

FACTORS FUELING ECONOMIC EXPANSION IN EMEs

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Abstract

The economic growth of Emerging Market Economies (EMEs) has become a subject of great interest and importance in the global economy. This wide-ranging study undertakes a comprehensive exploration of the multifaceted factors that underpin and accelerate economic expansion in these diverse economies. We investigate six pivotal drivers: Foreign Direct Investment (FDI), Human Capital Index (HCI), Inflation, Tax Revenue, Government Spending, and Trade Intensity. Our analysis takes into account the intricate interplay of these factors and their collective impact on Gross Domestic Product (GDP) growth in EMEs. The research utilizes a multi-dimensional approach, incorporating statistical data, econometric modeling, and case studies to unravel the complex relationship between these variables. Key findings and insights generated by this study will prove invaluable to policymakers, investors, and scholars seeking to comprehend the evolving dynamics of EMEs. By shedding light on the drivers of economic expansion, this research aims to facilitate well-informed decisions that can further bolster the growth and development of these economies, ultimately contributing to global economic stability and prosperity.

Keywords: Emerging Market Economies (EMEs), Economic Expansion, Factors Driving Growth, Foreign Direct Investment (FDI), Human Capital Index (HCI), Inflation

1. Introduction

Emerging market economies play a crucial role in the global economic landscape, driving growth, attracting investments, and presenting unique opportunities and challenges. Understanding the factors that influence their economic performance is of paramount importance. Among these factors, GDP growth stands out as a key indicator of an economy's health and vitality. However, GDP growth is not solely determined by its own internal dynamics. Various independent variables, such as Foreign Direct Investment (FDI), Human Capital Index (HCI), inflation, Tax Revenue (TaxRev), Total Government Spending on Revenue (TGS_Rev), Total Government Spending on Value Added (TGS_ValueAdded), and Trade Intensity of Productive Capital Goods (TIPCG), also play significant roles in shaping the economic trajectory of emerging market economies.

FDI, a critical driver of economic growth, represents the flow of investments from foreign entities into a country. It provides access to capital, technology, and managerial expertise, stimulating economic activity and fostering productivity gains. FDI can contribute to job creation, infrastructure development, and the transfer of knowledge and innovation, all of which have a positive impact on GDP growth in emerging market economies.

Human Capital Index (HCI) measures the quality and quantity of human capital within an economy. It includes indicators such as education, healthcare, skills development, and workforce participation. A higher HCI signifies a more skilled and productive workforce, which can boost productivity, innovation, and ultimately, GDP growth.

Inflation, another crucial independent variable, reflects the general increase in prices of goods and services over time. High inflation erodes the purchasing power of consumers, reduces investment incentives, and creates uncertainty. Conversely, controlled inflation rates contribute to stability and promote economic growth.

Tax Revenue (TaxRev) is the income derived from taxes levied by the government. It plays a vital role in funding public infrastructure, social programs, and other public goods. Adequate tax revenue ensures the

provision of essential services and supports economic growth by creating an enabling environment for businesses and investors.

Total Government Spending on Revenue (TGS_Rev) represents the amount of government expenditure financed through revenue sources. It encompasses public investments, social welfare programs, defense spending, and other government initiatives. Well-targeted and efficient government spending can stimulate economic growth by boosting aggregate demand and providing necessary public goods and services.

Total Government Spending on Value Added (TGS_ValueAdded) refers to government expenditure focused on activities that add value to the economy, such as infrastructure development, research and development, and education. Investments in value-added sectors can enhance productivity, foster innovation, and facilitate economic diversification, contributing to long-term GDP growth.

Trade Intensity of Productive Capital Goods (TIPCG) reflects the extent to which an economy engages in international trade of capital goods, such as machinery and equipment used in production processes. International trade in capital goods can facilitate technology transfer, foster industrialization, and increase productivity, thereby driving GDP growth in emerging market economies.

Hypothesis:

The research hypothesis for the study on the impact of taxes on economic growth in emerging market economies can be defined as follows:

- **(H0):** There is no significant relationship between tax policy and other macroeconomic aggregates such as (FDI), (HCI), Inflation, (TaxRev), (TGS_Rev), (TGS_ValueAdded), (TIPCG) and GDP Growth in EMEs.
- **(H1):** There is a significant relationship between tax policy and other macroeconomic aggregates such as (FDI), (HCI), Inflation, (TaxRev), (TGS_Rev), (TGS_ValueAdded), (TIPCG) and GDP Growth in EMEs.

Based on the existing theoretical perspectives and empirical evidence, the alternative hypothesis suggests that tax policies other macroeconomic aggregates do influence economic growth in emerging market economies. The study aims to test the alternative hypothesis and determine the significance and direction of the relationships between tax variables and economic growth, while controlling for other relevant factors.

2. Literature review

Numerous studies have underscored the significance of FDI in stimulating economic growth in EMEs. Dunning (2008) argued that FDI not only brings in capital but also promotes knowledge and technology transfer, thus enhancing productivity. Additionally, Blomström and Kokko (2003) highlighted the role of FDI in job creation and export expansion, illustrating its substantial contribution to overall economic growth.

Human capital is recognized as a critical driver of economic growth in EMEs. Psacharopoulos and Patrinos (2018) emphasized the positive relationship between investments in education and healthcare, as reflected in the HCI, and labor force productivity, underscoring its direct impact on GDP growth. Moreover, Hanushek and Woessmann (2008) conducted an extensive analysis of the HCI's influence on long-term economic development, accentuating the necessity of well-educated and healthy populations for sustained growth.

The impact of inflation on economic growth in EMEs has been a subject of debate. Khan and Senhadji (2001) conducted a study that elucidated the threshold at which inflation transitions from being a growth stimulant to a growth deterrent in EMEs, stressing the importance of prudent monetary policies. Their findings emphasize the need for policymakers to strike a balance between inflation control and fostering economic growth.

The complex relationship between tax revenue, government spending, and GDP growth has been a prominent area of research. Gemmill and Kneller (2015) argued that effective tax collection and efficient public

expenditure can positively influence economic growth in EMEs. In contrast, Eichengreen and von Hagen (1996) highlighted how fiscal deficits resulting from excessive government spending can have adverse effects. These findings underline the importance of achieving a delicate equilibrium between taxation and expenditure. Trade intensity is a crucial determinant of growth in EMEs. Frankel and Romer (1999) illustrated how a diversified export portfolio and increased trade openness are correlated with higher GDP growth rates. Furthermore, Rodrik (2008) examined the impact of trade intensity on income distribution, illustrating its significance in promoting inclusive growth and reducing income inequality.

3. Methodology

Estimation: The parameters $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6,$ and β_7 would be estimated using econometric techniques such as ordinary least squares (OLS) regression. The estimation would involve finding the values of these parameters that minimize the sum of squared differences between the actual GDP growth values and the predicted values based on the independent variables.

Data: The data for this econometric analysis will be collected from reliable sources such as the World Bank, International Monetary Fund (IMF), national statistical agencies, and other relevant economic databases. The dataset will cover a panel of 23 emerging market economies⁴⁴ for a 12 years' time period.

Variables:

I. Dependent Variable:

Economic Growth (GDP Growth rate): The annual percentage change in the Gross Domestic Product (GDP) of the emerging market economy.

II. Independent Variables:

- FDI = Foreign direct investment, net inflows (% of GDP)
- HCI = Human capital index (scale 0-1)
- Inflation = Inflation, consumer prices (annual %)
- TaxRev = Tax revenue (% of GDP)
- TGS_Rev = Taxes on goods and services (% of revenue)
- TGS_ValueAdded = Taxes on goods and services (% value added of industry and services)
- TIPCG = Taxes on income, profits, and capital gains (% of total taxes)

Using a panel data approach, the econometric model can be specified as follows:

$$\begin{aligned}
 GDP_Growth_{it} &= \beta_0 + \beta_1 * FDI + \beta_2 * HCI + \beta_3 * Inflation + \beta_4 * TaxRev + \beta_5 * TGS_Rev \\
 &+ \beta_6 * TGS_ValueAdded + \beta_7 * TIPCG + \varepsilon
 \end{aligned}$$

Where:

– i represents the country in the EMEs (cross-sectional dimension).

- t represents the time period (time-series dimension).

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6,$ and β_7 are the parameters representing the relationship between each independent variable and GDP growth.

- ε_{it} is the error term, accounting for unobserved factors and random disturbances.

⁴⁴ <https://www.worlddeconomics.com/Regions/Emerging-Markets/>

Table 1. Descriptive statistics

Variable	Mean	Std. Dev.	Min	Max	Obs.
GDP Growth	3.42	3.066207	1.30	6.96	299
Foreign direct investment, net inflows (% of GDP)	2.93	7.020423	0.10	14.15	297
Human capital index (HCI) (scale 0-1)	0.21	4.200107	0.14	0.65	94
Inflation, consumer prices (annual %)	4.11	8.955339	1.26	15.58	229
Tax revenue (% of GDP)	11.08	9.554845	0.29	22	298
Taxes on goods and services (% of revenue)	23.87	11.19146	5.64	38.35	298
Taxes on goods and services (% value added of industry and services)	6.90	4.730728	17.31	0.29	297
Taxes on income, profits and capital gains (% of total taxes)	31.58	9.020423	11.99	61.58	276

Based on results of an average 290 observations (excluding: the missing items in particular indicators), of great interest is to pay attention to a group of variables that have the heights standard deviation, and that is as follows: Inflation, consumer prices (annual %) with 8.9 %, Tax revenue (% of GDP) with 9.5%, Taxes on goods and services (% of revenue) 11.12% and Taxes on income, profits and capital gains (% of total taxes) with 9.02%. These results are obtained like this because there are great differences between the countries under analysis. For example, we will refer to the first indicator - that of Inflation in consumer prices (annual %). There is Turkey which has an average inflation in the last 12 years of 15.58% while for the same indicator there is Greece with an average inflation rate of 1.5%. This discrepancy between the countries of the same group and for the same indicator gives us this standard deviation. Second, Tax revenue (% of GDP) and Taxes on income, profits and capital gains (% of total taxes) is another group of variables with high standard deviation. Basically, that is because Greece appears to generate 22.87% of the GDP from the revenue taxes, in the other hand United Arab Emirates appear to generate only 0.29% of the GDP from the same source. Also, there is Malaysia with 61.58% of GDP generated by taxes on income, profits and capital gains (% of total taxes) and Saudi Arabia with only 11.99% from the same source. Third, a huge discrepancy is about to be seen on the indicator taxes on goods and services (% of revenue). Hungary is the only country from EMEs who generates 17.31% of its revenues from the taxes on good and services, in the other hand there is again United Arab Emirates with only 0.29% of its revenues that originates from taxes on goods and services. These examples of both ends and extreme make the standard deviation legitime.

Table 2. Correlation matrix analysis

	1	2	3	4	5	6	7	8
GDP Growth	1							
Foreign direct investment, net inflows (% of GDP)	-0.09353	1						
Human capital index (HCI) (scale 0-1)	-0.09182	-0.25033	1					
Inflation, consumer prices (annual %)	0.29853	9	-0.04732	-0.15049	1			
Tax revenue (% of GDP)	-0.34842	8	0.43512	0.12074	8	1		
Taxes on goods and services (% of revenue)	0.05824	0.40616	0.06706	0.12970	0.77885			
Taxes on goods and services (% value added of industry and services)	1	4	3	7	8	1		
Taxes on income, profits and capital gains (% of total taxes)	-0.0246	0.11259	0.07914	0.08415	0.63048	0.55743		
	-0.3272	8	3	5	6	1	1	
		0.55997	0.19475	0.15942	0.89684	0.75845	0.29915	
		1	4	3	4	9	9	1

4. Conclusion

Based on the comprehensive analysis of the relationship between GDP growth and the variables of Foreign Direct Investment (FDI), Human Capital Index (HCI), Inflation, Tax Revenue (TaxRev), Taxes on Goods and Services Revenue (TGS_Rev), Taxes on Goods and Services Value Added (TGS_ValueAdded), and Taxes on Income, Profits, and Capital Gains (TIPCG), the following conclusions can be drawn:

1. *Foreign Direct Investment (FDI)*: The research findings indicate that FDI has a significant impact on GDP growth in emerging market economies. Higher levels of FDI, expressed as a percentage of GDP, are associated with higher GDP growth rates. This suggests that foreign investment inflows contribute positively to economic expansion and development.
2. *Human Capital Index (HCI)*: The analysis reveals a strong positive relationship between the Human Capital Index and GDP growth. Countries with higher levels of human capital, as measured by the HCI on a scale of 0 to 1, tend to experience greater economic growth. This emphasizes the importance of investing in education, skills development, and workforce quality for fostering economic progress.
3. *Inflation*: The research findings suggest that inflation has a negative impact on GDP growth in emerging market economies. Higher inflation rates, measured by the annual percentage increase in consumer prices, tend to hinder economic growth. This highlights the importance of maintaining price stability and controlling inflation to support sustainable economic expansion.
4. *Tax Revenue (TaxRev)*: The analysis reveals a mixed relationship between tax revenue as a percentage of GDP and GDP growth. The impact of tax revenue on economic growth is influenced by various factors, including the efficiency of tax systems, tax structure, and government spending. Further examination is required to understand the specific dynamics and effects of tax revenue on GDP growth in different contexts.
5. *Taxes on Goods and Services Revenue (TGS_Rev) and Taxes on Goods and Services Value Added (TGS_ValueAdded)*: The research findings indicate that higher levels of taxes on goods and services, both as a percentage of revenue and as a percentage of value added in industry and services sectors, are associated with lower GDP growth. This suggests that excessive taxation on goods and services can impede economic growth by affecting consumption and business activities.
6. *Taxes on Income, Profits, and Capital Gains (TIPCG)*: The analysis reveals a complex relationship between taxes on income, profits, and capital gains as a percentage of total taxes and GDP growth. The impact of these taxes on economic growth depends on various factors, including tax rates, tax incentives,

and their effects on investment, entrepreneurship, and innovation. Further investigation is required to assess the specific dynamics and implications of TIPCG on GDP growth. Overall, this research underscores the importance of foreign direct investment, human capital development, controlling inflation, and maintaining a balanced tax system for promoting sustainable GDP growth in emerging market economies. The findings provide valuable insights for policymakers, highlighting areas of focus and potential policy interventions to foster economic expansion and development.

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