International Journal of Economics, Commerce and Management
United Kingdom Vol. VII, Issue 2, February 2019
http://ijecm.co.uk/ ISSN 2348 0386

THE ROLE OF MONEY SUPPLY: FOREIGN DIRECT INVESTMENT & ECONOMIC GROWTH IN PAKISTAN

Maryam Hina
Lecturer, Department of Commerce,
Fatima Jinnah Women University (FJWU),
The Mall, Rawalpindi, Punjab, Pakistan
hinamaryam5@gmail.com

Anayat Ullah
Research Officer, Faculty of Social Sciences & Humanities,
Department of Social & Behavioral Sciences,
National University of Medical Sciences (NUMS),
The Mall, Rawalpindi, Punjab, Pakistan.
au.shinwari@gmail.com, anayat.ullah@numspak.edu.pk

Abstract

In global economy, Foreign Direct Investment (FDI) is considered an imperative indicator for economic growth. Pakistan is a developing state and FDI is an important element of human capital development, technology transfer, and tax revenues. This paper investigates the role of money supply as moderator in this relationship between economic growth and FDI in Pakistan. The impact of economic growth on FDI is tested and money supply taken as moderator utilizing the data of twenty two years (1995-2017). The secondary data is collected from the World Bank and analyzed by running the statistical tests of correlation and regression. The results indicate that money supply plays a positive role in strengthening the relationship of economic growth and FDI. Consequently, it is implied that if the money supply is increased, there will be economic growth and it will lead to attract the foreign direct investment from the foreign countries in Pakistan.

Keywords: Money Supply, Foreign Direct Investment, Economic Growth, Development, Pakistan

INTRODUCTION

In the longer term, Foreign Direct Investment (FDI) has financially viable spillover effect on an economy. The FDI is an important indicator of showing economic growth enhancement in a host country. It is considered as a measure of ownership of assets by a foreign investing country. It is an investment in a business of a country either in existing company or by forming a new company (Bilgili, Tuluce, & Dogan, 2012). Extensive research work has been done on checking the effect of foreign direct investment on economic growth in developing as well as developed countries of the world. Before entering into a developing economy, an investing country will must see the economic growth of the host country and other conditions having an impact on the investment to avoid the future losses. On the other hand many researchers have proved that FDI inflow improves international trade, upgrade management technique and technological spillovers results in increasing the economic growth (Tang, Yip & Ozturk, 2014; Agbloyor, Abor, Adjasi & Yawson, 2013; Hassaballa, 2014).

Pakistan is a developing economy and FDI is an important element of human capital development, technology transfer, and tax revenues. There are many issues like corruption, political instability, economic instability and quality of institutions that can hinder the investment to come into Pakistan. But on the other hand, the developing economies offer cheap labor, new unexploited markets, access to natural resources and other direct or indirect incentives to attract the international investors (Albuquerque et al. 2005; Asiedu 2002; Reece & Sam, 2012).

Money supply has got an attention in monetary economics field in recent years. There is a relationship between money stock and economic growth in Nigeria. By decreasing the money stock and increasing the interest rate will lower the gross national product (Alwoda, 1993). The economy reaches the stage of develop and process growth when the economy becomes matured (kuttner, 2001).Many economists have varied opinion of impacting money supply on economic growth and some says that money supply is an important determinant of economic growth (Handler, 1997).

The main objective of this study is to investigate the role of money supply in strengthening the relationship between economic growth and foreign direct investment in Pakistan.

LITERATURE REVIEW

There are different macroeconomic variable that can affect the economic growth of a country. Economic growth of a country is usually measured through the gross domestic product (GDP) growth rate. Different researches have checked the effect of different macroeconomic variables on GDP growth. Economic growth is an important factor that can attract the foreign direct

investment. Economic growth can have positive impact the FDI or it can have negative impact the FDI or it may have no impact on FDI. Different researches have shown different results.

Foreign investors are attracted by the economic growth due to many reasons. When many industrial countries were in depression in 1980s then there was increase in FDI (Jensen, 2003; Katrakilidis et al. 1997). Economic growth can lead to the profitability which is an incentive to the investors. Increase in Economic growth rate results in increase in demand leads to increasing the profits that can attract the investors to invest (Lim, 1983 & Zhang, 2001). Economic growth indicates the larger market and economies of scale results in efficient scale of production enabled by the larger market (Agosin & Machado, 2007; Carstensen & Toubal, 2004). Some researches mentioned that, the economic growth has a negative impact on FDI. In case of developing countries economic growth has a negative impact on FDI (Wint & William, 2002; Buchanan et al. 2012). A negative impact can cause increase in FDI. For instance if there is country who is experiencing low economic growth due to less capital but has plentiful natural resources and labor at low rate. In such cases a country may find an opportunity to earn profits by investing in those countries to utilize the resources. So decrease in economic growth can attract FDI.

The determinants of FDI inflows have been examined in Turkey and quarterly time series data from the year 1988 to 2012 was used with regime switching model. Results was that the determinants of FDI i.e. GDP growth, imports, exports, energy prices, labor cost and country risk significantly affect FDI flows in Turkey (Bilgili, Tuluce, & Dogan, 2012).

Nexus between Money Supply and Economic Growth

Money supply can play an important role in economic growth of a country. Money supply is the total amount of money that is in circulation of a country (Anyanwu, 1993). Monetarists say that it can have an effect on prices but not on GDP. But Keynesian say that change in money supply can result in changes in prices and real output. Many studies have been done to check the relationship between money supply and GDP. Economists have different view point that money supply can have an impact on economic growth and some consider money supply an important determinant of economic growth. Increase in demand results in inflation that can be controlled by decreasing the demand through decreasing the money supply growth resulting in reduction of prices and wages growth (Griffiths, 1976). The countries who studied a behavior of money supply over a period of time hardly saw much variation in the economic activities (Handler, 1997). An economy may not grow in the absence of suitable money supply level and generally suitable financial conditions (Steve, 1997; Domingo, 2001). There is a strong relationship between money supply and real GDP in Czech Republic (Bednark, 2010). Increasing the supply

of money by SBP negatively affect the economy of Pakistan because of increasing inflation rate (Ihsan & Anjum, 2013). Money supply has not a significant effect on GDP growth as it cannot explain the real GDP growth (Ogunmuyiwa & Ekon, 2010). Bahera (2016) found the linear combination in long run so the relationship of long run equilibrium exists in the research model suggesting that GDP growth of the economy is positively affected by the money supply. On the other hand the study conducted by Srithilat and Sun (2017) revealed that economic development will be negatively affected if the money supply stock changes. So the money supply and per capita GDP has a negatively significant relationship.

Ahmed and Afzal (2016) investigated the relationship between monetary policy and economic growth by applying the autoregressive distributive lag model. He found a positive relationship of money supply and economic growth as money supply has a positive impact on economic growth. Other researchers found the same result. Like Hussain and haque (2017), examined the relationship between money supply and gross domestic product per capita in Bangladesh by applying cector error correction model. They found that the money supply significantly affects the growth rate. Chokethaworna Chaiboonsrib and Kahounkhalaxc (2015) also found positive relationship between money supply and economic growth by using autoregressive distributive lag.

Some of the studies found insignificant relationship between money supply and economic growth. Gatawa, Abdul Ghafar and Olarinde (2017) used VCEM to analyse money supply and economic growth and found that money supply has a negative impact on economic growth.

Nexus between Money Supply and FDI

Money supply is an economic variable and some studies have been done to check the effect of money supply on FDI. Keynes has identified macroeconomic variable that can affect the FDI. Those macroeconomic variables include gross domestic product, interest rate, uncertainty, exchange rate, credibility, inflation, institutional factors, political factors and government expenditure. Aslamand Ghafoor (2018) investigated the relationship between monetary policy and economic growth. Correlation matrix is used to see the association between variables and results shows significant relationship between foreign direct investment and broad money.

In Malaysian financial system increase in money supply results in increasing the capitalization of listed companies of domestic market that build the confidence of international companies (Mugableh, M. I., 2015). In the process of money supply, inflation mechanism plays its role, inflation can depreciate the local currency and exchange rate will appreciate can result in increasing the exports and economic growth the will lead to foreign direct investment.

Increase in money supply by the central bank will result in demand of money that will result in increase in inflation that will cause the exchange rate to increase leads to depreciation in exports and it will increase the FDI (Khan, N. U., & Ullah, M. A., 2015).

METHODOLOGY

In this paper, the economic growth is taken as an independent variable and foreign direct investment is a dependent variable. The role of money supply as moderator is checked, in order to know that, what role this moderator plays and whether it strengthens or weaken the relationship of independent and dependent variable. Moderator variable is "a qualitative or quantitative variable that affects the direction and/or strength of the relationship between an independent and predictor as a dependent or criterion variable" (Baron & Kenny 1986). The following sections further explain the methods and techniques used in this study.

Models

There are different models that have been tested and can clarify the relationship between economic growth and foreign direct investment. The simple model of this research is:

$$FDI_t = \alpha_0 + \alpha_1 EG_t + \mu_t \qquad (1)$$

Where α is intercept term, EG represents the independent variable Economic Growth, FDI represents the dependent variable Foreign Direct Investment, and μ error term.

To check the moderation impact on money supply variable an interaction term is created and the model 2 is created as:

$$FDI_t = \beta_0 + \beta_1 EG_t + \beta_2 (EG * MS) + \nu_t \qquad (2)$$

Where β is intercept, EG is economic growth, MS is money supply, FDI is foreign direct investment, MS.EG is interaction term created by multiplying money supply by economic growth and ν is error term. This model describes that moderator variable has an impact on dependent variable is through the independent variable.

To check the effect of money supply as independent variable on the dependent variable foreign direct investment another model is designed as;

$$FDI_t = \gamma_0 + \gamma_1 EG_t + \gamma_2 MS_t + \gamma_3 (EG * MS) + \varepsilon_t \qquad (3)$$

Where γ is intercept, EG is economic growth, MS is money supply, FDI is foreign direct investment, MS.EG is interaction term created by multiplying money supply by economic growth and ε is error term

Data

Data used to test this model is time series data and is taken from the World Bank development indicator. Time series data selected from 1995 to 2017. The reason for selecting twenty two years of data is to cover the economic indicators that have changed over a period of time. The economic indicators include changes in economic growth / policies, natural and man-made disasters, and paradigm shift in political regime. For this purpose, EViews software is used to run the tests. Therefore, this research will investigates that how the selected variable has behaved in the chosen time frame.

RESULTS AND DISCUSSION

Augmented Dickey-Fuller Unit Root Test results

This study applied unit root ADF test to check that the data is stationary or not. It is found that the data is stationary at 2nd difference. EG shows P-value=0.0000, FDI P-value=0.014 and MS P-value=0.001.These P-Values are less than 0.05 so we reject the null hypothesis by seeing these results. Null hypothesis is; H_0= Data is not stationary.

The data is stationary to apply other test. P-values for dependent, independent and moderating variables are shown in the table as follows:

Table 1: Regression Analysis

Variables	Level of stationary	P-value
Foreign Direct Investment	Stationary at 2nd difference	0.0000
Economic growth (EG)	Stationary at 2nd difference	0.0014
Money supply (MS)	Stationary at 2nd difference	0.0001

Model 1:

For regression analysis least square is run as it's the standard approach. Results shows that there is insignificant relationship between FDI and EG. The probability is 0.3926 that is higher than the 0.05 so we are unable to reject the null hypothesis that is:

H_0= Economic Growth (EG) don't effect Foreign Direct Investment (FDI).

This result supports Wint and William (2002), and Buchanan et al. (2012).

To overcome this problem we run another test Breush-Godfrey Serial Correlation LM Test. The result of this test shows that there is a significant relationship between EG and FDI at probability of 0.0002 that is lesser than the 0.05. Durbin Watson Stat is 2.396593 that are greater than 2 showing negative correlation between dependent variable and independent

variable means if there is increase in one variable than there will be decrease in other variable. So, the null hypothesis is rejected and these results also supported by Lim (1983) and Zhang (2001) studies.

Model 2:

This model checks the moderation effect of money supply (MS) by creating the interaction term. For regression analysis of model 2 least-square is run. Results show that there is insignificant relationship between FDI and the interaction term. The probability is 0.5491 that is higher than the 0.05 so we are unable to reject the null hypothesis that is:

H_0= the relationship between economic growth (EG) and foreign direct investment (FDI) does not become more positive as the money supply (MS) increases.

To overcome this problem another test is run, the Breush-Godfrey Serial Correlation LM Test. The results of this test shows that there is a significant relationship of MS with EG at probability of 0.0007 that is lesser than the 0.05. Durbin Watson Stat is 2.380423 i.e. greater than 2 showing negative correlation between dependent variable and interaction term means if there is increase in money supply then the relationship between EG and FDI will be strengthened. So, the null hypothesis is rejected.

Model 3:

This model checks the moderation effect of money supply as well as the impact of money supply as independent variable on dependent variable. For regression analysis of model 3 least-square is run. Result shows that there is insignificant relationship between FDI, EG, MS and the interaction term. The probability is EG= 0.3323, MS=0.3064 and MS*EG=0.2408 that is higher than the 0.05 so we are unable to reject the null hypothesis that is:

H_0= the relationship between economic growth, money supply and foreign direct investment does not become more positive as the money supply increases.

To overcome this problem another model is run, Breush-Godfrey Serial Correlation LM Test. The result of this test shows that there is a significant relationship of money supply with economic growth at probability of 0.0018 that is lesser than the 0.05. Durbin Watson Stat is 2.299556 that is greater than 2 showing negative correlation between EG, MS, FDI and MS*EG means if there is increase in money supply then the relationship between MS, EG and FDI will be strengthened. So, the null hypothesis is rejected and results also supported by Khan, N. U. and Ullah, M. A, (2015).

CONCLUSION AND RECOMMENDATIONS

The role of money supply plays an important role in the relationship between economic growth and FDI in Pakistan. The economic growth is a major factor for FDI inflow and it strengthens or weaken the relationship with money supply. The data of variables that is examined is from 1995 to 2017. So we reject the null hypothesis. That is, the relationship between economic growth (EG) and foreign direct investment (FDI) does not become more positive as the money supply (MS) increases.

In the process of money supply, inflation can depreciate the local currency and exchange rate will appreciate, which resulted into increasing the exports and then, economic growth will lead to foreign direct investment. So, policy makers should consider money supply as an important factor having an impact on economic growth as well as foreign direct investment. In Pakistan, due to political instability and unlawful situation, it has created many hurdles to attract FDI and ultimately effect economic growth. So, Government should channelize the cash flow for foreign investors to invest there. Furthermore, the policy makers should practice diversification policy rather than depending upon FDI. Therefore, Government should invest and strengthened the capacity of domestic markets, in order to have the long term positive and spillover effects on the economy of Pakistan.

REFERENCES

Ahmad, D., Afzal, M., & Ghani, U. (2016). Impact of Monetary Policy on Economic Growth: Empirical Evidence of Pakistan. International Journal of Applied, 4(6).

Aslam, M., &Awan, A. G. (2018).Impact of monetary policy on economic growth: evidence from Pakistan. Global journal of management, social sciences and humanaitioes. Vol 4 (1) Jan-March, pp.89-109

Albuquerque, R., Loayza, N., & SErven, L. (2005).World market integration through the lens of foreign direct investors.Journal of international Economics, 66: 267-295.

Agbloyor, E. K, Abor, J.,Adjasi, C.K. D, & yawson, A. (2013). Exploring the causality links between financial markets and foreign direct investment in Africa. Research in International Business and Finance, 28, 118-34.

Agosin, M.R., & Machado, R.(2007). Openness and the international allocation of foreign direct investment. Journal of development studies, 43(7): 1234-1247.

Asiedu, E. (2002). On the determinants of foreign direct investment to developing countries: in Africa different? World Development, 30: 107-119.

Bednarik, R., 2010. Money Supply and real GDP: the case of the Czech Republic, http://papaers.ssrn.com/so13/papaers.cfm?abstract_id=1539390

Behera, J. (2016). Dynamics of Inflation, Economic Growth, Money Supply and Exchange Rate in India: Evidence from Multivariate Analysis. Quarterly Journal of Econometrics Research.

Bilgili, H. A., & Dogan I. (2012). The determinants of FDI in Turkey: A Markove Regime-Switching approach. Economic Modelling, 29, 1161-69.

Buchanan, B. G., Le, Q. V., & Rishi, M. (2012).Foreign direct investment and institutional quality; some empirical evidence. International Review of Financial Analysis, 21;81-89.

Chaitipa, P., Chokethaworna, K ,Chaiboonsrib, C and Khounkhalaxc, M. (2015). Money Supply Influencing on Economic Growth-wide Phenomena of AEC Open Region. International Conference on Applied Economics.

Carstensen, K., & Toubal, F. (2004). Foreign direct investment in Central and Eastern European countries: A dynamic panel analysis. Journal of comparative Economics, 32(1):3-22.

Gatawa, N. M., Abdulgafar, A, and Olarinde, M. O. (2017). Impact of Money Supply and Inflation on Economic Growth in Nigeria. IOSR Journal of Economics and Finance.

Hassaballa,H. (2014). Testing for Granger causality between energy use and foreign direct investment inflows in developing countries. Renewable and Sustainable Energy Reviews, 31, 417-26.

Hussain, M. E., and Haque, M. (2017). Empirical Analysis of the Relationship between Money Supply and Per Capita GDP Growth Rate in Bangladesh. Journal of Advances in Economics and Finance

Jensen, N. M. (2003). Democratic governance and multinational corporation: political regimes and inflows of foreign direct investment. International Organization, 57(3): 587-616.

Katrakilidis, C. P., Tabakis, N. M., & Varsakelis, N. C. (1997). Macroeconomic environment and foreign direct investment net inflows: An empirical approach. International Review of Economics and business, 44(2): 375-389.

Kuttner, K. N., Monetary policy surprises and interest rate: Evidences from the Fed funds futures market. Journal of Monetary Economics 47, 523-544.

Khan, N. U., & Ullah, M. A. (2015). Issues relating to investment in Pakistan and its effects on economic growth. The Journal of Commerce, 7(3) pp.90-109

Lim, D. (1983). Fiscal incentives and direct foreign investment in less developed countries. Journal of Development Studies, 19(2): 207-212.

Mugableh, M. I. (2015). Time series analysis of inward foreign direct investment function in Malaysia. Procedia-Social and Behavioral Sciences,172, 679-685.

Ogunmuyiwa, M. S., & Ekone, A. F. (2010).Money supply-economic growth nexus in Nigeria. J Soc SCI, 22(3), 199-204.

Reece, C., & Sam, A. G. (2012).Impact of pension privatization on foreign direct investment. World development, 40(2): 291-302.

Srithilat, K., Sun, G., & Thavisay, M. (2017). The Impact of Monetary Policy on Economic Development: Evidence from Lao PDR. Global Journal of Human-Social Science Research.

Tang, C.F., Yip, C.Y., & Ozturk, I. (2014). The determinants of foreign direct investment in Malaysia: A case of electrical and electronic industry. Economic Modelling, 43, 287-92.

Wint, A. G., & Williams, D. A. (2002). Attracting FDI to developing countries: A changing role for government? International Journal of Public Sector Management, 15(5): 361-374.

Zhang, K. H. (2001a). does foreign direct investment promote economic growth? Evidence from East Asia and Latin America. Contemporary Economic Policy, 19 (2): 175-185.

ACKNOWLEDGEMENT

Authors thank Ms. Shavana Sahar for assistance and useful comments.