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The Impact of Government Economic Policies on Labour Productivity in Selected Countries of ECD

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Abstract

Proper and logical use of abilities and talents of human resources in any society is one of the main causes of economic development, and improves the living standards of a nation. Therefore, evaluating the role and impact of economic policies on labour productivity is of great importance. In this study, using vector autoregressive panel (Panel VAR) and in the form of econometric model, we have tried to test the impact of government economic policies on labour productivity in selected OECD countries over the period of 2000- 2014. The results show that, in the long term, government investments are indexes determining the quality of governance among countries and openness of economy is the most important variable affecting labour productivity, so that all except the quality variable of regulation have a positive impact on labour productivity.

Keywords: Government economic policies; labour productivity; Panel vector Autoregression.

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Introduction

Before the First World War and due to dominance of classics view,the presence and activity of governments on economic issues was very limited and volume of public expenditures was too low. With the outbreak of the First World War, intervention in the economy increased and after the Great Depression of 1930 received more attention than before. In that era, classical economics didn't have any appropriate theory to solve problems until 1936, when Keynes cited his views in a book entitled The General Theory of Employment, Interest and Money and considered necessary government intervention in economic issues to resolve crisis. After that, many economists acknowledged that increase in government expenditures and government intervention in the economy were necessary for economic growth and stability. And this issue has intensified in the aftermath of World War II.

In theories of neoclassical economists, human beings have been considered as one of the productive entities in the cycle of producing goods and services. However, critics of neoclassical theories introduce human being as the origin of development; new theories of development are based on human beings. This means that some consider investing in people as the most valid condition for moving towards optimal economic development and emphasize that development without reducing inequalities and deprivation will not be achieved; Solo, Jones and Schumpeterwere among these critics. In order to goal setting and planning to improve economic growth, accurate identification of factors affecting it is inevitable. Labor and physical capitals are among factors that have been considered in many studies. Labor productivity is one of the main sources of economic growth. To this end, the labor force not only in the production process should provide better services, but also show more accuracy and sensitivity in applying other factors of production so that those factorsare more efficient. Therefore, the role of labor force, especially skilled labor in a coordinated and coherent system is significant to achieve higher economic growth.

The government is an important part of the economy of any country which in the form of legislation and economic security provides an appropriate context for optimal resource allocation as well as economic growth and development. In fact, it plays its role by creating infrastructure and facilities to increase economic productivity. Therefore, the implementation of economic policies affects the activity of other economic activities. Specifically, in this study, the government's economic policies are solely those policies that government expands public and underlying investments through them. According to this, reviewing government's economic policies on labor productivity in selected OECD countries could indicates part of strategic angles of economic growth and development on a long-term horizon. Thus, this paper consists of four main sections, first, the relation between government economic policies and labour productivity will be discussed. Second, the theoretical foundations and model specification will be reviewed and finally, conclusion will be presented.

Relation between government economic policies and labour productivity

At the beginning of the third decade of the twentieth century, when many countries, especially developing countries, faced a severe economic crisis, the market failure

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viewpoint was more acceptable to create economic equilibrium among economists, and governments were seen as managing economic activities. this has led to significant government presence in the field of economic activity, along with the production of public goods and legislation. On the other hand, the achievement of economic growth and development as the main economic principles has always been the concern of governments. The attempt by governments to achieve these important principles justifies their further presence on the economic scenes.

Productivity like other human sciences topics, is the result of economic, social, and cultural interactions that are shaped in the context of society, firm, and individual. It can be argued that is one of the communication circles of economic discussions that deal with other sciences in their productivity issues. Therefore, no developed country can be found that on these interactions, productivity has not been faded or a special place has not been institutionalized in its decision-making and policy-making system. proof of this claim is evident in the trends and developments of the macroeconomic and social indicators of these countries over the last few decades. Because the design and implementation of economic policies for the rapid and sustainable growth of the economy and exposure in the position of international competition, productivity is a key category.

In general, studies on the role of government in the economy can be classified into two groups. Some studies have examined the relationship between government size and economic growth, and some of these studies have focused on the effects of government policy on economic growth. Among the studies related to the first field are:

In an article, Ram (1986) reviewed the effect of government on economy's growth and efficiency. The results of this study show that the presence of government in the economy is positive and an increase in the size of government leads to economic growth and consequently has a positive impact on the economy. Another finding of this study is that physical investment costs and consumer expenditures have a negative and positive impact on economic growth respectively. Barro (1988) in an article entitled 'government expenditures in a simple model of domestic growth', reviewed the correlation between government size and economic growth rate and savings payment, and came to this conclusion that government's consumption expenditures and government's construction expenditures have a negative and positive impact on private sector investment respectively.

Strazicich et al (2004) in an article entitled government size and economic growth, showed that there is distinction between government's presence and its impact on the economy, and finally government's presence in economy, depending on the type of presence, in some cases has a positive and in others has a negative impact on the economy.

In a study, Herath (2010) has investigated the correlation between government size and economic growth in Sri Lanka. For this purpose, time series data for the years 1959-2003 has been used and the conclusion has been found that government's expenditures and economic growth have a positive relationship with each other, but if government's expenditures become too much, this relationship would be negative. Chen et al (2011) have examined the size of government and economic growth in the 24 OECD countries

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using integrated data model (Panel Data). The results show that as long as economic growth is low, increasing the size of government has a positive impact on economic growth, but gradually with enlarging the size of government, its effect will be negative.

In relation to the effects of government policy on economic growth, Gregoriou and Ghosh (2009) in their article reviewed the effect of government indicators on economic growth. For this purpose, they used GMM technique for 15 developing countries over the period of 1972-1999 and concluded that government's total expenditures have a positive impact on economic growth, while government's investment and consumption expenditures have a positive and negative impact on economic growth respectively.

In recent decades, the attraction of foreign direct investment is an important policy and strategy for achieving economic growth and development. Foreign direct investment not only helps to increase investment, it can also lead to the transfer of advanced technology to the host country, which will gradually increase the technological capabilities of the host country's companies. Firms that start with foreign direct investment use more advanced technology and new management methods in the production process, resulting in higher productivity and growth. Hee Ng (2007) examine the linkage between foreign direct investment (FDI) and productivity in fourteen sub-Saharan economies – Benin, Botswana, Congo, Cote d'Ivoire, Gambia, Ghana, Malawi, Mauritius, Nigeria, Senegal, Seychelles, Togo, Tanzania and Zambia. he use the Granger causality test and the Toda-Yamamoto version of the Granger causality test to test if FDI inflows result in higher productivity growth. in this article he find limited evidence that FDI inflows contribute to higher total factor productivity growth. There was no evidence that FDI inflows lead to higher technical change but there was some evidence that FDI inflows lead to higher efficiency in three countries.

Wacker and Vadlamannati (2011) have studied the impacts of direct foreign investment on the optimization of their labor market processes and concluded that reducing labor standards is a direct result of negotiations between employers and employees.

Boghean and State (2015) have reviewed the relationship between foreign direct investments and labor productivity in Europe Union countries. In this paper, they used the computer program SPSS for time series data 2000-2012 and came to this conclusion that there is a strong correlation between foreign flow volume of foreign direct investments and productivity as well as a direct and strong correlation between internal flows of foreign direct investments and average labor productivity.

In the last few decades, attraction of foreign direct investment has been one of the ways of financing countries to increase domestic investment. In this regard, the economic conditions of the host countries to increase the level of direct foreign investment has been of great importance. most studies of FDI in Africa so far have focused on examining the determinants of FDI flows into Africa. For example, Basu and Srinivasan (2002) analyzed FDI in African countries and argued that the main determinants of FDI flows in Africa can be divided into four categories – natural resource, specific locational advantage, policies towards FDI and economic reforms. They also argued that a "critical mass of

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mutually reinforcing policies" is needed for Africa to continue attracting FDI. In particular, they emphasised the importance of political and macroeconomic stability. Meanwhile, Asiedu (2005) uses panel data for 22 African countries to show that the presence of natural resources and large domestic market tend to promote FDI inflows into the country. However, she also finds that by improving their macroeconomic environment and policy stance, countries that are no well endowed with natural resources or with small domestic market can also increase their FDI inflows. Therefore, this suggests that the appropriate policies can play a very important role in attracting FDI.

The evidence that only higher-income developing countries benefit from FDI suggests that there may be other factors that determine how much a country benefit from FDI. Later research attempts to identify these factors. For example, Borensztein *et al* (1998) shows that the country needs a certain level of human capital in order for the country to benefit fully from FDI. They performed cross-country regressions on a sample of 69 developing countries and found that FDI contributes more to growth than domestic investment. Further, they also found that FDI is complementary with human capital i.e. human capital needs to be above a certain threshold for FDI to be more productive than domestic investment. It would seem that although FDI may bring with it advanced technology and techniques, the country also need to have sufficient absorptive capacity in terms of qualified people in order to benefit fully from it. Without sufficient level of human capital, the country does not have the absorptive capacity to take full advantage of FDI. Therefore, FDI is not seen as a cure-all. The country needs to have the right level of human capital for FDI to be fully effective.

However, the belief that FDI provides extra benefit to the economy is not universally shared. Nunnenkamp and Spatz (2003) found using data of US FDI stock abroad that the link between FDI and economic growth is quite weak. On a slightly bright note, they do find that the link tend to be stronger in countries with more favourable characteristics such as better institutions, more educated workforce and openness to trade. In general, however, they are quite sceptical about the benefits from FDI. They argue that it is easier to attract FDI than to derive benefit from it.

Research hypotheses and empirical model

The aim of this study was to evaluate the impact of government economic policies on labor productivity in selected OECD countries; so in this section, a number of government's indicators introduced by the World Bank that have more impact on labor productivity are explained and then a structural equation model to test whether government policies can increase labor productivity is used.

The rule of law shows trustworthiness of laws of society to firms and how much they remain loyal to these laws. A society that is successful in this aspect creates a favorable and predictable environment from the perspective of economic and social interactions. In such a society, there is confidence in laws and firms have high confidence in doing there transactions (Kaufmann et al, 2009).

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The importance of the rule of law on labor productivity can be stated as follows: if there exists no law, in such a society people tend to consider robbery as the easiest way instead of engaging in economic activities. In these circumstances, no one may have an incentive to produce. Production is also dependent on the amount of investment. If there is no protection of property laws and contract enforcement, there will not be substantial private investment (Duncan and pollard, 2002).

Government efficiency shows government's ability to generate and apply appropriate policies and delivery of public goods and services. Many studies have shown that productivity depends on the provision of public goods and services, communications infrastructure, institutions and development programs. On this basis, if the government can effectively provide these public goods and services, economic development would be possible. In addition, it is more likely that an effective government could implement macroeconomic policies that are necessary to create a favorable environment for economic development. For the quality of regulations, it can be said that law is the government's main tools for intervention in the economy and government can bring the quality of more economic growth by legislating laws and provide good infrastructure for the functioning of other entities.

Labor productivity in a country may be improved with appropriate government's policies. In this way, it provides more services including an increase in the quality of monitoring employees, encourage employees to do the right policies, proper macroeconomic policies and adequate market policies. Although the level of labor productivity depends on many factors, usually appropriate government policies depend on more investment in the country's economic infrastructure and a better environment for further investment, increase in attraction degree of foreign direct investments and policies in relation with market liberalization. In this way, costs of import of capital goods are reduced and acceleration of capital accumulation will increase. To test the hypothesis that government both directly and indirectly can increase labor productivity by increasing the amount of investment, a structural equation model is defined as follows. In this study, in order to review factors affecting the relationship between economic policies and labor productivity, studies conducted by Sutcliffe and Glyn (2003) and Mcguckin et al (1998) have been used and the proposed model of Min and Smyth (2014) has been used with slight modification as follows:

$$TFP_{it} = \beta_0 + \beta_1\, Governance_{it} + \beta_2\, Globalisation_{it} + \beta_3\, x_{it} + U_{it} \qquad (1)$$

Where:

TFP_{it} Is labor productivity for ith country in tth year and $Governance_{it}$ is the government's efficiecy and effectivity, rule of law and quality of regulations (as inicators of the government) for ith country in tth year. $Globalisation_{it}$ is country's index of globalization for ith country in tth year which in this study, economy's degree of openness and foreign direct investment have been used as indicators of globalization and x_{it} is a vector of government's investment for ith country in tth year.

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U_{it}Reperesents the error factor for ith country in tth year (subscript i indicates the country and t represents intended year).

Equation 1 can be written as equation 2:

$$TFP_{it} = \beta_0 + \beta_1 GE_{it} + \beta_2 RL_{it} + \beta_3 RQ_{it} + \beta_4 O_{it} + \beta_5 FDI_{it} + \beta_3 I_{it} + U_{it} \quad (2)$$

Its variables are introduced as follows:

TFP : labor productivity, GE: government's efficiency and effectivity, RL : rule of law, RQ : quality of regulations, O : openness degree of economy, FDI : foreign direct investment and I: government investment. Data on variables TFP, O, I, FDI are derived from the Organization for Economic Cooperation and Development site and data on variables RQ, RL, GE are derived from WGI site. In this study, a set of indicators of good governance, three variables of government's efficiency and effectivity, rule of law and the quality of regulation have been used which are closer to current study.

To estimate the relationships explained in this section, the sample consists of 11[2] member countries of the OECD with the distribution of economic policies and due to limited information on the three indicators of the government, the period during 2000-2014 is considered.

Results

To estimate the impact of economic policies on labor productivity, firstly time series should be reviewed in terms of stability. For this purpose, unit root test is used. Test results for time series are presented in table 1.

Thus, according to the some of non-viability time-series and difference in their degree of integration, Panel VAR method can be used for statistical estimations.

Table 1: Static Test Results

Variables	Test result
TFP	I(0)
GE	I(1)
RL	I(0)
RQ	I(2)
O	I(1)
FDI	I(1)
I	I(0)

[2]11 selected countries are:Canada, USA, Japan, Korea, France, Germany, Italy, Netherland, Spain, Turkey and England.

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In this study, according to the Panel quality of the data collected, Panel VAR model has been used to estimate the short-term relationships and Johansen Co-integration test and Vector Error Correction Model have been used to investigate the relationship between long term time series. The first issue in Panel VAR models is to determine theoptimallength ofinterruption which based on the Schwartz-Bayesian criterion, the number of interruption has been chosen as the optimal interruption.

Table 2: Determining the Optimal Length of Interruption

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-2243.701	NA	110547.9	31.47834	31.62338	31.53728
1	-1256.196	1864.521	0.220484*	18.35239*	19.51267*	18.82387*
2	-1207.305	87.52454*	0.221841	18.35392	20.52944	19.23795

What are derived from VAR method are short-term relationships between variables. Accordingly, results of estimating equation 2 variables using the VAR model to the length of interruption 1 will be obtained as follows.

Table 3: VAR model Estimation Results

Variable	TFP(-1)	GE(-1)	RL(-1)	RQ(-1)	O(-1)	FDI(-1)	I(-1)
TFP	0.1307	-62.6873	-3.7045	0.1889	-0.0292	-1.26E-07	-0.0576
T-STAT	1.4196	-0.0536	-4.347	0.529	-0.2629	-0.8905	-2.2271

Accordingly, the short-term relationship between the variables indicates that labor productivity is directly related to the regulations quality and is inversely related to the government' efficiency and effectiveness, rule of law, openness degree of economy, foreign direct investment and investment.

Using Pedroni Co-integration Test, long-term relationship between government's economic policies and labor productivity can be determined and the test results are shown in Table 4. As can be derived from table 4 and the results of Prob, the null hypothesis of no co-integration relationship is rejected. So, there is a long-term relationship between variables of model 2.

Table 4: Co-integration Test Results

Normal AR coefficients	Statistics	Prob	Weighted Statistics	Prob
Panel PP-Statistic	-9.5526	0.0000	-13.1963	0.0000

Table 5: Estimation results of VECM model

Variable	D(TFP(-1))	D(GE(-1))	D(RL(-1))	D(RQ(-1))	D(O(-1))	D(FDI(-1))	D(I(-1))
D(TFP)	-0.4265	13.7687	29.243	-3.0823	0.6751	4.65E-07	0.1004
T-STAT	-5.2775	0.6596	1.2039	-0.5949	2.0461	0.1616	3.9946

Coint Eq1= -0.2337

To evaluate the long-term impact of economic policies on labor productivity, VECM is used which is shown in table 5.

Accordingly, all variables except for the quality of regulationsin long-term have a positive impact on labour productivity. Also, in the long run, the rule of law has the greatest effect on labor productivity and labor productivity with a coefficient 0.2337 convergent to its long term value.

Conclusion

Given the importance of government’s role in decision making and as a result of production amount, this study has investigated the effectiveness of various government indexes and globalization on labor productivity in the member countries of the Organization for Economic Co-operation and Development (OECD). For this purpose, Panel VAR method was used to estimate the model for the period 2000-2014. The results of this study showed that in the long-run, the impact of efficiency and effectiveness variables of government, rule of law, openness degree of economy, foreign direct investment and government investment on labor productivity is positive, however; in the short-term, these variables are inversely related to labor productivity. Therefore, we can expect that by improving government structure of OECD countries, labor productivity will increase in these countries.

According to the results of estimated equation, labor productivity is highly dependent on government indicators. Accordingly, in these countries, policy-makers should be aware of the consequences of their decisions andtheirs impact on the economy before decision makings and by using specialists who have the ability to predict the results of government’s policy making, prior to the implementation of decisions, review and assess them. Based on this, by simulating the results of these decisions and reaction of society in facing them, governments will have better choices and before carrying out any decision by giving information to individuals can reduce errors caused by incorrect implementation of decisions and consequences of people resistance to those decisions.

Also prior to implementing government decisions for those who are supposed to cooperate in the implementation of decisions, educational and awareness sessions held to justify and provide logical reasons for why policy implementation can lead to the improvement of their country's economy and the welfare of the community so that these people can transfer the proper and complete knowledge to the community for the implementation of the new policy. having awareness that the country's need is to Implement important decisions on behalf of the government that people trust in, will lead

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to the results of the implementation of new decisions, is complete and without resistance the people. for example, in this case, we can be an example about increasing the price of gasoline, increasing the amount of taxes or value added tax that the people of the community's awareness and the clarity of the conditions for the people will lead them to more cooperation in implementing government policies.

References

Asiedu, Elizabeth (2005), "Foreign Direct Investment in Africa: The Role of Natural Resources, Market Size, Government Policy, Institutions and Political Instability," *UN-WIDER Research Paper*, No. 2005/24.

Barro, R. J. (1990). Government Spending in a Simple Model of Endogenous Growth, *Journal of Political Economy*, 98(5), s103-s125.

Basu, Anupam and Krishna Srinivasan (2002), "Foreign Direct Investment in Africa – Some Case Studies," *IMF Working Paper*, WP/02/61.

Boghean, C. & State, M. (2015). The Relation between Foreign Direct Investment (FDI) and Labour Productivity in the European Union Countries, *Procedia Economics and Finance*, (32), 278-285.

Borensztein, E., J. De Gregorio and J-W. Lee (1998), "How does foreign direct investment affect economic growth?", *Journal of International Economics*, Vol. 45, pp. 115-135.

Chen, S.T., Chen, C.C. & Kim, Y. (2011). Economic Growth and Government Size in OECD Countries: New Evidence from the Quantile Regression Approach, *Economics Bulletin*, 31, 416-425.

Duncan, R. & Pollard, S. (2002). A Framework for Establishing Priorities in a Country Poverty Reduction Strategy, *Erd Working Paper*, 15.

Gregoriou, A. & Ghosh, S. (2009). The Impact of Government Expenditure on Growth: Empirical Evidence from a Heterogeneous Panel, *Bulletin of Economic Research*, (61): 95-102.

Hee Ng, T. (2007). Foreign Direct Investment and Productivity: Evidence From Sub-Saharan Africa.

Herath, S. (2010). The Size of the Government and Economic Growth: An Empirical Study of Sri Lanka, *ePub Institutional Repository*.

Kaufmann, D., Kraay, A. & Mastruzzi, M. (2009).Aggregate and Individual Governance Indicators 1996-2008, *Policy Research Working Paper*, 4978.

Mcguckin, R. H., Streitwieser, M. L. & Doms, M. (1998). The Effect of Technology Use on Productivity Growth, *Economics of Innovation and New Technology*, (7): 1-26.

ISSN 2383-2126 (Online)
© Authors, All Rights Reserved

Min, B. S. & Smyth, R. (2014). Corporate Governance, Globalization and Firm Productivity, *Journal of World Business*, (49): 372-385.

Nunnenkamp, Peter and Julius Spatz (2003), "Foreign Direct Investment and Economic Growth in Developing Countries: How Relevant are Host-country and Industry Characteristics," *Kiel Working Paper* No. 1176, Kiel Institute for World Economy.

Ram, R. (1986). Government Size and Economic Growth: A New Framework and Some Evidence from Cross-Section and Time Series Data, *American Economic Review*, 76, 191-208.

Strazicich, M. C., Lee, J. & Day, E. (2004). Are Incomes Converging OECD Countries? Time Series Evidence with Two Structural Breaks, *Journal of Macroeconomics*, 26, 131-145.

Sutcliffe, B. & Glyn, A. (2003).Measures of Globalisation and Their Misinterpretation. International Journal of Michie (Ed.), *The handbook of globalisation*, London: Edward Elgar, 129–150.

Wacker, K. M. & Vadlamannati, K. C. (2011). Do Multinationals Influence Labour Standards? A Close Look at US Outward FDI, *Courant Research Centre*, 98.

Worldwide Governance Indicators Retrieved from www.Worldbank.org.

Organization for Economic Cooperation and Development Retrieved from www.OECD.org.