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PREFACE

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Chapter 1

AN EVALUATION OF INFLATION

Can MAVRUK[1]
Ersin KIRAL[2]
Gülşen KIRAL[3]

INTRODUCTION

World inflation has dropped significantly from 8,9 percent to 2,2 percent over the last decade (IMF, 2017). After experiencing deflation in 2014 and 2015, the European Union and The United States both had inflation rates climbing back to around 1.5 percent in 2018. Although the target inflation rate for both is 2.0 percent, they are stucked well under 2.0. The numbers for Türkey's are substantially higher. Following a sharp decline from double digits to single digit in 2013, Turkey inflation rate has climbed back to double digits, 25.2 percent in October 2018, which is the highest rate in the past one and a half decades. Over the last two years, Turkey is also leading all OECD countries in CPI (OECD, 2019).

Many commentaries made by economists on high inflation in Turkey have indicated the sharp incline in goods, food, energy and import prices due to exchange rate shocks. According to the European Central Bank (ECB), global factors tend to have a stronger impact on non-energy industrial goods price inflation than on services price inflation (ECB, 2014). Services inflation was more related to internal policies, hence increasing exchange rate shocks have created increasing substantial differences between goods and services. The incline in services inflation was around four times less than goods inflation in 2018. Therefore, goods was a better determinant of the total inflation index than services when exchange rate inclined. Inflation bias, including intervention in response to global factors, seems to be one of the important determinants of high inflation. In addition to high inflation and economic instability, institutional factors also played an important role in the evolution of dollarisation in Turkey (Bahmani-Oskooee & Domac, 2003). Dollarization keeps dollar/TL pressure and hence, high inflation pressure upward. However, there are more determinants of inflation that are not spelled out much

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Chapter 2

DRIVERS OF REGIONAL ECONOMIC GROWTH: A PANEL DATA ANALYSIS FOR EUROPEAN NUTS 2 REGIONS

Fatih KONUR[1]

1. INTRODUCTION

Economic growth refers to the increasing sizes of economies for macroeconomic variables such as gross domestic product (GDP), employment and inflation. It is driven most strongly by macroeconomic stability, physical and human capital, trade and financial openness as economic determinants. Increase in population, innovation, natural resources, geography, climate, institutions is among other factors.

GDP is used to measure economic activity and it represents the value of all productions in an economy (Tselios et al., 2019). Gross fixed capital formation, which is the foremost constituent of domestic investment, is a significant method that could increase the economic growth rate (Meyer et al., 2019). Unemployment affects economic activity as well the social structure of societies. The main purpose of every policymaker is to reach high economic growth and to decrease unemployment (Sahoo et al., 2019). Patent applications present strategic options on firms and it is contingent on the future growth of the market (Kulatilaka et al., 1998). The rise of regional technological innovation is an important way to increase the capacity of regional sustainable development (Su et al., 2018).

The fourth industrial revolution also has some effects on sustainable development over innovation. It transforms modern production with robotization and digitalization. In this context, artificial intelligence and the internet of things become more effective on investment and production. Due to these changes, investment and production in regions take the main source of prosperity and creation of employment (Vasin et al., 2018).

Acceleration of economic activity in the World is one of the important issues in literature. Global growth became fragile since the global crisis of 2008. Rising trade barriers, government debt, technology tensions, uncertainties, the slow-

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Chapter 3

THE RELATIONSHIP BETWEEN INFLATION AND ECONOMIC GROWTH: A CASE OF EU-15 COUNTRIES

Kemal ERKİŞİ[1]

1. INTRODUCTION

Although theoretical and empirical analysis of the relationship between inflation and economic growth attracted considerable attention in macroeconomics and especially in monetary policy models, it has not been reached a common conclusion yet.

Even though the phenomenon of inflation historically dates back to the period of Mercantilism, the theoretical framework began to be laid in the period beginning with Adam Smith. Afterwards, the relationship between inflation and economic growth was investigated based on cyclical observations until World War II. However, because of the chronic inflation that had been experienced just after World War II, the inflation issue became the centre of academic research in economics increasingly.

When the empirical literature examining the theoretical models developed in the historical process was revised, it is seen that different results have been reached and policy recommendations have been advertised due to the differences in the selected country or country groups, the variables used and the methods employed.

Although recent studies have shown that inflation cause to delay or/and adversely affecting growth, it is seen that the early studies revealed evidence of a positive relationship between inflation and economic growth. In this regards, empirical findings in the current literature can be categorized into four groups:

i. Inflation does not have an effect on economic growth (Sidrauski 1967; Cameron, Hum & Simpson, 1996).
ii. Inflation has a positive impact on economic growth (Rapach, 2003; Benhabib & Spiegel, 2009).

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select the appropriate estimation method, the homogeneity of the parameters was tested by preforming Swamy S test and it was concluded that the parameters are heterogeneous. Prior to the model estimation, the Pedroni Co-integration Test was conducted to determine whether there is a long-term relationship between the variables. The results revealed that series are cointegrated; therefore, there is a long-term relationship between the series.

After these preliminary tests, the model was tested by employing Pooled Average Group (PMG) Estimator. According to *the long-term results of the PMG Estimator*: (i) a 1% rise in investments increases economic growth by 0.82%; (ii) a 1% rise in inflation reduces economic growth by 0.037%; (iii) a 1% rise in labour force stock increases growth by 0.88%.

According to *the short-term results of PMG Estimator:* (i) a 1% rise in investments increases the economic growth by 0.004%; (ii) a 1% rise in inflation increases economic growth by 0.34%; (iii) a 1% rise in labour force stock increases 0.18% real economic growth.

Consequently, it is concluded that inflation has a positive impact on economic growth in the short-term and has a negative impact on the long-term. However, considering the long-term coefficient of inflation as 0.037, it can be said that this effect is negligible.

The long-term results support the researches of Stockman (1981), Fischer (1983) and Barro (1995), which concluded that inflation affects economic growth adversely. On the other hand, the short-term results support the researches of Rapach (2003), Benhabib and Spiegel (2009), which revealed that inflation has a positive impact on economic growth.

The interesting result of this study is that the relationship between inflation and economic growth produces different results in the short term and the long term. Accordingly, despite the negligible negative effects of inflation on economic growth in the long term, the positive effects of inflation on growth can be exploited in the short term.

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Chapter 4

FOREIGN TRADE AND CO_2 EMISSIONS IN THE EUROPEAN UNION

Nalan Işık[1]

INTRODUCTION

For centuries, foreign trade has been one of the main determinants of the increase in production and the achievement of countries' economic growth and development targets. In the aftermath of the Second World War, more importance was attached to the liberalization of foreign trade on a global scale (İncekara, 1995). The global gross domestic product, which was USD 1,366 in 1960, reached USD 80,684 trillion in 2017. While the value of exported goods was USD 156,866 billion in 1960, this value was USD 22.8 trillion in 2017. The share of global trade of goods and services within the gross national product must also be addressed to better understand the pace of development. While global exports of goods and services accounted for 11.8% of the global gross national product in the 1960s, this ratio was 28.5% in 2017 (www.wordbank.org, 01.08.2018). Moreover, it should be noted that the global economic crisis of 2007-2008 caused a global recession that led to a slowdown in production and foreign trade; however, the growth continued despite this.

It is generally accepted that the liberalization of foreign trade and its increasing share in production have a positive impact on global welfare. On the other hand, the environmental consequences of the foreign trade activities have been a primary topic of debate between trade politicians and environmentalists. Today, the use of fossil energies during foreign trade activities triggers the increase in carbon dioxide emissions, resulting in global warming, climate change and environmental damage, which is a global concern for both developed and developing countries (Copeland and Taylor, 2004). The CO_2 gas is the gas that causes the greatest greenhouse effect in the atmosphere among other greenhouse gases, with a rate of 82%. Carbon dioxide holds the infrared rays reflected in the atmosphere and plays an important role in maintaining the temperature balance of the atmosphere (Akın, 2006). According to the measurements by the Earth System Research Laboratory,

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concern for companies and multinational corporations that are engaged in foreign trade, they are crucial for future generations to be able to use the currently available natural resources.

Finally, the realization of empirical practices similar to this study, which handles the EU member states (28) individually, as well as studies with different variables representing the environmental pollution, energy use and the location selections of local/multinational corporations engaged in foreign trade activities can help policymakers to make more rational decisions.

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Chapter 5

CAUSALITY ANALYSIS OF THE HUMAN DEVELOPMENT INDEX, INNOVATION AND GROWTH[1]

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INTRODUCTION

Human development has been brought to the agenda within the scope of development economics in the early 1990s, when the Second World War ended and the effects of the Cold War began to diminish partially, in order to increase the welfare levels of the colonized countries when their under-developed and historical backgrounds were considered. Within the framework of development economics, it was noticed that economic development is not sufficient to ensure human development and the adoption of a more comprehensive and coordinated development notion is needed in this regard; hence, the "human development" approach started to be included in debates over economic development. The human development approach is a notion that states that the ultimate aim in the understanding of development should focus more on people than economic size and that all economic activities should be designed for the purpose of improving human capacity (Gürses, 2009, p.304).

With the embracement of this approach, put forward within the framework of human development, by broad circles in the early 1990s, states started to focus more on human development in order to gain the transformation and development they desire in social, economic and political domains. According to UNDP's 2018 report, for example, global population increased from 5 billion to 7.5 billion people and the population with low human development has been declined from 3 billion to 926 million, in other words, from the 60% to 12% of the global population, between 1990 and 2017. By the same token, the number of people with high and very high human development has tripled from 1.2 billion to 3.8 billion, in other words from 24% to 51% of the global population in the same period.

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The experiences gained by countries, dealing with the problems of economic growth and sustaining the short-term economic success to the long term, from both theoretical and empirical research conducted as well as the examples of countries who achieved good results struggling the same problems show that in combating this problem: products with high added value and competitive power in the international markets that are manufactured with knowledge-intense advanced technologies are needed, that a new production notion should be developed depending on the improvement of a new R&D and innovation infrastructure, and more importantly, that effective policies are needed to enable the appearance of the quality human element that bears the necessary knowledge and skills to achieve all these. Undoubtedly, the impact of investment in people begins to be felt in the long term. However, the achievement of the expected outcome in such investments is related to the number of expenditures made to these areas as well as their quality because more qualified education and health spending means the growing of more qualified individuals.

On the other hand, the Turkish economy has economic stability and growth problems from time to time. The quality of the way to be traced by Turkey that has directed towards a high and sustainable economic growth is closely associated with the solution of destabilizing/inhibitory structural problems as well as the comprehensiveness of the economic growth figures obtained, in other words, with the prioritization of those who cannot equally access certain services, opportunities or markets and lack these facilities. From this aspect, the country-wide economic growth can be carried to a more sustainable quality, by seriously leaning towards the problems of especially the regions with disadvantages in terms of education, health and per capita income factors, enhancing employment facilities in these regions, increasing technological development and dissolving public infrastructure deficiencies.

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Chapter 6

URBANIZATION, RENEWABLE ENERGY AND ECONOMIC GROWTH: SELECTED IN 10 COUNTRIES

Nazife Özge BEŞER[1]

INTRODUCTION

Renewable energy is energy derived from natural sources that can be reached continuously and repeatedly. It is also referred to as the types of energy that is derived from natural sources and is renewable. These are sources of energy such as hydraulics, wind power, solar power, geothermic, biomass, biogas, wave power and tidal power, which are not fossil based, do not run out and will continue renewing themselves at all times. It is well known that today's traditional technologies of energy production and consumption have negative effects on people, environment and natural sources at local, regional and global scales. Therefore, it gained significance for energy to be produced and consumed with minimal impact on the environment. Many countries place emphasis on introducing renewable energy sources, especially those with zero emission, into the economy through free market mechanisms in a reliable and affordable way without pushing the limits (www.epdk.gov.tr, 2016).

Energy is crucial for the progression of a society. Modern life is fully dependent on energy as the production of electricity is dependent on coal, transportation on petroleum products and heating is on natural gas. However, as much as beneficial it is, the production, distribution and consumption of energy has considerable negative effects on especially public health and the environment. Mining and drilling of fossil fuels such as coal and petroleum has significant impact on the environment. Additionally, coal mining is thought to be the leading source of greenhouse gas emissions. Most renewable energy sources including wind power and solar power do not entail traditional mining/drilling activities (Çoban & Kılınç, 2016).

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was concluded that all series have a cross sectional dependency. Presence of unit root in series was analyzed using CADF Unit Root Test and it was concluded that series were stationary in the first difference. Furthermore, presence of co-integration was analyzed using LM Bootstrap test developed by Westerlund-Edgerton (2007) and co-integration between series was concluded.

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Chapter 7

THE SLOW CONVERGENCE TRAP AND BAMT COUNTRIES

Reşat Can AKKAY[1]

1. INTRODUCTION

The trade globalization of the 1980s and the capital account globalization of 1990s led to a drastic change in the world economy. The increase in the volume of trade and financial flows triggered temporary high growth rates in most of the developing countries, especially in the emerging ones. On the other hand, most developing countries faced with the financial crisis, exchange rate crashes huge debt problems and income inequalities in the same period. The era after 2000 is called by some economists as the "Bretton Woods II" system due to the dominance of the US in the "vehicle currency business" as the main supplier of the US dollars and complicated financial products.[2] 2008 subprime mortgage crisis which existed basically due to the eagerness of the "financial ponzi scheme" has been the worst economic turmoil after the Great Depression, which affected the world economy via financial and trade contagion channels. In the beginning, the most affected countries have been advanced countries with highly developed financial markets. Later on, the economic problems in the advanced world led to an economic slowdown in the emerging market countries. Nowadays, some developed countries indicate signs for slow recovery while emerging market countries face economic slowdowns, high unemployment rates and output gaps due to the lack of foreign and domestic demand. In fact the economic performance of both country groups feels like that world economy might not return to its good days soon. Besides the changing structure of the production processes like Industry 4.0, the aging populations in both advanced and developing countries, the unfair income distribution, the conflicts between the benefiters and non-benefiters of the globalization are other issues in front of the countries.

Middle income trap is a relatively new and popular concept which seems suitable to discuss the above-mentioned problems from the developing countries' per-

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[2] The "vehicle currency" is defined as the money that is accepted by every country as the medium of exchange and store of value at the international level.

empirical results are very sensitive to the time period and the data source which weakens the soundness of the results. For instance we conclude that Argentina will not be able to catch-up high income countries if we use the data for the 1969-2018 period but if make the same analysis for the 2000-2018 period there exist a probability to catch-up.

iv. BAMT countries seem to be in the trap according to the classical MIT definitions. According to the data Turkey is the country with the highest probability to get rid of the trap while Argentina is the country with the lowest probability. However we suggest that crossing an income threshold should not be interpreted as escape from the MIT.

v. We are not sure about the benefits of the categorization of the countries as "trapped" or "not trapped". As we mentioned before the results are very data and time sensitive. We find "MIT" a useful concept to discuss the developmental issues on the one hand. On the other hand the aggregation bias of the concept categorizes the country as a whole. Especially in the emerging market countries, different regions in the same country have been developing differently. One province could reach high income level while the other one struggles with poverty trap. Hence the aggregation bias of the MIT concept lowers the effectiveness of the recommended policies towards the solution of the trap.

vi. The difference between high income and upper middle income country is not only about the income levels. There are also differences about their social life, education, health, culture, happiness, etc. Hence we suppose that MIT is a useful concept to discuss the developmental issues but some dimensions of this concept is missing. According to our approach the "trap" problem should be discussed with the help of a composite index that covers all these dimensions.

vii. We prefer to use "slow convergence trap" instead of "middle income trap" because most of the emerging market countries seem to catch-up high income level countries sooner or later. The problem is about the time that they should spend for it. According to our investigation BAMT countries are all in the "slow convergence trap".

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Chapter 8

EFFICIENCY AND PRODUCTIVITY GROWTH IN IRAN'S ECONOMIC SECTORS USING DATA ENVELOPMENT ANALYSIS

Saeid HAJIHASSANIASL[1]

INTRODUCTION

Undoubtedly, economic, social and cultural development, improving living standards and greater prosperity for the people are the top goals of every economic system. But these valuable goals cannot be easily achieved, unless accurate and comprehensive plans are designed for optimal use of all the available facilities and capabilities to increase GDP, or national wealth, and redistribution of income and wealth in the community.

Today, in developmental approaches, only creating new capacities is not feasible, so the efficiency and improving the productivity of existing capacities should be boosted. In other words, using a combined approach, they should simultaneously upgrade the inputs and their productivity. And as a main model that has been proposed in recent decades, it can play an effective role in accelerating the process of economic growth and development. In the meantime, for many developing countries, the lack of investment resources and low technology levels are a negative factor in promoting economic prosperity, and increasing efficiency and productivity can cause a significant growth in GDP, hence the welfare of the community.

Statistical surveys show that Iran economy has faced huge changes through 1977-2002, which are in line with internal and external political and economic transactions, hence a semi-dynamic state in economy. The average growth of Iran economy in the first decade of the revolution (1978-1988) was negative by 2.3% and in the first period of the development program (1989-1993) was 7.4, and in the second program (1995-1999) was 4 and in the first four years of the third plan was 5.6%. And thus, Iran's average economic growth in the 25 years since the revolution was 1.6 and without oil was 2.7 percent. (Management and Planning Organization 2004 and 2005).

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The scientific achievements of this paper suggest that the slow and downward trend of technological and managerial developments in economy sectors causes reduction in the total productivity, and thus due problems should be alleviated by saving the limited resources and inputs. So we can have sustained economic growth that achieves development goals in the country.

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Chapter 9

REGIONAL UNEMPLOYMENT AND FOREIGN TRADE IN IRAN ECONOMY

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INTRODUCTION

In the real world, due to specific social consequences, employment has always been considered as one of the most influential indicators of economic assessments. Economic Literature has shed light on the issue of unemployment and its causes as well as globalization. So, some crucial issues have been taken into account in several studies like international trade growth, foreign investment growth, and the international movement of labor.

Given the fact that unemployment is considered as one of the most important economic problems, in foreign trade models, due to the assumption of the existence of full employment conditions and variable wages, the true relationship between foreign trade and unemployment is neglected. Several studies have been carried out in developing countries on the relationship between trade and labor market in various aspects, such as wage conditions and employment indicators, which have been led to different results.

To some economists, there are two main reasons that foreign trade influences unemployment. Firstly, foreign trade is considered as one of the issues of microeconomics (selling goods by firms in the market), but the issue of unemployment refers to macroeconomics, hence different studies for each. In other words, foreign trade and the distribution of resources require a micro analysis, whereas unemployment should be dealt with in a macro analysis. Secondly, the subject of international trade is based on the theoretical issues of the microeconomics, so the impact of foreign trade on the real sector of the economy should be examined through mathematical and theoretical models, which usually suffer due inadequacies.(Davidson et al., 1999).

Basically, the unemployment rate is not the same in a country and even in its different regions, although it is often referred to as a national issue and its regional

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increase has not been beneficial in reducing unemployment in the border regions. Therefore, some policies should be rendered so as to cause basic changes in the structure of production and employment in these areas and; due priorities should be considered in regional planning.

As a final point, they should give foreign trade a boost in the provinces of the country to improve the level of employment, hence undeniable effects on the regional economic growth and development, high quality of export products, as well as the incentive to increase production and new investments.

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