REMITTANCES AS A DETERMINANT OF IMPORT FUNCTION
(An Empirical Evidence from Pakistan)

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ABSTRACT
In this paper an attempt has been made to investigate the relationship between remittances and imports. It has been examined that remittances of overseas Pakistanis are usually spent on imports. The estimated import function reveals that remittances play a significant role in the determination of imports in the economy. The results show that marginal propensity of imports and coefficient of remittances are positively related with imports and real exchange is negatively related with imports.

Keywords: Import Function, Remittances, Pakistan

INTRODUCTION
It is obvious that there is a positive correlation between imports and income. Similarly remittance income is available to workers and their families to fulfill their needs. In addition to cash which they remit to their relatives they also send imported consumer durables. The change in imports due to change in income and remittances affect the value of multiplier negatively being a leakage. But the value of multiplier itself depends on the values of propensities to consume. It can be inferred here the more the availability of resources, higher will be the value/volume of imports and the economy will be highly dependent on imports (Kandil and Metwally, 1999).

Remittances as a result of export of labor can influence the key macro-economic variable such as imports, thereby leading to enhanced aggregate demand and hence hamper economic growth (if the imports are not meant for productive purposes). It has advantages such as remittances can cushion up the adverse effects of external shocks such as energy crisis, rising foreign interest rates, etc. While on the other hand, it can improve the standard of living of recipients and improve the distribution of income. Contrary to these benefits it is fact that it is an uncertain source of foreign exchange and it depends upon immigration policies of the host countries. Similarly increased consumption and monetary expansion that follows remittances fuel up inflation at home (Nishat and Bilgrami, 1991).

In most of the less developing countries (LDCs) it has been observed that balance of payment problems (because of a high proportion of imported goods in consumption) can be eased with the flow of remittances. Keeping all these strengths and weaknesses of remittances in view, however, there is no general consensus among researchers and policy-makers about the net effect of these remittances.

Pakistan's economy has experienced a dramatic increase in emigration of both skilled and unskilled labor since the mid-seventies, which resulted in a significant inflow of remittances. These remittances have been a valuable and inexpensive source of foreign exchange available for the economic development of the country. During this period, a significant improvement in remittances was experienced. It reached to its peak point of Rs 3.2 billion in 1983 (World Development Indicators WDI, 2004). A salient feature of these remittances is that they not only comprised of 40 percent of the total foreign exchange reserves but also financed 86 percent of the total trade deficit. (Noman, 1991). Burney (1987) observed that the remittances jumped up from US$ 436 millions in 1976-77 to US$ 2,344 millions in 1985-86. Noman (1991), reported that due to the present construction trend in the Middle East and its future prospects, remittances are unlikely to play a crucial role in growth profile of Pakistan which also greatly alleviated poverty in rural areas.

Remittance income is considered as an injection of resources into the economy but imports being an increasing function of income become leakage. It is, therefore worthwhile to analyze its affect on imports. By scanning all available literature it has been observed so far that no attempt has been carried out to use such a methodology of this nature.

METHODOLOGY AND MODEL SPECIFICATION
This study mainly deals with determining statistical relationships between imports, gross national product (GNP), real exchange rate (REER) of Pakistan's economy. Therefore the following Import function was estimated using a simple Ordinary Least Square (OLS).

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Import Function

Import is specified to depend upon national income \((Y)\), remittances \((REMT)\) and real exchange rate \((REER)\) with the assumption that there is positive correlation of Imports with \(Y\), and \(REMT\) and negative with \(REER\). As for the choice of estimation technique is concerned, different researchers have used different forms according to their objectives and inclinations. Learner and Stern (1970) have discussed at length the functional form of the import demand but they have not said anything about import supply. They have also noted and estimated the linear and log-linear forms of import function. And unlike (Kandil and Metwally, 1990) methodology of estimating on the Egyptian economy. The import function used in this model is as follow.

\[
M = m_0 + m_1 Y + m_2 REMT + m_3 REER + E_i
\]

\[
m_1 > 0, m_2 > 0, m_3 < 0
\]

where \(m_0\) is constant, \(m_1\) and \(m_2\) are marginal propensities of import to \(Y\) and \(REMT\), while \(m_3\) is the coefficient of imports due \(REER\), and \(E_i\) is random error term.

The import function we employed in our model is defined in a manner that import is a function of Gross National Product, remittances and real exchange rate.

Estimated Import Function

The estimated results of import function are reported in equation (2) below. The specification of this model is such that imports are dependent on gross national product \((Y)\), remittances \((REMT)\) and real exchange rate \((REER)\). The results show that the marginal propensity of imports is 0.16 with high level of significance i.e. 1 percent. Similarly the coefficient of remittances is 0.20 with 1 percent level of significance. Import and real exchange rate is negatively related, as is evident from the estimated coefficient i.e. -741.5 with 1 percent level of significance.

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.

\[
M = 799.48 + 0.16 Y + 0.20 REMT - 741.48 REER
\]

\[
(2.17) \quad (10.86)^* \quad (2.81)^* \quad (-3.80)^*
\]

\[
SE \text{ of Regression}=464.85
\]

Adjusted \(R^2=0.97\)

Durbin – Watson=1.65

* Shows statistical significance at 1% level

Data Description and Estimation Technique

It is a well-known fact that a researcher confronts frequently with the problem of inadequate and unreliable data. Sufficient and accurate data set is indispensable for advanced empirical research. Generally in developing countries and particularly in Pakistan one would come across serious deficiencies in the quality of economic data. In our study the data regarding gross national product, private consumption, exports, imports, rate of interest, direct taxes, investment, government expenditures and remittances are taken from Pakistan Economic Surveys and International Financial Statistics (IFS) for various years. The GNP deflator with 1959-60 as base year was computed by taking the ratio of GNP at current prices and GNP at constant prices. Imports, unit value of imports, and import taxes are taken from various issues of Pakistan Economic Survey. The real exchange rate was calculated by using a simple formula. Disposable income was calculated by simply subtracting direct taxes from GNP. Disposable income adjusted for remittances was computed by subtracting remittances from disposable income. Capital inflow was adjusted for remittances by subtracting remittances from capital inflow. The base year for all the data is 1959-60.

Conclusion and Policy Implications

The main objective of this study was to evaluate the impact of the huge amount of remittances ($4 billion) made by migrants to their home country on imports. The results of the estimated model were used to approximate the magnitudes of marginal propensities to import for the economy of Pakistan. Every other country intends to maximize the benefit of labor migration and its resultant remittances. It is obvious that among other benefits accrued to the economy, was the huge remittances sent by Pakistani migrants to their home country.

The government needs to consider measures to attract as much remittances as it can, by making the process convenient, profitable and certain. This could be done through establishment of import substitution production processes that stand up to the level of foreign competition.

REFERENCES

Amjad, R. 1986. "Impact of Workers' Remittances from the Middle East on Remittances and Imports: A Study of Pakistan", In Rashid Amjad (ed). To the Gulf and Back, Studies on the Economic Impact of Asian Labor Migration, New Delhi, Asian Regional Team for Employment Promotion

Amjad, R. 1989. "Economic Impact of Migration to the Middle East on the Major Asian Labor Sending Countries: An Overview", In Rashid Amjad (ed). To the Gulf and Back, Studies on the Economic Impact of Asian Labor Migration, New Delhi, Asian Regional Team for Employment Promotion


