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Impact analysis of Remittance flow on Import Demand of Pakistan

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Abstract

The purpose of this study is to analyze the impact of remittances on import demand of Pakistan, by keeping the effect of population. This study has used time series data set from 1975 to 2015 and the result has shown that there is a significant and positive effect of remittances and population on import demand. The results of this study have also shown that the model of this study takes account of the direct effects of imported inputs on exports and availability of official foreign exchange reserves on the level of imports. Real exchange rate shock has shown 10 percent reduction in the volume of imports which in turn lowers the volume of exports in our model by about 2% point in short run and 5% point in long run. So, it is recommended that developing countries should follow the policy of import compression. The result has shown that over the next decade rising global protectionist pressures, higher energy prices, increased world interest rates and augmented political uncertainty could seriously undermine the debt-servicing capacities for most heavily-indebted, low-growth, low-income countries in the Asia Pacific region. The policy implication of this study is that economy should spend precious foreign exchange only to fund vital imports only to successfully overcome foreign exchange shortages and this would enable many underdeveloped countries to support rapid economic growth.

Keywords: import demand; remittances; population; capital flight

Introduction

Import can be defined as the goods and services into the port of a country; buyer of such goods and services is referred as an “importer” at the country of import where as the out of the country based seller is referred to as an “exporter”. Import demand function was empirically tested for Pakistan by using co-integration and error correction mechanism. It is obvious that there is a positive correlation between imports and income. Similarly remittance income is accessible to workers and their families to fulfill their needs. Remittance is a transfer of money by foreign workers to their home countries. Remittances throw into economic escalation and to the trade of populace international and its help to convey to promote access to financial services for the sender and recipient, by this means rising financial and social enclosure. Remittances are playing a huge position in the economies of many countries, causal to cost-effective growth and to the source of revenue of less wealthy people (though generally not the poorest of the poor). Import functions for Pakistan both at the aggregate and disaggregated levels. Jawaid and Raza investigated “remittances from abroad affecting the growth of country” (Jawaid & Raza, 2012).

We take time series data by using least square testing method and we take secondary data which has a sample size of 40 years of import demand and remittance of Pakistan. World Bank and Bank for International Settlements have developed international standards for remittance services. Pakistan has 13.19 remittances (in billions of US Dollar) in 2012. Since remittance beneficiary a lot contain a higher tendency to own a bank account. A crucial part of leveraging remittances to promote economic development and stability of remittance flows regardless of financial crises and economic slump make them a consistent financial resource for developing countries.

Khan, et al., investigate the relationship between import and remittance (Munir Khan, 2007) . They estimated that the remittance from oversees Pakistan's are usually spent on import. They collected the data from Pakistan by employing these variables national income, remittance and real exchange rate. The government needs to consider the measures to attract more remittances and it could be possible by import substitution production process. It is examined that remittance are the result of labor export and it has positive effect on import so that economy workings efficiently.

(Saab & Ayoub, 2010) explored "How the broad gap among imports & export get in the way the nation's economy". With the intention of 4 Dutch countries were taken in view. Remittances are unlikely to play a central role in growth profile of Pakistan which also greatly alleviated poverty in rural areas. Pakistan's economy has been facing down flow in his foreign remittances for last few years. Fatima (2010) explored "the impact of changes in trade system of Pakistan on income and consumption and she says that that changes in term of trade should be made on the basis on the economy whether its positive or negative". (Mody, 2002) examined "the combine effect of two themes to assess the effectiveness of imported machinery in increasing export competitiveness and thus in stimulating growth".

The econometric analysis is prepared to identify key determinants of FDI (foreign direct investment) flows to Asian countries. (Khan & Knight, 1988) explored "the brunt of developing countries contain had to compress imports to create trade surpluses to service foreign debt and imports of intermediate and capital goods are critical inputs in export of production, import compression can adversely affect export performance".

The role of international trade is very important and crucial in the development of any economy. During modern era of globalization, trade between nations has become more or less inevitable due to its imperative role in fulfilling the rising needs of the economies crosswise the world. Conventional trade theories of unlimited advantage and proportional advantage regard as international trade as valuable for trade partners due to its economic competence and wellbeing effects. In theory trade preserve reduce income inequality amongst and within nations by escalating the incomes of unskilled labor in rich countries. However the empirical facts show that allocation of trade gains among dissimilar nations is rough. These encompass set birth to a type of controversy between economists as regards the gains of trade. Import demand literature can be categorized into three different magnitudes.

Import demand as a function of aggregate income and prices. Which utilize the disaggregated imports of different commodity groups as a function of income and relative prices? Aggregate import is treated as a function of disaggregated components of total income or aggregate expenditure. The imports of the country increase with the increase in marginal propensity to consume and it also increases with remittances, and decreases with the increase in the real exchange rate. (Morgan, 2011) examined "the financial mechanisms that helped English merchants to consolidate their control over the transatlantic slave trade in the eighteenth century". Remittance flows benefit the recipient countries because they allow higher human capital development. But they also pose a challenge to these countries of control these external savings to fruitful projects and stay away from macroeconomic overheating.

The chief objective of this learning was to estimate the impact of the huge amount of remittances made by homeless person to their home country on imports.

Literature Review

The literature review is divided into two parts; first part is about theoretical background of our objective which is Import demand and Remittance and second part is Empirical Studies which comprises of literature reviews from different journals. The objective of this research is to carry out the relationship between import demand and remittance, how they affect each other in Pakistan economy.

Theoretical Background

The New Economics of Labor Migration theory says that "due to market failures in the home country, a domestic portion of population migrate to another labor market as well as the theoretical perspective, three micro economics motives have been recommended to explain these transfers" Stark and Bloom (1985). In economies such as Pakistan, remittance commencing provisional worker out of the country has be converted into increasing key like a resource of foreign exchange earnings. Other hand, The Macroeconomics focus on such key variables s as supply of migrants, exports, and import, GDP, population special effects that remittances include in beneficiary countries. So that remittances increases the import demand is raising of the home country means (human capital fight) is increasing is positive effect on host country. Likewise if import is rising than Remittance is raising its means that it has a dependent impact of import and remittances. Import function make known that remittances play a major role in the fortitude of imports in the economy.

The execution of WTO rules and extensive reduction in trade limitations, the imports of most of developing countries are rising speedily. The economy of Pakistan is not an omission it depends on the rest of the world and this level of interdependence has enlarged in the past few years. The value of imports as a percentage of GDP has shown upward trend since 1999-2000. The imports demand has increased due to high demand of machinery and raw material. There is no impact on the demand for imported consumer's goods; their impacted on the import of raw materials and capitals goods are superior to with the purpose of locally make income.

Remittances play a potentially vital role in the import demand function, both aggregate and disaggregate stage, predominantly where there is foreign exchange problems exist..

On the other hand, Paine gives another theory in (1974) confirmed that "the tendency to import out of remittances may well sound be high , not low for the reason that recipient families at this moment enclose contact with foreign goods and living standard, mostly if the migrant worker member has returned home. Finally the marginal propensity of imports and Coefficient of remittances are positively connected with imports and real exchange is negatively related with imports.

Empirical Studies

(Munir Khan, 2007) et al, investigated the "relationship between import and remittance". They estimated that the "remittance from oversees Pakistanis are usually spent on import. They collected the data from Pakistan by employing these variables national income, remittance and real exchange rate. The result shows that remittances play a significant role in the determination of import in the economy. There is need to stabilize labor migration and its benefits in the form of remittances. The government needs to consider the measures to attract more remittances and it could be possible by import substitution production process. It is examined that remittance are the result of labor export and it has positive effect on import so that economy works smoothly".

(Siddiqui & Kemal, 2006) explored the "trade liberalization and its impact on remittance". They examined the "data from urban and rural areas' households of Pakistan by using CGE framework. The result shows that in term of welfare, all urban areas gain more as compare to rural areas. The poverty rate reduced in urban households than in rural households. But in trade liberalization the poverty and welfare rate goes down in urban households and in rural households the rate somehow stays same as base year. It means that trade liberalization has negative impact on inflow of remittances. So it is concluded that trade liberalization is the major contributor in increasing poverty of Pakistan".

(Glytsos, 2005) investigated “the impact of exogenous shocks of remittances on consumption, investment and imports and output in five Mediterranean countries by using the data are annual figures of the period from 1969 to 1998”. The dependent variable is exogenous shocks of remittances and consumption, investment and import independent variable are considered. The purpose is to examine the demand side impact of remittances as an exogenous variable in its model the technique least square has been used. The result that the rising remittances are relatively less powerful to produce output as falling remittances are powerful in reducing output and produce growth decelerates faster as a result of falling remittances than it accelerates as a result of rising remittances. The recommendation is that should be look the weak spots concerning the relationship between remittances and development with the help of some clues and findings may offer options for the design of suitable measures for maximizing the profit and minimizing the negative.

(Saab & Ayoub, 2010) investigated “How the wide gap between imports & export hampers the nation’s financial system”. For that 4 Dutch countries were taken in view. A regression analysis examined the relationship between inflow of capital and different sectors of these economies. Common variables like GDP Growth, Consumer Price Index, Workers Remuneration, exports, imports, political stability, industry & services are independent variables co-related. It’s evident that subsidies on exports depends upon the circumstances in the country due to large negative shocks or due to some reconstruction efforts, imposing higher import tariffs needed to get reduced. In order to reduce the impact of the disease it’s advisable to allocate the biggest part of excess profits to investment rather than consumption, raise the taxes on booming sector and improve the performance of financial institutes.

Especially they focus on FDI flows from Japan. It relates FDI flows to changing industrial structure plus to trade flows. Its helped cost reduction and export promotion in the host countries and Japan has created a large trade surplus with these countries from 1985 to 1994 is based on board data covering 11 developing countries of east, south east and south Asia. The result indicates clearly a tough upbeat pressure of the size of the economy on FDI flows. The effect of GNP on total FDI inflow is set up to be larger than that on Japanese FDI flows and its denote to the fact that size of the local market has been a theme of less anxiety for the Japanese firm in investing in Asia as compared to investors from other industrialized countries and positive relationship is found between exchange rate and rate of FDI flow and the statistical results are steady with the observation made earlier that the Japanese FDI led industrial reform of countries of the east and south-east Asia has resulted in a vast Japanese trade surplus with these countries. So it’s recommended that FDI flows to south, south-east and East Asia rise rapidly and has shifted over time from Asian NIEs to ASEAN, and promote to china. With rising wages and currency appreciation, Asian NIEs have lost their charm as a destination for FDI flows and Japan is main source of Asia and its play vital role in promoting the economic growth of east and south-east Asia, during cost reduction and export promotion and those countries of the in Asia Pacific in the future.

(Morgan, 2011) examined “the financial mechanisms that helped English merchants to consolidate their control over the transatlantic slave trade in the eighteenth century”. Specifically, he investigates “remittance procedures for slave sales in the British plantation colonies at a time when Britain was the largest national carrier of enslaved Africans to the Americas. He considers the devices that evolved to secure payments in a trade that conducted business in a more complex, sophisticated way as it expanded during the eighteenth century. Result shows that the financial arrangements made by British slave merchants in the later eighteenth century helped to protect credit and to recover debt. These mechanisms were more helpful for realizing funds in the trade when they were required than the more limited financial procedures available to merchants operating outside the

British credit system. The evolution of remittance procedures in the eighteenth-century British slave trade therefore shows how a chain of businessmen cooperated to secure a viable means for ensuring payments in a notoriously risky trade by ensuring that extensive credit was backed up by payers of known capital, repute, and commercial standing. English financial institutions in the eighteenth century cannot be regarded as a necessary precondition for British industrialization, the development of credit practices associated with the slave trade, including remittance procedures as well as banking and marine insurance, helped to strengthen the British economy by as long as sound, complex mediator instruments for the apprehension of profits from intercontinental trade".

(Silberling, 1924) examined, "In the light of new evidence, first, the financial operations of Great Britain during the period from 1790 to 1816, and second, the course of monetary discussion during that period in its relation to the financial and economic needs of the time. The present paper will be concerned chiefly with the sources of the public revenue, and with the heavy remittances which the British Treasury had occasion to make to the Continent for the support of British armed forces and by way of loan or subsidy to allies". Payments of interest on the debt; capital charge; expenditures for civil government; and, finally, the expenditures specifically for the Army, Navy, and Ordnance are the variables. The result shows that restoration of the gold standard was not accomplished until some six years after Waterloo. In 1817 steps toward resumption were undertaken by the Bank; but, unfortunately, their carefully accumulated reserve was quickly drained away in 1818 by an unexpected shift in the commercial balance. Price deflation began long before the resumption, being promoted by many failures among the unsubstantial country banks and business houses in 1815-16 and again in 1819. Even the price of specie and the exchanges had substantially touched par in 1816 after the strain upon the remittance mechanism was relieved.

Methodology

To examine the effect of remittance on import demand, penal data use of 40 years from 1975 to 2015, collected from World Bank.

Analysis done on SPSS (22) regression, correlation, and descriptive statistics.

The regression model to predict the objective is;

$$\boldsymbol{IMP = \beta_0 + \beta_1 REMT + \beta_2 POPUL + \epsilon} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \boldsymbol{Eq. 1}$$

Where,

β_0 = Intercept of the equation

$\beta_{1\text{ to }2}$ = Co efficient of the variables.

ε = Error term.

We have import as our dependent variable, remittances and population as independent variables. In this regression model Y represents Import demand while REMT represents Remittances and POPUL represent total Population involved in income from abroad.

- *Hypothesis*

H_1: Remittance has significant effect on Import demand.

H_0: Remittance has not significant effect on import demand.

Results and Estimations

To determine the long-term relationship between import demand and remittances, we go through some analysis. Data is based on time series and conducted through World Bank's website.

Table 1 shows the minimum, maximum, mean and standard deviation of all variables present in the model. Table 1 is the description of variables and number of observations taken for the analysis.

Table 1. Descriptive Statistics

Variable	No. of Obs.	Range	Minimum	Maximum	Mean	Std. Deviation
IMPORT	40	43790025425.57	2584199909.09	46374225334.66	16669203994.1215	13941960653.81460
REMIT-TANCES	40	18894263061.50	411736938.50	19306000000.00	4371514967.3350	4796991023.83270
POPULA-TION	40	120106403.00	68818471.00	188924874.00	125174794.2500	36007189.86703
Valid N (List wise)	40					

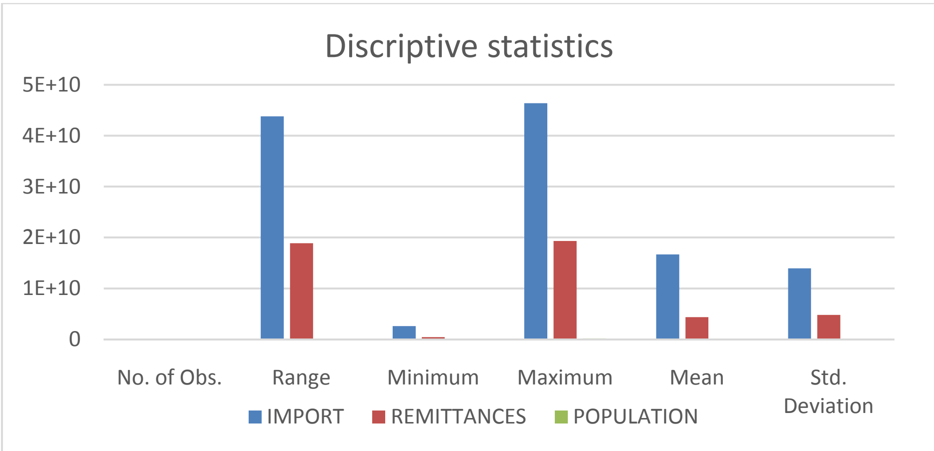

Figure 1: Graphical representation of descriptive statistics

Quantitative Analysis

Two methods are used for quantitative analysis. First we used correlation to check the relationship between variables we consider in this research. Correlation indicates variables positively or negatively associated with working capital. Pearson's correlation method is used to check the correlation of multiple variables.

Pearson's Correlation Analysis

Pearson's correlation analysis is used to identify the relationship between research variables.

Table 2. Correlation

		IMPORT	REMITTANCES	POPULATION
IMPORT	Pearson Correlation	1	.929**	.888**
	Sig. (2-tailed)		0	0
	N	40	40	40
REMITTANCES	Pearson Correlation	.929**	1	.765**
	Sig. (2-tailed)	0		0
	N	40	40	40

		IMPORT	REMITTANCES	POPULATION
POPULATION	Pearson Correlation	.888**	.765**	1
	Sig. (2-tailed)	0	0	
	N	40	40	40
**. Correlation is significant at the 0.01 level (2-tailed).				

Above table shows that import is positively and significantly correlated to remittance and population at the confident level of 0.01.

Regression Analysis

Regression analysis is conducted to examine the relationship of independent variables on dependent variable.

Table 3. Regression

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-11702776749.288	2570893898.130		-4.552	0
REMITTANCES	1.748	0.184	0.601	9.493	0
POPULATION	165.61	24.53	0.43	6.75	0.00
a. Dependent Variable: IMPORT					

Table 3 reveals that model is statistical acceptable (P value = 0.000). Regression equation demonstrates positive relationship between import and remittance and also with population.

Table 4. ANOVA

ANOVA[a]					
Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	71142440546800100000000.000	2	35571220273400000000000.000	282.13	.000[b]
Residual	4665083533481270000000.000	37	126083338742737000000.000		
Total	75807524080281400000000.000	39	3720000.000		
a. Dependent Variable: IMPORT					
b. Predictors: (Constant), POPULATION, REMITTANCES					

ANOVA table also shows significant and statistical acceptable result (P value = 0.000).

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