Coordination of Factors Characterizing Stable Economic Growth

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Կայուն տնտեսական աճը բնութագրող գործոնների համակարգումը

Դավթյան Կամո Ա.
ՀՊՏՀ տնտեսամաթեմատիկական մեթոդների ամբիոնի ասպիրանտ (Երևան, ՀՀ)

Ամփոփագիր. Սույն աշխատանքում գործոնների համակարգումը իրականացվել է ըստ աճի աղբյուրի, որոնց կարելի է դասակարգել երկու խոշոր խմբերի մեջ՝ արտաքին և ներքին գործոններ: Աշխատանքում դիտարկվել են զարգացող ու փոքր բաց տնտեսություն ունեցող երկրներում մակրոտնտեսական տատանումների կարևոր պատճառ հանդիսացող արտաքին պահանջարկի, առաջարկի ինչպես նաև դրամավարկային քաղաքականության ցնցումները, որոնք հանդիսանալով փոխանցումային ուղիներ իրենց ազդեցությունն են թողնում կայուն տնտեսական աճ ապահովող գործոնների հետագծի վրա ինչպիսիք են ՕՈՒՆ-ը, դրամական փոխանցումները, արտահանում կամ ներմուծումը, փոխարժեքը և մի շարք այլ ցուցանիշներ: Տարբեր տեսական և էմպիրիկ հետազոտությունների ուսումնասիրությունը թույլ է տալիս եզրակացնելու, որ ներքին գործոնները, որոնցից են գնաճը, զբաղվածության և աղքատության մակարդակները, եկամուտների անհավասարության մակարդակը մարդկային կապիտալին առնչվող ցուցանիշները, պետական ծախսերը և մի շարք այլ գործոններ հանդիսանում են ֆունդամենտալ հիմք արտաքին գործոնների ազդեցությունը փոփոխելու գործում: Հետևաբար, գործոններ դասակարգումը ըստ առաջնայնության, ինչպես նաև դրանց խորքային ուսումնասիրությունը միայն հնարավորություն կտա քաղաքականություն իրականացնողներին գնահատելու առկա իրավիճակը և հետագա քայլերը իրականացնելու տնտեսությունում կայունություն հաստատելու կամ արդեն իսկ առկա կայունությունը պահպանելու գործում:

Հանգուցաբառեր՝ կայուն տնտեսական աճ, գործոնների համակարգում, արտաքին գործոններ, ներքին գործոններ

Координация факторов, характеризующих устойчивый экономический рост

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Аннотация. В данной статье координация факторов осуществлялась по источнику роста, который можно разделить на две большие группы: внешние и внутренние факторы. В работе были рассмотрены колебания внешнего спроса, предложения, а также денежно-кредитной политики, которые являются важной причиной макроэкономических колебаний в развивающихся странах и странах с малой открытой экономикой, что оказывает влияние на траекторию факторов, обеспечивающих устойчивый экономический рост такие как ПИИ, денежные переводы, экспорт или импорт, обменный курс и ряд других показателей. Обзор различных теоретических и эмпирических исследований позволяет сделать вывод, что внутренние факторы, среди которых инфляция, уровень занятости и бедности, уровень неравенства доходов, показатели связанные с человеческим капиталом, государственные расходы и ряд других факторов, являются фундаментальной основой для изменения воздействия внешних факторов. Следовательно, классификация факторов в порядке приоритетности, а также их углубленное изучение позволят лицам, осуществляющим политику, оценить текущую ситуацию и предпринять дальнейшие шаги для установления стабильности в экономике или поддержания уже существующей стабильности.

Ключевые слова: устойчивый экономический рост, координация факторов, внешние факторы, внутренние факторы

Stable economic growth is a primary objective for many countries, serving as the foundation for poverty reduction, improved living standards, and the stable development of the country's economy. Various economists, at different times, have conducted both theoretical and empirical studies to identify and explain the underlying factors of economic growth and the extent of their impact on economic growth. these studies, using different theoretical and empirical methods, have highlighted various sets of parameters to explain economic growth. Additionally, the sentence mentions that these studies have proposed different approaches to understanding the factors affecting economic growth. As a result of those studies, various potential determinants of growth were evaluated and identified. But at the same time growth factors for individual countries has consistently posed a challenge and has been a subject of discussion, particularly in the context of developing and small open economy countries. For example, some economists have shown in their research that the degree of trade openness is important in ensuring economic growth. Another group of economists emphasized the significance of the geographical position in ensuring growth. The latter is possibly due to the fact that in the 16th century, the welfare of the population in landlocked countries was quite different compared to that of coastal countries. During the late 18th to the 19th centuries, one of the crucial determinants of economic development was the ability to capitalize on technological innovation, specifically the ability to participate in and benefit from the Industrial Revolution. With all this, the diversity of viewpoints makes it challenging to identify the most effective policies and factors that promote growth.

In the given context, achieving stable economic growth and preserving the desired result necessitate a systematic study of the country's economy. This involves identifying more important factors affecting economic growth, researching their trends, and systematically presenting these factors. The article focuses on identifying the main factors characterizing stable economic growth in developing countries with a small open economy, and emphasizes the necessity for their systematic presentation.

In economic literature, there is classification of factors affecting economic growth based on various criteria such as direct and indirect, intensive and extensive, supply and demand, controllable and uncontrollable, economic and non-economic, as well as external and internal factors influencing economic growth. The diversity in the classification of factors can be attributed to differences in researchers' views on the problems of economic growth. In this particular work, the grouping of factors was done based on the source of growth, which has been classified into two broad groups: external factors and internal factors. Here we consider it important to mention the fact that despite such a division of factors, they are interconnected.

The connection between external and internal factors, as described above, can be illustrated by the example of foreign direct investment (FDI), which is identified as one of the most studied external factors. Most economists and researchers believe that foreign direct investment (FDI) stimulates technology development through investment in the sector, increases capital accumulation, and raises employment levels. However, the impact of foreign direct investment (FDI) depends on the readiness of the economy and economic agents to utilize these investments in a manner that leads to long-term economic results [**1**]. Thus, we can conclude that internal factors are mostly fundamental in determining the impact of external factors. Therefore, it is the combined result of the two groups of factors that can lead to favorable conditions in ensuring stable economic growth. Studies in the literature also support this claim. For example, similar research has been conducted to determine the role of external shocks in explaining macroeconomic fluctuations in African countries. According to the results, external shocks play a crucial role in the sustainability of growth in these countries. In particular, trade shocks account for roughly half of economic fluctuations in aggregate output. Moreover, adverse trade shocks cause prolonged recessions because they cause a significant reduction in aggregate investment [**2**]. A number of reports conducted by the International Monetary Fund state that external shocks can have a significant impact on economic growth, macroeconomic stability, and poverty in developing countries [**3**]. Thus, it was revealed and substantiated that the vulnerability of countries with a small open economy to external fluctuations is based on their economic structure, trade dependence, limited opportunities and options to implement policies. Therefore, macroeconomic stability in these types of economies requires the implementation of mainly adaptive and precise risk management policies that will allow to overcome the challenges caused by external shocks.

Based on a number of studies in the literature, external demand shocks, supply shocks, and monetary policy shocks can be considered as the main external shocks in countries with a small open economy, including Armenia. The latter are transmission channels for the influence on various indicators, which can be presented in the form of a diagram as follows. The external demand shock can manifest as an increase or decrease in demand. In one scenario, it can lead to greater exports, stimulating production and economic growth in a small open economy. In the opposite scenario, it can result in a reduction in exports, leading to a decrease in production and a slowdown or decrease in potential economic growth. External supply and external monetary policy shocks have their positive and negative effects in a similar way. These shocks, acting through various indicators, can either contribute to the stabilization of economic growth or result in negative consequences for the trajectory of economic development. And the following indicators were considered as the main transmission channels of the above shocks: money transfers, foreign direct investments, foreign trade (export or import), exchange rate.

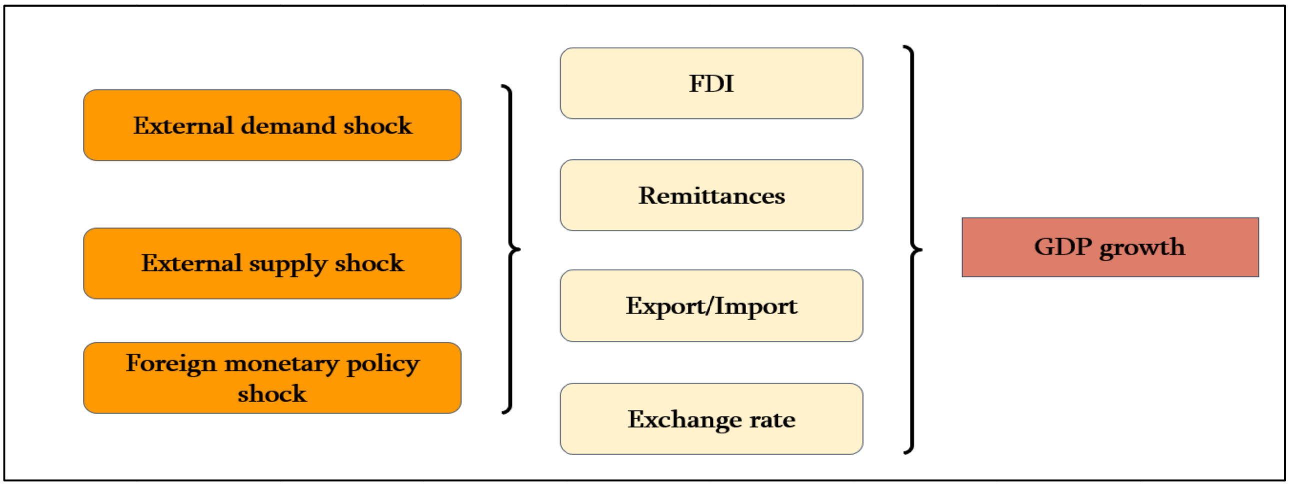

Figure 1. *External factors and possible transmission channels* [**4**]

Authors	Title of the research	Countries included in the research	The main conclusions
Mamingi N., Martin K.	Foreign direct investment and growth in developing countries: Evidence from the countries of the Organisation of Eastern Caribbean States	Caribbean countries	Although FDI has a positive effect on growth, its effect is minimal when considered as an individual factor [**5**].
Arif, I., Khan, L., & Ali Raza, S	External Resources and Economic Growth: An Empirical Analysis of South Asian Countries	South Asian Countries	The impact of remittances, FDI and imports on GDP growth was assessed through panel analysis. The results show that remittances play a vital role in the economic growth of selected South Asian countries, while the effects of imports and foreign direct investment are insignificant [**6**].
Barrot, L. D., Calderón, C., & Servén, L.	Openness, specialization, and the external vulnerability of developing countries	Developing countries	a panel vector autoregressive model with sign restrictions is applied to investigate the effects of four exogenous structural shocks (demand, supply, monetary, and commodity prices) on economic growth. External shocks are found to account for a small part of the variation in GDP, especially in the short run. However, their influence has grown in recent decades. Furthermore, global monetary shocks have become a major external source of GDP volatility in developing countries [**7**].
Ayouni, S. E., Farhani, R., & Hamdaoui, M.	External factors and economic growth in Tunisia: ARDL approach with structural change analysis	Tunisia	There is no correlation between economic growth and FDI in BOTH the long run and the short run. Remittances and imports negatively affect economic growth, while exports boost economic growth [**8**].
Ali, Ş. E. N., Şentürk, M., Özkan, G., & Ducan, E.	External Determinants of Economic Groawth in Developing Countries: Panel Data Analysis	Brazil, India, China, South Africa and Turkey	Current account, exports, foreign direct investment and energy imports were selected as exogenous determinants of GDP growth. According to the results of the tests, the variables are cointegrated, so there is also a long-run relationship between them [**9**].
Mehdi Taghavi, Masoumeh Goudarzi, Elham Masoudi, Hadi Parhizi Gashti	Study on the Impact of Export and Import on Economic Growth in Iran	Iran	The obtained results confirm that the relationship between these variables is positive in Iran [**10**].
John Nana Francois, Nazneen Ahmad, Andrew Keinsley, Akwasi Nti-Addae	Heterogeneity in the long-run remittance-output relationship: Theory and new evidence	Developing countries	The results of the analysis prove the existing relationship between the selected factors, but the latter differs in its strength in different countries [**11**].
Khan, M.F.	Impact of Exchange Rate on Economic Growth of Bangladesh	Bangladesh	The results showed that the exchange rate has a significant effect on economic growth [**12**].
Li, Xiaoying, and Xiaming Liu	Foreign Direct Investment and Economic Growth: An Increasingly Endogenous Relationship	Developing and developed countries	From the results, it can be concluded that FDI has a direct and positive effect on growth [**13**].

Table 1. *A brief description of the research done by different authors* [**14**]

The table provides a summary of research conducted by various authors on the impact of external factors on economic growth. The geographies of research implementation are diverse, and so are the econometric approaches. In particular, various econometric approaches, such as autoregressive distributed lag models (ARDL), rolling window regression method, vector autoregression models (VAR), structural vector autoregression models (SVAR), panel data analysis methods, etc., have been utilized to estimate the influence of external factors on growth.

Summarizing the analyzes of the external factors affecting economic growth found in the literature, we can state that the observation of the mentioned factors is especially important for countries of our type, which have a small open economy, and the latter are certainly an important source of stable economic growth. In particular, we can conclude that the influence of external factors on economic growth can vary based on the specifics of the country, and their impact may differ in terms of both magnitude and direction (positive or negative). Therefore, the importance of the considered external factors is unequivocal, but the extent of the impact and even whether it is positive or negative is determined by many other circumstances and factors, as well as other characteristics of a specific country.

In the study of internal factors, the development policy focused on short-term growth has, according to some authors, resulted in a greater emphasis on external factors and less attention to internal factors. We consider internal factors to be those practically located within the borders of the country, which are the target of policy actions conducted by the country. The study of the literature allowed us to understand that such factors are mainly included in the areas related to demography, fiscal policy, institutional quality, etc.

Among many other variables that can be cited as internal determinants of economic growth, inflation also plays an important role in this context. Inflation is a crucial element within the overall system of economic interdependencies. Furthermore, it emphasizes that achieving high and sustainable economic growth in the context of low inflation remains relevant for macroeconomic policymakers in developing countries. Many economists have worked on this topic; however, a unanimous opinion on the issue has never been formed. Some studies have estimated a negative relationship between inflation and economic growth, as indicated by the works of Barro (1991) [**15**], Fisher (1983, 1993) [**16**; **17**], Bruno and Easterly (1998) [**18**], and Farira and Carneiro (2002) [**19**]. However, some studies have demonstrated the opposite, as seen in the works of Tobin (1965) [**20**] and Lucas (1973) [**21**], where they concluded that there is a positive relationship between economic growth and inflation. According to the results of Nobel laureate Akerlof's research, there is an indication that significant pressure on the inflation level can likely constrain the rate of economic growth, especially during structural changes in the economy [**22**]. In one study by Berentaeva, where the necessary conditions for achieving stable economic growth were justified, the author concluded that even if the same level of current inflation is recorded in different countries at the same moment, the rates of economic growth will still vary. This variation depends on the significance of the threshold level of inflation and vice versa [**23**].

One of the most important problems in the field of stable economic development in developing countries with a small open economy is also to identify the connection between the concepts of poverty and economic growth, as well as employment and economic growth. Although economists held different views on this connection at various times, it became clear over time that studying economic growth is not possible without considering the poverty and employment levels of the given country. After many decades of research, there is a generally accepted view among economists that an inverse relationship exists between poverty, unemployment, and economic growth. Therefore, the current task for economists is not to prove this inverse relationship but rather to determine the strength of the impact of growth on poverty and unemployment, specifically the magnitude of their elasticity with respect to growth. Economists A. Sargsyan and K. Davtyan also assessed the relationship between employment and GDP for Armenia using the ARIMAX model in their article "Employment trends and macroeconomic interactions" [**24**]. The researchers came to the idea that a 1% increase in GDP in Armenia implies a 0.26% reduction in the number of unemployed.

The studies in the literature also document the importance of a number of other internal factors affecting economic growth, such as: indicators characterizing human capital, government expenditures and state budget revenues, the level of domestic investment through savings, fiscal and monetary stimulus policies, state budget deficit, the country's debt level, the level of uneven income distribution, etc. The main conclusions of these studies are presented in the table.

Authors	Title of the research	The main conclusions
Ranis Gustav	Human Development and Economic Growth	The development of human capital directly contributes to the development of labor productivity and ensures an increase in economic output [**25**].
Okoye, L.U., Omankhanlen, A.E., Okoh, J.I., Urhie, E., Ahmed, A.	Government expenditure and economic growth: The case of Nigeria	In Nigeria, capital expenditure has a positive effect on economic growth [**26**].
Loizides, J., & Vamvoukas, G.	Government expenditure and economic growth: Evidence from trivariate causality testing	Using data on Greece, UK and Ireland, the analysis shows: i) government size Granger causes economic growth in all countries of the sample in the short run and in the long run for Ireland and the UK; ii) economic growth Granger causes increases in the relative size of government in Greece, and, when inflation is included, in the UK. [**27**].
Ahmad Ghazali	Analyzing the Relationship between Foreign Direct Investment Domestic Investment and Economic Growth for Pakistan	There is a mutual dependence between economic growth and national investment, in other words, investment affects economic growth, and the progress of the economy contributes to additional domestic investment [**28**].
Pattillo et al.	External Debt and Growth	A doubling of the external debt-to-GDP ratio reduces economic growth by one-third to half a percentage point [**29**].
Baum, A., C. Checherita-Westphal and P. Rother	Debt and Growth: New Evidence for the Euro Area	When the debt-to-GDP ratio is less than 67 percent, it has a positive and statistically significant effect on GDP [**30**]. This ratio is the threshold of sensitivity, which was defined by the famous Armenian economist A. Tavadyan [**31**].
Amir Rubin and Dan Segal	The Effects of Economic Growth on Income Inequality in the US	In the half century preceding the crisis in the United States, the level of unequal distribution of income affected economic growth [**32**].

Table 2. *A brief description of the research done by various authors* [**33**]

Summarizing the results of research in the literature, it is crucial to note that studies focused on economic growth within specific groups of countries or at different levels of development may not be universally applicable. Therefore, it is necessary to consider the specifics of each country when determining the importance and significance of various factors. The latter has also received certification in the roadmap for medium-term and long-term economic growth developed by the International Monetary Fund ('IMF'). The main approach, depending on the level of development of the country, involves the development of differentiated policies. The International Monetary Fund claims in one of its studies that, for example, research and development (R&D) investments are more effective in developed countries, instead developing countries should focus more on infrastructure and supply development [**34**]. This can be explained by the higher marginal yield from infrastructure in developing countries and the need for a favorable environment for research and development (R&D) work and the uncertainty of results.

Summarizing the results of the empirical and theoretical studies studied in the article, it can be concluded that:

- Stable economic growth is the outcome of the harmonious coordination of various factors that collectively contribute to creating a stable environment for that economy.
- Some studies have concluded that there is a positive causal relationship between investment and economic growth. However, there are other studies that show that this connection is weak or non-existent.
- International trade has become a primary subject of study for explaining economic growth, whether it is through trade liberalization and openness or the export growth hypothesis. In general, most studies have concluded that high exports increase and stabilize the rate of economic growth.
- The exchange rate has a significant impact on economic growth, and its fluctuations are an important factor influencing the stable economic growth of a country, particularly in the context of developing countries.
- Internal factors have a leverage effect to increase or decrease the influence of external factors, which is especially evident in the case of a developing country.
- In countries with small open economies, macroeconomic stability requires the implementation of precise risk management policies, taking into account the challenges posed by external shocks.
- The vulnerability of countries with small open economies to external shocks is based on the structure of the country's economy, trade dependence, as well as limited opportunities to implement policies.

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