path of the given countries represents a new approach in development economics providing the novelty of current research.

The main motivation for the research topic is to contribute to the growth economics based approach of certain emerging countries' development scenarios by detecting patterns of protracted growth slowdown scenarios in middle-income economies and making prognosis about their future catching-up path. What factors might determine the long-term development and convergence of certain regions of the world? Can factors which possibly contribute to slowdown periods, be classified according to any accurate method that might be economically legitimate for more than one nation state? What is the relationship between dependent market economies theory and the middle-income trap?

To continue, it is also important to investigate which country group and why has been performing in an efficient way during the last couple of decades in relative terms. Can asymmetric interdependencies be blamed for the long-run economic divergence of certain – usually middle-income level – countries which are struggling to catch up to the regionally more developed economies but are failing to achieve latter goal among current conditions of global capitalism? In order to have a more comprehensive macroeconomic approach of the issue, the Author has developed a new definition for the middle-income trap phenomenon by focusing on both exogenous as well as endogenous factors of the economic development concerning the BRICS and the CEE economies' growth path. The research carried out in frames of the Thesis pays special attention to the case study of Hungary since it is representing one of the most ambivalent development models within the analysed economies. Thus, it raises some further questions about the long-term development tendencies of strongly FDI-based, small, and open economies experiencing the middle-income trap.

2. Structure of the dissertation

Following the introduction of the chosen research field as well as a methodological summary of the applied quantitative means and models, the research topic investigated in the dissertation is introduced by an extended theoretical overview of growth theories with a special focus on development asymmetries in frames of Chapter 3. From the classical approach to the modern growth theories, the Author provides a brief analysis of the most relevant statements, conditions and characteristics of economic growth, growth slowdowns and economic development based approaches which are significant from the point of view of current research topic.

Chapter 4 is representing the congestion point of both theoretical and practical approaches by introducing in details the middle-income trap concept and presenting the Author's findings about trap episodes since 1950 by developing an alternative definition and calculation method for the phenomenon relying on the World Bank World Development Indicators (WDI) as well as the Maddison Project Database. In Chapter 5, the analysis is narrowed to the growth tendencies and catching-up patterns of two sets of dependent market economies, the BRICS and the CEECs through various country episodes and some further macro level results of the research starting with the thorough analysis of the dependent market theories and continuing with presenting the special case character of these regions regarding convergence. The final chapter of the Thesis serves as the concluding block of the research with providing the Author's findings for the originally stated five hypotheses.

3. The main research hypotheses of the Thesis

In what follows, the Author is briefly presenting the most important hypotheses developed within current research.

H1: **Global semi-periphery economies** (e.g. BRICS country group) – **due to certain favourable endogenous and exogenous factors** (geographical location, high raw material and natural resource abundance, huge domestic market, beneficial demographical tendencies, "follower based" technological developments or periodically increasing/decreasing global competitiveness) – **are holding significant potential of a realizing a successful catching-up scenario and thus redefine the power balance between centre and periphery economies**.

H2: **The integrated periphery economies** (e.g. Central and Eastern European Countries) – **due to their historical burden based asymmetric interdependencies** (high dependence on foreign direct investment inflows, relatively small domestic market, lack of natural resources and raw materials, the cumulated economic divergence since the change of the regime in case of Central and Eastern Europe and middle-income trap episodes) **are not likely to produce long-term full convergence to the Western European centre among current conditions of global capitalism**. The relatively small-scale and in most cases, hectic development of such dependent market economies might be rather viewed as a special case that usually emerges only in countries with certain initial advantages.

H3: **The growth dynamics of the BRICS countries shows strong correlation with the fluctuation of commodity**

prices, especially in case of the raw materials and natural resources.

H4: **The process of accession to the European Union -** by stimulating foreign investment to the region **- has strongly contributed to the significant pre-crisis growth as well as to the post-crisis persistent growth slowdown in Central and Eastern European Countries**.

H5: Strictly in economic frames, **Hungary has been showing a significant diverging tendency from the Visegrad Four countries since the mid-2000s** and thus represents a special case within the country group having possible further implications regarding its catching-up path. Further, based on Jánossy's trendline theory calculations, **Hungary's long-term** (of almost a 100 years long period) **average GDP per capita growth rate is around 1.8 percent per year**, indicating that it has been **neither converging nor diverging to the most developed economies.**

4. Research methodology

In order to provide an extended analysis of growth slowdowns and economic growth episodes of the selected countries, the Thesis composes of both qualitative and quantitative research methods. As it has been already mentioned, Chapter 3 provides a theoretical comparison of the different economic growth related approaches and models in frames of a secondary research. On the other hand, in Chapter 4 the author is introducing several empirical methods with the aim of detecting growth trajectories of the BRICS and CEECs as well as to find some middle-income trap episodes by developing a new system for latter phenomenon. The following quantitative tools have been applied within the research:

- **comprehensive micro and macro level data comparison** regarding the investigated countries' economic performance relying on the databases provided by several international organizations (see beneath) as well as the researched countries' statistical bureaus' information;
- **statistical and econometric models and analyses** (e.g. Jánossy's trendline theory model);
- **statistical hypothesis testing and comparison of samples** (e.g. probability of slowdown episodes, randomness testing of the order of years with slowdown periods, covariance of closing years of slowdowns within country groups, etc.);
- **prediction models such as two- and multiple variable regressions and variance analysis** (ANOVA).

In course of the Author's empirical research, the following sources have been used with the highest frequency: CIA – The World Factbook; Eurostat; IMF World Economic Outlook; OECD Statistics; The Maddison Project Database; The World Bank – World Development Indicators; UNCTADSTAT; WEF – Global Competitiveness Reports; National statistical office databases provided by the examined economies.

5. Basic results of the research

In what follows, the Author is presenting the most significant results of the research organized according to the main theses, hypotheses and results of the hypothesis testing carried out in frames of the analysis. First of all, as the most relevant novel scientific result, the definition and main characteristics of the **middle-income trap** has been developed according to the following method:

- First of all, it is relevant to determine the income categories used for classifying individual economies. Relying on World Bank WDI data as well as the Maddison Project Database, we are comparing the per capita Gross Domestic Product of the given country to the global average per capita GDP. As a result, those countries can be considered as **low-income group** members which have **per capita incomes at least 50 percent below the world average**. **Between** a relative income levels of **50% to 100%**, an economy will belong to the **lower-middle group**. **From 100 to the 200 percent** level, countries are identified as **upper-middle income** economies. **Above 200%** we are dealing with **high income group** members, which represent the most developed countries. Second, some further criteria should be developed in order to identify protracted slowdown periods as well as possible middle-income trap phenomena;

- The **per capita GDP** adjusted for purchasing power parity of the middle-income country **has to achieve at least 50% of world average and maximum the double of it**;

- **10 years before the slowdown period** there is era of **faster-than-usual economic growth**. Moreover, the given country is likely to follow a **catching-up path** producing **at least 3% per capita GDP growth annually as a 10-year average**;

- **Growth slowdown** is viewed as **stagnation** and not as a rapid recession;

- During the **minimum 10-year long growth slowdown**, the **per capita GDP growth rate is close to zero or maximum one percent per year**;

- The **uppermost income level where the middle-income trap could be observed** is around **2.3 times the value of the per capita world GDP**. This value approximately conforms to the current level of development of the *Czech Republic* or *Estonia*.

The dissertation is organized according to the following theses:

Thesis I: Growth tendencies of the developing economies (Chapters 5.1-5.2 of the dissertation)

Hypothesis 1: *Global semi-periphery economies* (e.g. BRICS country group) – *due to certain favourable endogenous and exogenous factors* (geographical location, high raw material and natural resource abundance, huge domestic market, beneficial demographical tendencies, "follower based" technological developments or periodically increasing/decreasing global competitiveness) – *are holding significant potential of a realizing a successful catching-up scenario and thus redefine the power balance between centre and periphery economies*.

Result 1: *The hypothesis was partially accepted* since only China and India has been showing such a relevant catching-up tendency with minor fall-back episodes due to factors as the recent economic crisis of 2007-08. Brazil is currently dealing with several endogenous socio-economic problems and it also has quite high dependence on the global market prices of raw materials. What is more, Russia's development path is completely contradictious with the hypothesis having extremely high natural resource dependency, severe domestic implications (e.g. a low-intense conflict with Ukraine and the EU-US sanctions' economic effects) and the country is also struggling with rampant corruption. In the wider sense (BRICS approach), the South African Republic is a complete outlier within the group but it is also highly dependent on commodity prices. Besides a considerably large domestic market and abundance in certain natural resources, its overall growth and development performance is far from the other four countries' averages.

Thesis II: The middle-income trap phenomenon (Chapter 4 of the dissertation)

Hypothesis 2: *The integrated periphery economies* (e.g. Central and Eastern European Countries) – *due to their historical burden based asymmetric interdependencies* (high dependence on Foreign Direct Investment inflows, relatively small domestic market, lack of natural resources and raw materials, the cumulated economic divergence since the change of the regime in case of Central and Eastern Europe and middle-income trap episodes) *are not likely to produce long-term full convergence to the Western European centre among current conditions of global capitalism*. The relatively small volume based and in most cases, hectic development of such countries might be rather viewed as a special case that usually emerges only in economies with certain initial advantages.

Result 2: *The hypothesis was accepted* since the CEECs (as a country group) still haven't managed to produce full convergence to the EU centre economies in the recent 30 years. Although there have been positive examples like the Czech Republic, it can be concluded that these economies are performing relatively better due to some special comparative advantages (as the tight trade relations and proximity to Germany, more FDI inflows, etc.). However, consistent vulnerability to internal and external shocks, strong FDI dependency, relatively low rate of economic growths in the long run and a special peripheral geographic location between the more developed part of Europe and some authoritarian powers of the 'East', like Russia or Turkey are definitely presenting a risk for a successful convergence path. On the other end of the scale, Hungary might be viewed as an absolute loser of current economic circumstances with the highest dependency indicators among the CEEC countries. In Hungary, two middle-income trap episodes were detected in the Author's calculations. Although Poland develops faster, it also had a MIT event.

Thesis III: convergence path of the BRICS economies and Central and Eastern European Countries in light of the middle income trap (Chapters 5.2 and 5.3. of the dissertation)

Hypothesis 3: *The growth dynamics of the BRICS countries shows strong correlation with the fluctuation of commodity prices*, especially in case of the raw materials.

Result 3: *The hypothesis was partially accepted* after analysing the Combined Commodity Price Index (published by the IMF). According to the results, Russia represents the most exposed economy within the BRICS and only India might be viewed as a country whose development path is independent of the commodity markets. There is thus a strong relation between a country's export structure, its exposure to commodity prices and economic growth. The example of Brazil and Russia serves as a conclusion that in the aftermath of a global economic crisis falling commodity prices are likely to break a steep growth path sustained in a preceding time period and may lead to protracted stagnation thus preventing the given country from upgrading to a higher income group.

Hypothesis 4: *The process of accession to the European Union* - by stimulating foreign investment to the region - *has strongly contributed to the significant pre-crisis growth as well as to the post-crisis persistent growth slowdown in Central and Eastern European Countries*.

Result 4: *The hypothesis was accepted* since latter coherence is significant, especially in case of current account balance and foreign direct investment inflow. Subsequently, larger external imbalance and more inflow of foreign capital contributes to GDP increase, however, the net international investment positions of the examined countries will likely deteriorate within the same period. It also means that these economies are much more vulnerable than the more advanced EU Member States and may experience severe recession episodes following external shocks. What is more, recovery periods tend to be much longer and thus, more devastating for their domestic economic processes.

Hypothesis 5: Strictly in economic frames, *Hungary has been showing a significant diverging tendency from the Visegrad Four countries since the mid-2000s* and thus represents a special case within the country group having possible further implications regarding its catching-up path. Further, based on Jánossy's trendline theory calculations, *Hungary's long-term (of almost a 100 years long period) average GDP per capita growth rate is around 1.8 percent per year, indicating that it has been neither converging nor diverging to the most developed economies.*

Result 5: *The hypothesis was accepted* since according to the Author's calculations, besides having a close-to-world-average long-term growth rate, Hungary was producing the lowest GDP per capita in PPP in 2017 within the V4 group, had the second lowest net FDI inflow, having the lowest ranking result based on WEF's Global Competitiveness Report and a very disproportionate foreign trade dependency on its main trading partner (Germany) compared to the other three Visegrad countries. Due to its dual economic structure, strong dependency on foreign capital as well as EU subsidies, cheap labour force pool and low value added production, it has developed a high exposure to external shocks as well as endogenous socio-political changes unbeneficial for long term economic growth.

6. Conclusions

In our 21st century world economy, social, political and economic development tendencies as well as power shifts have been undergoing at faster rates than ever. This mainly occurs due to level of globalization, increasing concentration of assets and resources and the fast flow of information through all the main regions of the world. Still, it might be noticed that certain country groups or individual economies have become even more vulnerable than a couple of decades ago. The main aim of the research was to analyse the economic growth path of such economies and to detect those standard or non-standard factors which might have greatly contributed to the slowdown phases in recent decades.

The Author's most relevant method was to develop an alternative concept of the middle-income trap phenomenon and to examine the given countries' overall economic performance in details. As the research proceeded, it turned out that the main difference between the fastest emerging economies and the transit countries of the CEEC region is that some countries within the BRICS group – although also having relevant dependence on global prices of natural resources – seem to be much more successful regarding long-term convergence. Besides such evident characteristics as huge domestic market or raw material abundance, it is much more important that latter countries didn't experience such a shock as the regime change of the CEECs thus imposing a historical burden of furtherly growing dependency on inward FDI as well as other features. It was also presented that there is a significant divergence among the above-mentioned country group and Hungary is representing an outlier economy currently balancing between the Visegrad Group and the Balcanic Three countries' level of development being the only economy within the region that had previously experienced two MIT episodes. Due to certain endogenous factors, its performance has generally slowed down in the recent 10-15 years and it has also developed a dual structure of economy with a strong multi- and transnational based branch. These internationally-backed firms are highly integrated into global economy in contrast with a weak domestic sector that is not competitive on international level due to low value added production and the lack of high quality human capital base.

Since the development of emerging economies has been representing a topical issue, some future research should be carried out concerning the possible catching-up strategies for certain middle-income economies. It should be also investigated more thoroughly what governments as well as public institutions should imply as strategies in order to maintain stable economic growth especially in country groups with such a special development pattern as the CEECs being so vulnerable on the periphery of the EU. Crisis management in emerging economies is also a relevant issue to discuss since the higher level of dependency on external processes. Regarding the BRICs, it would be vital to model their future rate of economic growth because due to their size of economy, the effect on other regions' development is also quite significant. However, the lack, reliability and quality of the data are one of the main limitations of such researches.

7. Relevant publications of the Author

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