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Foreign Aid, Real Exchange Rate and Economic Growth

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ABSTRACT

The tendency of foreign aid to augment economic growth and real exchange rate is a topic of great controversy today. This study incorporates the cross country data of seven developing countries from 1980 to 2010. The Govt. policies, terms of trade and Govt. consumptions decide the effectiveness of aid in growth and RER appreciation. Panel regression has been used in this study. Our study highlights that the countries receiving short term aid have no impact on the RER because the short term aid fails to improve the economic growth and exports of a country and the effective growth rates are absorbed in the country specific effects. The relative significance of the variables is important for the policymakers to improve the conditions to enhance the economic growth.
KEYWORDS: Aid, Real exchange rate, Economic growth, Panel regression

Jel codes: F35, F3, F43, C23

INTRODUCTION

The last few decades have seen that how to utilize the foreign aid for economic growth which is not only important for researchers but also for the policymakers. The empirical studies inferred some results that can be utilized by the policymakers for getting maximum benefits from the foreign aid.

The ultimate objective of an economy is the sustained growth and stable real exchange rate. However, most of the countries do not meet the planned goals of growth and stability due to certain reasons. The developed and well managed countries and economies play their role and help them out in the form of aid. Economists tried to find out efficiency of the economic growth with the foreign aid but there are dual relations in the literature. The principle role of the foreign aid is the poverty reduction which is included in the United Nations millennium goals.

Some researchers showed that foreign aid is useless for boosting up the economic growth (Mosley, P., Hudson, J., Horrell, S., 1987). The corrupt bureaucracy uses the foreign aid for their personal interests and not for the country's interest due to which the role of aid diminished (Easterly,W., 2002). The benefits of foreign aid are less than its bad effects on the economy; and these effects include the Dutch disease, mismanagement of resources by government and institutional inefficiency (Boone 1996).

The aid utilized for the exportable items and general public welfare does not affect the economic growth and real exchange rate of the country.

However the aid used in the production leads to economic activities that ultimately cause economic growth and exchange rate appreciation.

There is very little research on the distribution of foreign aid among the public. The elite class and the bureaucracy use the aid for their own interests rather than for the public welfare. Friedman (1958) argued that foreign aid does not incrementally change the economic conditions and livelihood of masses especially in democratic governments. The unequal distribution does not allow the country to develop significantly. However in autocratic government the corruption and unequal distribution of aid is negligible. The formulation and the implementation of policies is more necessary for the distribution of aid so that it can affect the country's growth positively. In the presence of poor policies the aid does not affect the growth significantly. The donor countries sometimes try to fulfill their interests by conditioning the aid with some policies that the recipient countries have to accept, these biased policies does not allow the aid recipient countries to grow economically.

LITERATURE REVIEW

In recent days the maintenance of sustained growth is the major challenge in today's world. The past studies focused on the aid saving and aid investment relationship and its relationship with the exchange rate has not been studied extensively. Although there is a strong relation of aid and the real exchange rate but this area of study has not been studied extensively. The empirical studies regarding consumption of aid will be helpful for the policymakers to design policies of the economy so that the aid can be utilized efficiently and give maximum benefits

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to the economy rather than affecting negatively in the form of Dutch disease. The past studies indicate both the positive as well as negative relationships of exchange rate with the foreign aid.

Foreign aid is important source of circulation of wealth from developed countries to the developed countries and the poor economies (Serpil Tekin, Valerie Cerra, Stephen J. Turno, 2000). The trend of giving aid has increased in the 20th century. The main purpose of the donor countries is the reduction of the poverty in the world by utilizing the aid for productive resources so that they can generate some economic activity reducing the poverty. The foreign aid can be utilized in two ways, one is to increase the consumption level of the population and the second is to increase the productive capacity of the economy and create sources of wealth for future prospective.

While studying the long run relation of the aid and the real exchange rate the literature indicate two type of relation. The economists widely described that the countries that manage their long term strategies and policies and prevent it from corruption, experience positive relation of aid with the growth (Hansen and Tarp, 2001., Easterly, 2003, Easterly, Levine, and Roodman, 2004., Roodman, 2004 and Rajan and Subramanian (2005). On the other hand some of the researchers proposed that the aid leads to the mismanagement of the resources particularly the foreign that is surplus from the budget sue to which it is used carelessly and because the Govt. is not answerable for the surplus income. Due to additional resources in the form of aid, the tax collection is relaxed and the Government consumption is increased that disturbs the overall growth of the economy (Azam, Devarajan, and O'Connell, 1997, and Adam and O'Connell, 1999).

The elite class and the democratic government use the major portion of the aid for their personal interests rather than in the interest of the general public. Angeles and Neanidis (2006) concluded that the elite class divert the resources towards their own benefits and use all means to achieve their personal goals. In the presence of the extractive and strong elite the real effectiveness reduces and fails to play its true role in the economy.

The foreign aid fails to perform its role efficiently because it provides and additional envelope to the government's resources and it is not answerable to the general public to the usage of the resources. In this way the chances of the corruption enhances and the aid distribution becomes influential by elite people of the Govt. (Adam and O'Connell, 1999). So the aid that was planned to have impact on the economy in increasing the economic growth does not perform its role perfectively. In long run the economy starts depending on the foreign aid which is not a good sign for any growing economy. We have identified two ways aid might have adverse effects in the long run; aid may weaken institutions and aid may adversely affect a country's competitiveness. Economidesa, Kalyvitis and Philippopoulos (2004) reported that the use of aid in the non productive operations leads to long term affect adversely to the country by losing its competitive edge.

Van Wijnbergen (1985 and 1986) suggested the impact of aid on the prices of the non-tradeable goods. The foreign aid is utilized in the non-tradable sector so that their prices increase due to increase of the demand of these goods. The real exchange rate is measured as the ratio of non tradable to the price of tradable; so due to appreciation of the domestic currency the exports will decrease and the long run growth of the economy will be affected. In severe forms the aid leads to greater appreciation of domestic currency followed by the affected exports and overall the scenario leads to Dutch disease. In this situation the aid negatively affected the growth of the country.

The earlier studies a dual relation of aid with the policies. Chauvet and Guillaumont (2004) and Guillaumont and Chauvet (2001) proposed that policies policies depends on the foreign aid. While other researchers proved from their research that aid depend on the policies of the recepient country's policies (Dalgaard and Hansen, 2001). Levine and Roodman (2003) proved that the robustness of the Daglard et,al was not significant so the dominant proven relation is that the policies depends on the aid that is itself plays role in the economic long run growth.

Extensive study of large number of individual countries suggest the channels through which the aid affects the growth (World Bank 1998) but the country specific factors limits its efficiency. If the effectiveness of aid is studied cross country it would be helpful in determining the factors that enhance the economic growth along with other effects of aid. In the same time cross country study will also enables us to know the shortcoming in the literature and in the methodologies. The cross country study will provide information at the micro level and enable us to identify the key variables through case studies that why and how these variables effect growth and also lists the limitations that why these variables failed to show its impact in a particular situation.

There are two type of methodologies are used in the literature and in this study uses the methodology of Rajan and Zingles (1998), which suggests that the channel can be identified by studying the growth of the affected industries of that particular channel. The effect of that channel is greater in the countries where that particular channel is more operative. The relative we competitiveness can be checked by this method that by increasing aid inflows their competitiveness increases or decreases. This method also has the edge to study the different types of industries like labor intensive or capital intensive industry separately and make policies targeting differently to make the aid more effectiveness.

On the other hand if aid is utilized according to carefully designed policies and production sector of the economy is developed then the aid helps the country to grow in its true sense. So, the effectiveness of aid depends on the policies, environment, type of government and its actions regarding institutional performance.

3. METHODOLOGY AND DATA ISSUE

Data sample

All macroeconomic variables of developing countries including Chile, Fiji, Ghana, Malaysia, Morocco, Nepal, Brazil and Pakistan used in this study. The data of particular variables are obtained from IMF *International Financial Statistics* (IFS) online database for 3 decades from 1980 to 2010. The frequency of data was on quarterly basis.

Panel Unit Root Tests

Before applying panel regression equation model we applied Levin, lin and Chu (2002) panel stationarity tests (Unit root tests). These techniques were widely used in many empirical researches.

Regression Equation Model

In our research we have used a regression model developed by Edwards (1989). Following multifactor regression equation has been used to find out how much REER is effected by Aid inflows and some other very influencing macroeconomic variables.

$$REERt = \alpha + \beta_1\ Aid_t + \beta_2\ GC_t + \beta_3\ GDP_t + \beta_4\ Open_t + \beta_5\ TOT_t + \varepsilon_t$$

Measurements of the macroeconomic variables used in this equation are given below.

REER is the real effective exchange rate calculated according to the following formula.

$$REER = 100 \times \left(\frac{NER \times CPIf}{CPId}\right),$$

NER = nominal exchange rate (number of Pakistani currency/unit of foreign currency)
CPI*f* and CPI*d* are consumer price indices for Pakistan and the United States respectively. According to this, an increase in REER reflects depreciation of the Pakistani currency.
All relevant data are obtained from the *International Financial Statistics* (IFS) 2010.

AID: Net foreign aid namely official development assistant ODA obtained from the OECD-DAC online statistics.

GC: government consumption obtained from the *International Financial Statistics* (IFS) 2010 as a portion of GDP.
GDP: Gross Domestic Product is obtained from *International Financial Statistics* (IFS) 2010.
Open: Trade openness of the economy is calculated as:

$$= 100 \times \frac{(\text{imports} + \text{exports})}{GDP}$$

Values of imports and exports are obtained from *International Financial Statistics* (IFS) 2010.

TOT: Terms of Trade is calculated by dividing exports and imports of home country.

$$TOT = \frac{Exports\ d}{Imports\ d}$$

'ε' is the error term, and '*t*' as time subscript.
According to the literature and relevant theories the expected impacts of these macroeconomic variables on real effective exchange rate REER are as follows:

Table no. I

Aid (+)	**Foreign aid tends to directly cause REER appreciation .**
GDP (+)	According to the Balassa-Samulson hypothesis the expected effect of GDP on REER is to be Positive.
GC (+)	Govt. consumption of non-tradable items tends to appreciate the REER, while that of tradable items leads to real depreciation.
OPEN (+)	Openness of the economy would cause real appreciation if it reduces the demand for non tradable.
TOT (?)	The effect of the terms of trade on the RER depends on whether the substitution or the income effect dominates. If the income effect dominates then a deterioration of the TOT tends to cause real depreciation.

Description of variables

RESULTS AND DISCUSSIONS

Unit root tests:

The results of the panel unit root tests show that our 3 series namely Aid, Govt consumption, terms of trade and openness are stationary at level while the rest GDP series was stationary at 1st difference.

Table II. Panel Regression

Capital	Coef	z-value	p-Value
Aid	0.117**	2.33	0.028
GC	2.86e-07**	2.26	0.017
GDP	.0000144**	2.63	0.030
TOT	5.72e+07-***	3.54	0.000
Openness	-7.21e+14	-1.02	0.307
Cons	-2.35e+07	-0.79	0.431
R squ.	0.519		

*** , ** indicates significance at 1% and 5% level

Panel regression:

The results of the panel regression indicates that the foreign aid, GDP and the terms of trade (TOT) significantly affect the real exchange rate appreciation in the developing countries. The foreign aid increases the economic growth and enhances the exchange rate (Tekin,S. et al, 2000) and our study confirms the results of many researches of the past (Dal gaard et al, 2001). But the impact of foreign aid on economic growth is conditional with the implementation of the policies (Guillaumont & Chauvet, 2001 and Chauvet & Guillaumont, 2004). The government as well as the elite class of the country plays its role in utilizing the aid in constructive purpose or in their self interested projects.

The terms of trade affecting the real exchange rate appreciation in the sample countries and are highly significant. The countries managing good policies that are feasible for the enhancement of exports relative to stable imports lead to the economic growth and exchange arte appreciation. The results also show that the gross domestic product (GDP) is also significantly affecting the real exchange rate. Our findings that the real exchange rate appreciate as the GDP of a country increases are consistent with Burnside and Dollar (2004), Collier and Dollar (2002), Collier and Dehn (2001) and Svens-son (2003). In the same way greater the per capita GDP the greater the impact of aid on the growth as well as the real exchange rate.

The government consumption is also significantly positively affecting the economic growth. If the foreign aid is consumed on the import of capital goods that will generate the local production of tradable products then in the long horizon the exports will grow and due to the demand of the domestic currency the RER will appreciate. But this appreciation require consistent long term policies. All the cumulative policies thus lead to the enhancement of the exports which is described as the engine of the economic growth.

Conclusion

The tendency of foreign aid in promoting economic growth and RER fluctuation in the developing nations is an issue of considerable controversy. Empirically this study investigates the equilibrium RER that could be helpful for the long run economic growth of the country. The study focuses on the developing countries having a relatively volatile exchange rate and less developed economies as compared to the developed economies of the world. The main contribution of this study is calibrating the role of foreign aid in misalignment of RER if effective long term policies are not followed and term of trade are not adequately adjusted.

The long term aid affects greatly on the real exchange rate appreciation provided with the favorable terms of trade. The countries receiving short term aid have no impact on the RER because the short term aid fails to improve the economic growth and exports of a country and the effective growth rates are absorbed in the country specific effects. Due to long term aid the prices of non tradable increase and causing RER appreciation but exports are greatly affected by it. So the aid can only be helpful in enhancing economic growth when the aid is not wasted on imported items and by carefully designing the trade policies terms of trade are augmented so that overall economic conditions help the economy to boost up. Finally the whole study concludes that the economies having access to foreign resources able to get them in the form of aid and enhance their growth but in the long run role of aid in growth is decreasing due its misuse and weak absorption capacity of economy.

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