Current depreciation of rupee: Justified or not?

Mehreen Naseem [a,b]

[a]Pakistan Customs Service, 26th SMC (mehreenny2k@hotmail.com)

[b]This paper was written in 2019

Introduction

Stable currency, for any country, is an important indicator of economic stability. The value of a currency viz-a-viz other currencies is an indicator of its competitiveness in the international market. It is an important economic parameter which affects trade balance between countries and influence investment opportunities. The volatility in the exchange rate of a currency is a sign of some serious economic problem which requires immediate redressal. Currency depreciation results as a consequence of weak exchange rate system requiring correction in balance of payment deficit. Depreciation is undertaken when it is necessary to protect the country from liquidity crunch and economic hardship. In cases where such volatility and downward slide of currency has happened consistently over a long period of time, then it is a sure sign of economic mismanagement, financial indiscipline and weak economic fundamentals.

The phenomenon of currency depreciation is not new for Pakistan. It started in 1955 for the first time and after that a periodic recurrence has been the order till today. The Pakistani rupee in terms of a currency has been classified as the worst performer in Asia against a basket of 13 currencies.[1] The most recent cycle of rupee depreciation in Pakistan started in December 2017 and it gained further momentum in 2018 and continued till August 2019. The country's foreign reserves dropped to $7.8bn, not enough even to pay for two months import bill and debt servicing.[2]At the same time, current account deficit and trade deficit increased to $19.2bn and $31.8bn respectively.[3]

[1] Bloomberg, "Pakistan Lets Rupee Devalue as Finances Wobble Before Election", https://www.bloomberg.com/news/articles/2018-07-16/pakistan-said-to-devalue-asia-s-worst-performing-currency-again (accessed 10 October, 2019).

[2] "October FX reserves fall below $8bln for first time in nearly 5yrs", The News, 26 October 2018, https://www.thenews.com.pk/print/385436-october-fx-reserves-fall-below-8bln-for-first-time-in-nearly-5yrs (accessed 01 December, 2019).

[3] Government of Pakistan, Economic Survey of Pakistan 2018-19.

Whereas, fiscal deficit increased to 8.9% of GDP. Consequently, depletion of foreign reserves, twin deficit, a weak currency and a fragile economy all increased tremendous pressure on the Pakistani rupee. The economic planners including State Bank of Pakistan have found proper implementation of monetary and exchange rate policies a daunting task.

Real Exchange Rate (RER) plays a vital and significant role for major macro-economic variables' settlement while its instability causes hindrance in trade flow, investment and economic growth.[4] Kempa stated that demand and supply side variables cause fluctuations in real exchange rate which affect output growth, price level and foreign exchange reserves.[5] Moreover, optimal results are achieved when Central Banks alter monetary policy in response to fluctuation in RER.[6]

In Pakistan, there have been different stages of monetary policy and frequent changes in exchange rate system varying from fixed to managed float, full float and currently flexible exchange rate driven by market forces. Despite all this there has been a distinctive and unusual characteristic of the economy depicting continuous depreciation of the value of Pakistani rupee. The steps taken by successive governments have not yielded desired results, fundamentally because there has not been much consistency and continuity in the economic policies. Some short terms measures have been pursued by successive governments. However, a long term and a sustainable solution for a stable currency has so far remained a far-fetched dream.

Statement of the Problem

Current account deficit predominantly due to trade deficit has always remained a significant problem for Pakistan. In order to address this problem, Pakistan has time and again resorted to depreciation of rupee. Such decisions have always remained controversial as the arguments have been advanced both in favour and against such devaluations/depreciations. It is argued that such a decision just provides temporary relief and in the longer run only increases value of external liabilities, causes inflation to rise and aggravates economic distress.

---

[4] Jeffrey Frankel and Andrew Rose. "An estimate of the effect of common currencies on trade and income", *The quarterly journal of economics* 117, no. 2 (2002): 437-466.

[5] Bernd Kempa, "An oversimplified inquiry into the sources of exchange rate variability," *Economic Modelling* vol. 22, no. 3 (2005): 439-458.

[6] David Parsely and Helen Popper, *"Evaluating Exchange Rate Management an Application to Korea",* Hong Kong Institute for Monetary Research HKIMR, Vol. 28. Working Paper, 2009. and Thomas A Lubik and Frank Schorfheide, "Do Central Banks Respond to Exchange Rate Movements? A Structural Investigation", *Journal of Monetary Economics* 54, no. 4 (2007): 1069-1087.

The value of rupee has plummeted significantly in recent times in its parity with foreign currencies especially US Dollar. The government argues that the free float of rupee was essential in order to let it find its true value in the currency market. This in turn has been argued to have positive impact on the critical issue of unsustainable current account deficit. However, as usual, this step has been criticized by many.

This paper is an attempt to assess and evaluate the current depreciation of rupee in its present and historical perspective. Through comprehensive analysis, the paper will eventually conclude whether such a step was justified or not. Furthermore, recommendations will be given in order to improve the situation of trade deficit through different viable policy options.

Significance and Scope of the Research

Stable currency and good macro-economic performance of the country is of utmost important for healthy and sustainable growth of the economy. Pakistan has been persistently facing adverse trade and fiscal balance for a long time compelling the government to borrow money for running the economy. Moreover, the exchange rate of Pakistani rupee has been volatile and the country is facing currency depreciation since 1955 when for the first-time rupee was devalued. The objectives of this research paper is to analyze historical perspective of depreciation of Pakistani rupee, identify the factors leading to recent rupee depreciation and future prospects of stabilization of the exchange rate and improvement in current account deficit given the challenges being encountered by the economy.

Literature Review

Shahbaz, Islam and Aamir (2012) examined the effect of real devaluation on economic growth and concluded that it exerts contractionary effect on economic growth.[7] Upadhyaya and Upadhyay (1999) studied the effect of currency depreciation on total output of six countries including Pakistan and it revealed that depreciation is contractionary in nature for Pakistan.[8] Choudary and Chaudhry (2007) also concluded that depreciation declined the level of output and increased the inflation in Pakistan.[9] Yeyati and Federico (2003) took a sample of 183 countries to investigate the impact of

7 Muhammad Shahbaz, Faridul Islam and Naveed Aamir, "Is devaluation contractionary? Empirical evidence for Pakistan", *Economic Change and Restructuring* vol. 45, no. 4 (2012): 299-316.

8 Kamal P Upadhyaya and Mukti P. Upadhyay, "Output effects of devaluation: evidence from Asia", *The Journal of Development Studies* vol. 35, no. 6 (1999): 89-103.

9 Munir AS Choudhary and Muhammad Aslam Chaudhry, "Effects of the exchange rate on output and price level: evidence from the Pakistani economy", *The Lahore Journal of Economics* vol. 12, no. 1 (2007): 49-77.

exchange rate policies on aggregate output and the results revealed that exchange rates have a much more important and outstanding role in economic performance of the developing countries than developed countries.[10] In another study Mushtaq (2014) concluded that both exchange rate and balance of trade are correlated. It also concluded that there is an established relationship between exchange rate and macro-economic variables, hence it is extremely important and necessary to have a stable exchange rate especially for developing countries like Pakistan.[11] He further identified that there has been significant depreciation of Pakistani currency due to various factors like economic instability, trade deficit, external debt repayments etc. and as a consequence the value of rupee has decreased against other major currencies and especially US Dollar.[12]

Khan, Akhtar and Rana (2002) revealed that under the managed floating exchange system, there is a direct relationship between budget deficit and exchange rate as the former actively determines the latter.[13] According to Adil and Anis (2012) exchange rate policy is normally considered a useful tool for controlling the balance of trade.[14] Khan and Ismail (2012) while examining the factors responsible for exchange rate volatility concluded that inflation, growth rate, exports and imports respectively are contributing to fluctuations in exchange rate in Pakistan.[15] Ahmad, Ara and Hyder (2005) have showed that external shocks have been decisive in bringing about economic fluctuations in Pakistan.[16]

In an article regarding the negative impact of depreciation, it has been shown that from 2002 to 2007 the exports doubled and rupee/dollar parity was at Rs.60 per dollar. From 2008 to 2012 the rupee depreciated around 51% but there was no corresponding increase in the value of exports.[17]

[10] Eduardo Levy-Yeyati and Federico Sturzenegger, "To float or to fix: evidence on the impact of exchange rate regimes on growth", *American economic review* vol. 93, no. 4 (2003): 1173-1193.

[11] Mushtaq Rehman."Analysis of Exchange Rate Fluctuations: A Study of PKR VS USD", *Journal of Managerial Sciences* vol. 8, no. 1 (2014).

[12] Mushtaq Rehman, "Analysis of Exchange Rate Fluctuations: A Study of PKR VS USD", *Journal of Managerial Sciences* vol. 8, no. 1 (2014).

[13] Rana Ejaz Ali Khan, Ali Abbas Akhtar, and Amir Saeed Rana, "Relationship between Exchange Rate and Budgetary Deficit: Empirical Evidence from Pakistan", *Journal of Applied Sciences* vol. 2, no. 8 (2002): 839-842.

[14] Atiq-Ur-Rehman, Iftikhar Hussain Adil, And Hafsa Anis, "Exchange rate, J curve and Debt Burden of Pakistan", *Pakistan Economic and Social Review* (2012): 41-56.

[15] Abdul Qayyum Khan and Muammad Ismail, "Analysis of the factors affecting exchange rate variability in Pakistan", *Exchange* vol. 2, no. 3 (2012).

[16] Shaghil Ahmed, Iffat Ara, and Kalim Hyder, "How external shocks and exchange rate depreciations affect Pakistan? Implications for choice of an exchange rate regime", (2005): 61-88.

[17] Dr. Ishrat Husain, "PKR: The upsides and downsides of devaluation", *Business Recorder*, 04 October 2017, https://fp.brecorder.com/2017/10/20171004223247/ (accessed 11 November, 2019).

In a study by Ishtiaq, Qasim and Dar (2016) it was found that the real devaluation of rupee will hardly have any impact on improving the trade deficit of Pakistan as the price elasticities of demand of imports and exports is close to 1. Thus use of depreciation as a policy instrument to correct adverse balance of payment cannot be considered as an effective tool.[18] In another research by Shah and Majid (2014) it suggested that the Marshall-Lerner Condition does not hold in case of Pakistan and depreciation cannot be used as a measure for improving trade balance.[19] Awan, Shahbaz and Sher (2012) established that there is a negative impact of depreciation on the trade balance in case of Pakistan and stated that focus should be on increasing the exports to solve the issue of trade deficit.[20] Another research also showed that Marshall-Lerner condition does not hold true for Pakistan and therefore no improvement in the trade balance is visible in response to depreciation of exchange rate.[21]

Thus, it can be stated that literature review could be a helpful and beneficial tool for devising a comprehensive trade and economic policy to address the issues of current account deficit, trade deficit and fiscal deficit in a viable and practical manner by the government of Pakistan.

Research Methodology

The research on the topic has been exploratory and descriptive in nature. During the course of research, primary as well as the secondary sources have been employed. The relevant work on the topic which is present in the form of books, research articles, thesis and Journals published from time to time has been perused. Newspaper archives have been a very useful resource in understanding the social, political and economic dynamics at any particular time when the currency was devaluated in Pakistan. The research also relies significantly on the primary sources in the shape of interviews that were conducted. The interviews conducted with Mr. Rashid Amjad and Ms. Tasneem Zafar provided great insight and depth into the topic. The holistic and in-depth understanding of the research topic helped in critical analysis and exploring various possible solutions to this consistently weakening currency dilemma faced by Pakistan.

[18] Nazeef Ishtiaq, Hafiz Qasim, and Adeel Dar, "Testing the Marshall-Lerner Condition and the J-Curve Phenomenon for Pakistan: Some New Insights", *International Journal of Economics and Empirical Research* vol. 4, no. 6 (2016): 307-319.

[19] Anwar Shah and Muhammad Tariq Majeed, "Real exchange rate and trade balance in Pakistan: An ARDL co-integration approa.ch", (2014): 1-14.

[20] R. U Awan, M. Shahbaz, and F. Sher, "Does J-curve phenomenon exist in Pakistan? A revisit", *Interdisciplinary Journal of Contemporary Research in Business* vol 9 no. 3 (2012): 1456-1467

[21] Adnan Ali Shahzad, Bilal Nafees, and Nazar Farid, "Marshall-Lerner condition for South Asia: A panel study analysis", *Pakistan Journal of Commerce and Social Sciences (PJCSS)* vol. 11, no. 2 (2017): 559-575.

Organization of the Paper

The sequence of the paper consists of the introduction, including statement of the problem, literature review, discussion on the significance and scope of research. Section 1 defines currency depreciation, types of exchange rate and its importance and elaborates currency depreciation through economic prism, Section 2 deals with comprehensive analysis of rupee depreciation in Pakistan, Section 3 dilates upon international experience and lessons to be learnt followed by the conclusion. In the end, some policy recommendations have been given how to further improve the current situation resulting in stability of exchange rate of Pakistani rupee and better performance of macro-economic variables of the economy.

Section - I

Currency Depreciation through Economic Prism

Concept of Depreciation

Currency depreciation is defined as "A decline in the value of one currency relative to another currency. Depreciation occurs when, because of a change in exchange rates, a unit of one currency buys fewer units of another currency".[22] This happens on the basis of imports and exports of that country. Normally it is done to reduce trade deficit by curtailing imports and boosting exports. Another definition of currency depreciation as follows: "The fall in the exchange rate of one currency in terms of other currencies".[23]

Definition of Exchange Rates

The price (rate) at which one currency is exchanged for another currency.[24] Exchange rate is the key macro-economic variable that connects a country with rest of the world in terms of assets and goods markets and has an impact on the internal and external sectors of an economy.[25] Mostly the following two types of exchange rates are used in the economic theory to explain the concept of exchange rate.

---

[22] "Currency Depreciation," *Financial Glossary* S.v, (assessed 04 October, 2019).

[23] Dictionary of Economics, The Economist Books.

[24] *ibid.*

[25] Muhammad Tariq, "Exchange Rate Fluctuations and Its Impact on Output Growth, Price Level and Foreign Exchange Reserves in Pakistan (1973-2008)", *Phd Diss.*, University of Peshawar Khyber Pakhtunkhwa Pakistan, 2012.

a. Nominal Effective Exchange Rate (NEER)

"The Nominal Effective Exchange Rate (NEER) is an unadjusted weighted average rate at which one country's currency exchanges for a basket of multiple foreign currencies. The nominal exchange rate is the amount of domestic currency needed to purchase foreign currency. In economics, the NEER is an indicator of a country's international competitiveness in terms of the foreign exchange (forex) market".[26]

b. Real Effective Exchange Rate (REER)

"The Real Effective Exchange Rate (REER) is the weighted average of a country's currency in relation to an index or basket of other major currencies. The weights are determined by comparing the relative trade balance of a country's currency against each country within the index. This exchange rate is used to determine an individual country's currency value relative to the other major currencies in the index".[27]

Economic Models Explaining Depreciation

Various economic concepts and models will be discussed comprising of (i) concept of deprecation through market forces i.e. Demand and Supply in Foreign Exchange Market, (ii) The Marshall-Lerner condition and (iii) The J curve theory illustrating how depreciation takes place and when depreciation will be beneficial in correcting adverse trade deficit and provide desired results.

(i) Demand and Supply Model

The demand and supply model of currency exchange rate is a useful and effective tool to explain the concept of rupee depreciation. It is important to understand that the demand and supply gap of foreign exchange is basically responsible for the fluctuation in the exchange rates resulting in depreciation or appreciation of any currency. Exchange rate plays a vital role in any economy as its stability determines economic development and growth rate. The demand and supply model of rupee depreciation is best explained in terms of exchange rate between Pakistani rupee PKR and US Dollar. The major reason for this is the fact that USA is one of the main trading partners of Pakistan and dollar is also the primary trading currency in the international foreign exchange markets, therefore, the exchange rate of rupee is normally and frequently measured in terms of US Dollar.

---

[26] "Nominal Effective Exchange Rate (NEER) Definition", *Investopedia*, 10 October 2019, https://www.investopedia.com/terms/n/neer.asp (accessed 22 October, 2019).

[27] "Real Effective Exchange Rate – REER Definition", *Investopedia,* 13 July 2019, https://www.investopedia.com/terms/r/reer.asp (accessed 22 October, 2019).

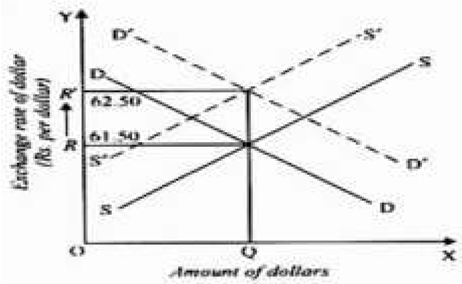

Fig 1: Demand and Supply of currency in Foreign Exchange Market

In Figure 1, the X axis represents the quantity of foreign exchange i.e. amount of Dollars whereas the Y axis represents the exchange rate or price of dollar. The demand for foreign exchange is represented by line DD and supply of foreign exchange is represented by the line SS. The point where the demand curve and supply curve cross each other is the equilibrium point and that determines the exchange rate and quantity of foreign exchange. At this point supply of foreign exchange is equal to its demand and thus the exchange rate does not change. Moreover, an increase in exchange rate along Y represents depreciation in PKR whereas a downwards movement along Y represents appreciation of PKR.

(i) The Marshall-Lerner Condition

The Marshall-Lerner Condition explains the circumstances under which a change in the country's exchange rate will either lead to worsening or improving of a country's balance of payments. According to the Marshall-Lerner condition currency depreciation or devaluation will result in improvement of trade balance for a specific country only in cases where sum of price elasticity of demand for imports and exports of that country is greater than 1 in absolute terms.

	Price Elasticity (Exports)	Price Elasticity (Imports)	Total sum of elasticities	Will currency depreciation improve trade balance?
Country 1	0.5	0.3	0.8	No
Country 2	0.8	0.7	1.5	Yes
Country 3	0.6	0.4	1.0	Trade balance remains unchanged

(i) J Curve Theory

According to this theory, depreciation of currency will increase the price of foreign goods and make them expensive whereas the exports of that country will become cheaper for foreign countries. This initially worsen the trade deficit. However, as the volume of exports of that country increase due to cheap prices and the nation buys of local goods due to increase in prices of imported goods, the trade balance of that country improves and may even surpass its previous level. This theory works only when exports and imports of a country are elastic enough and responsive to the change in exchange rate.

Section – II

Pakistan's Perspective

History of Currency Depreciation in Pakistan

The exchange rate policy of Pakistan has evolved over the passage of time. Different changes have been brought about basically in response to domestic priorities and international demands. After independence, in order to promote domestic production and industry, Pakistan's exchange rate remained over valued and fixed for a number of decades. Due to over valuation of exchange rate, the cost of raw materials and imported capital goods required for increasing domestic industrialization reduced. Thus, the exchange rate policy was unresponsive and rigid during the first three decades. However, in 1980s there has been a shift in the policy as Pakistan moved towards floating exchange rate. From 2000 onwards efforts were made towards flexible exchange rate determined through market forces. Thereafter, exchange rate remained an active instrument of decision making and economic policy. Resultantly, the depreciation of PKR can be divided into different phases due to changes brought about by the government in the exchange rate policy.

In the first phase of exchange rate policy, Pakistan maintained and followed a fixed exchange rate regime. Soon after independence, rupee was pegged to Pound Sterling having 1:1 parity with Indian rupee. Due to decision of non-devaluation in 1949, the rupee remained over-valued in the first half of 1950s.[28] This decision was taken due to Pakistan's competitive advantage in the production of jute being its largest export. However, the PKR was devalued for the first time by 30% in June 1955 in order to achieve a realistic exchange rate vis-à-vis other trading partners.[29] This was done with the approval of IMF due to balance of payment crisis consequent to international recession caused by Korean War.

---

[28] Mohammad Afzal and Karamat Ali, "An Historical Evaluation Of "Export-Led Growth", *Lahore Journal of Policy Studies* vol. 2, no. 1 (September 2008).

[29] *ibid.*

In January 1959, multiple exchange system was introduced resulting in favourable terms of trade for manufacturing goods but against agricultural exports which was done away with in 1971. In 1971, PKR was pegged to US dollar after being delinked from Pound Sterling. However, over-valued fixed exchange rate policy continued until rupee was devalued in May 1972 by 56.8% and was fixed at Rs.11 per US dollar.[30] Thus it can be stated that during 1947-72, the nominal exchange rate of Pakistan was changed twice. First time in 1955 by 30% and second time in 1972 by 56.8%. In February 1973, US dollar depreciated by 10% due to which new exchange rate of PKR and US $ became Rs. 9.90 per dollar.[31] Pakistani rupee remained pegged to US dollar for the next nine years during which Pakistan enjoyed favourable terms of trade and there was an increase in exports by almost 40%. Moreover, fixed exchange rate policy was maintained by Pakistan till January 1982.[32]

The second phase of exchange rate policy started in January 1982 when the government established the managed float exchange rate.[33] Previously, the fixed rate of PKR with the US $ caused the overvaluation of rupee because as the dollar appreciated against all major world currencies the Pakistani rupee also appreciated with it. This revaluation of PKR adversely effected the Pakistani exports and made imports less expensive in Pakistan which resulted in balance of payment crisis. Consequently, a decision was made on the recommendation of IMF to delink the PKR with US $ with the condition that there would be retention of dollar as an intervention currency.[34] However, this delinking with the US dollar in 1982 caused PKR nominal exchange rate to depreciate sharply by 20% in 1982-83 and 11% in 1983-84.[35] Under this exchange rate system rupee was allowed to float and determined by State Bank of Pakistan on the basis of weighted average of rupee with currencies of its major partners in trade.[36]

30 *ibid.*

31 Iqbal Mahmood, Major Ehsanullah, and Ahmed Habib, "Exchange rate volatility & macroeconomic variables in Pakistan", *Business management dynamics* 1, no. 2 (2011): 11.

32 Mohammad Afzal and Karamat Ali, "An Historical Evaluation of "Export-Led Growth", *Lahore Journal of Policy Studies* vol. 2, no. 1 (September 2008).

33 *ibid.*

34 Mohammad Ahmed, "Pakistan's exchange rate policy: An econometric investigation", *The Pakistan Development Review* (1992): 49-74.

35 Matthew McCartney, "The missing economic magic: The Failure of trade liberalization and exchange rate devaluation in Pakistan, 1980–2012", (2015).

36 Iqbal Mahmood, Major Ehsanullah, and Ahmed Habib, "Exchange rate volatility & macroeconomic variables in Pakistan", *Business Management Dynamics* vol. 1, no. 2 (2011): 11.

After introduction of managed float exchange rate system in 1982 by the government, there was a depreciation of about 230% in the next nine years in the value of rupee. The range of this depreciation was from 2.3% to 28.28%.[37]

In May 1999 Pakistan shifted to unified floating exchange rate system. However, in 2001, Pakistan adopted floating inter-bank exchange rate policy. In comparison to 1982 when Pakistan adopted managed floating exchange rate, the value of Pakistani rupee depreciated by more than 372% and 520.30% between January 1982 and June 1999 and 2001-02.[38] Moreover, due to extreme trade liberalization policies by the government imports immensely out-numbered exports resulting in alarming current account deficit in 2000s.[39]

The third phase of exchange rate system started from 2001 till to date in which Pakistan moved to free float exchange rate system. In free float exchange rate policy, the trade imbalances are adjusted automatically through exchange rate mechanism. However, in Pakistan some support through monetary and fiscal measures is often used to fix imbalances in the trade balance. In 2008, once again a massive depreciation took place due to large current account deficit to the extent of 8.5% of GDP and depletion of foreign exchange reserves. Last cycle of rupee depreciation started in December 2017 which continued till August 2019 and the value of US dollar increased to Rs. 156.

In view of what has been stated above it can be concluded that the role played by exchange rate during the era of fixed exchange rate was minimum and it was not used as an instrument of economic activity. With the passage of time as trade liberalization policies were initiated, the economy became more open and there was financial integration of international economies which led to increase in the role of exchange rate in the performance of major macro-economic variables and determining of monetary policy. In case of Pakistan there have been continuous fluctuations in terms of nominal as well as real exchange rate resulting in persistent depreciation in the value of rupee in comparison to other major currencies of the world especially US Dollar. The history of Pakistan's exchange rate policy shows that there has been continuous depreciation of rupee since 1982.[40]

---

[37] ibid.

[38] Mohammad Afzal and Karamat Ali, "An Historical Evaluation Of "Export-Led Growth", Lahore Journal of Policy Studies vol. 2, no. 1(September 2008).

[39] ibid.

[40] Iqbal Mahmood, Major Ehsanullah, and Ahmed Habib, "Exchange rate volatility & macroeconomic variables in Pakistan", Business Management Dynamics vol. 1, no. 2 (2011): 11.

The data pertaining to Pakistan's exchange rate position in terms of US dollars from 2001-02 to 2018-19 is given below showing the trend of rupee depreciation as a continuous process over the passage of time.

Exchange Rate position in terms of US Dollars									
YEAR	2001 - 02	2002 -03	2003 -04	2004 -05	2005 -06	2006 -07	2007 - 08	2008 - 09	2009 - 10
US DOLLAR	61.42	58.5	57.57	59.36	59.86	60.63	62.55	78.49	83.80
YEAR	2010 - 11	2011 -12	2012 -13	2013 -14	2014 -15	2015 -16	2016 - 17	2017 - 18	2018 - 19
US DOLLAR	85.50	89.23	96.73	102.86	101.29	104.23	104.70	109.84	156

Source: Economic Survey of Pakistan, 2018-19

Recent Depreciation of Rupee and its Causes

The major reasons behind depreciation of any currency are persistent trade deficit and negative balance of payment. Trade deficit occurs when the imports of a country are more than its exports which is true for many developing countries. Pakistan is no exception to it and falls in this category. The rupee has been depreciated to the extent of 47% since the latest phase of depreciation which started in December 2017. The value of US Dollar in December 2017 was Rs. 105 per dollar which has increased to Rs.156 per dollar in October 2019.[41]

The main objective of this section is to identify the major causes behind depreciation of rupee to the extent of 47%. The reasons identified for recent rupee depreciation are huge current account deficit, fiscal deficit, depleting foreign exchange reserves, debt repayment dues, debt servicing payment schedule, role of speculative forces and subsequent hoarding of dollar by money dealers. All these factors will be discussed in detail in the foregoing paras.

I) Current Account Deficit: The major cause of recent depreciation as stated by SBP was last financial year's current account deficit which stood at $19bn.[42] Pakistan has been facing persistent current account deficit which reflects poor economic performance in the international comity of nations. Current account deficit mainly due to trade deficit is a major area of concern for Pakistan's economy.

---

[41] Rashid Amjad, Professor Lahore School of Economics, interview by author Lahore, 22 October, 2019.

[42] "The devaluation of economy", *The Frontier Post*, 30 January 2019, http://thefrontierpost.com/the-devaluation-of-economy/ (accessed 22 October, 2019).

CAD depicts the problem of low export growth and uncompetitive exports of Pakistan. Current account deficit has been on the rise in the past years. In FY2014-15 it was $2,795m which increased to $4,867m in FY 2015-16. In FY2016-17 it jumped to $12,621m whereas in FY2017-18 it increased to $19,897m.[43] Similar is the situation with trade deficit. In FY2014-15 it was $17,267m which increased to $19,283m in the FY 2015-16. In FY2016-17 it raised to $26,680m whereas in FY2017-18 it further increased to $31,824m.[44] The table below gives the details of both trade deficit and current account deficit as a percent of GDP.

COMPONENTS OF BALANCE OF PAYMENT (AS PERCENT OF GDP)					
Year	**Exports**	**Imports**	**Trade Deficit**	[illegible]	**Current Account Balance**
2014-15	8.7	16.9	8.2	6.9	-1.0
2015-16	7.5	16.0	8.6	7.1	-1.7
2016-17	6.7	17.4	10.7	6.3	-4.1
2017-18	7.4	19.3	11.9	6.3	-6.3

Source: Economic Survey of Pakistan, 2018-19

To finance this deficit government has no option but to resort to borrowing from both foreign and domestic sources. This trade imbalance being a chronic ailment has led to multiple diseases in the economy like increase in public debt, higher debt repayments, reduction in provision of public goods and services, less funds left for developmental projects and less growth of GDP. This problem has also kept exchange rate constantly under pressure which resulted in frequent depreciation of Pakistani rupee.

ii) Fiscal Deficit: Another major reason of depreciation is continuous fiscal deficit being faced by Pakistan. In 2017-18, fiscal deficit was 6.5% of GDP which increased to 8.9% in 2018-19.[45] The answer to the question as to why Pakistan has not been able to overcome the issue of fiscal deficit perhaps lies in the vicious circle comprising of low rate of saving leading to low level of investment which results in low growth rate and less Gross Domestic Product (GDP). Consequently, there is low tax-to-GDP ratio which again results in fiscal deficit. Thus, to run the economy the government resorts to borrowing both from domestic and foreign sources which accumulates public debt.

---

43 Ministry of Finance, *Economic Survey of Pakistan 2018-19* (Islamabad: Official Printers, 2018).

44 *ibid.*

45 *ibid.*

It can, therefore, be concluded that the twin deficit in the shape of trade deficit and fiscal deficit are two major reasons of depreciation of rupee in the recent past. Both of these macro-economic variables move in the same direction making the economic position even weaker.

iii) Role of SBP: The role of State Bank of Pakistan in maintaining rupee dollar parity is of utmost importance. Historically whenever there has been pressure on rupee, the State Bank of Pakistan has invariably all of the times intervened by taking certain measures which eased the pressure on the local currency. Many of the currency analyst point out that the rupee dollar parity was artificially maintained around Rs.100 to Rs.105 for a long time from 2013-2017 in order to keep local market at comfort due to which rupee remained overvalued. In January 2018, the real effective exchange rate was Rs.127 against US dollar which was stated to be overvalued by 27 percent.[46] Once the State Bank of Pakistan stopped intervening for sustaining current value of rupee the Rupee devalued drastically in the local currency market.

iv) Depletion of Foreign Reserves: Depletion of foreign reserves to the extent of $7.8bn was another reason for the recent depreciation. Developing countries require to preserve adequate reserve coverage to meet their international payment obligations. However, the financial situation of Pakistan was close to default due to rise in current account deficit over time and its payment deadline.[47]

v) Debt burden and debt repayment schedule: Another cause of recent depreciation was debt repayment which was due in July 2018. In order to finance debt repayment, the government had to resort to expensive international borrowing which further exasperated the situation of Pakistan's external debt.

vi) Role of speculative forces: It has been observed throughout the history of Pakistan that whenever currency volatility has hit the market, the speculative forces have always tried to gain from such situation. It is unfortunate that this practice has been so evident throughout the currency market history of Pakistan. It is unlike in many other countries where public at large has stood by the government in order to shoulder such issues by ensuring that extra foreign currency available with them

---

[46] APP. "Speculations Main Reason Behind Rupee Devaluation: Asad Umer", https:///www.app.com.pk/speculations-main-reason-behind-rupee-devaluation-asad-umer/ (accessed 25 October, 2019).

[47] "Is the Government Bankrupt", *The Express Tribune*, https://tribune.com.pk/story/1685257/6-is-the-

currency available with them was deposited in the national financial mainstream so as to ensure that it is available for use by their states. There is a significant portion of Pakistan's economy which is undocumented and cash based and in such moments of currency volatility people start buying dollars in expectation that the Rupee would further slide down and they will gain profits from this. This practice creates an artificial shortage of dollars in the open market and causes legitimate buyers of dollars for their personal needs to panic. This panic results in purchase of dollars in the open market at a considerable higher rate.

It is also pertinent to mention that during the history of Pakistan's economic crisis, the government has entered into several structural adjustment and stabilization programmes with IMF. When the current government took charge of office the situation regarding Pakistan economy was very challenging. In order to address this situation Pakistan government resorted to IMF for another bailout package. Pakistan went to IMF for the 23rd time and opted for the Extended Fund Facility (EFF) for $6.2bn in 2019 which is spread over a period of three years. This programme has come with strict and stringent conditionalities like decrease in government expenditures, depreciation of currency, rise in taxes, decrease in imports etc. It has been said that one of the understandings between the Pakistan government and the IMF negotiating team was to stop the practice of artificially sustaining rupee dollar parity through strong regulatory body in the shape of State Bank of Pakistan. Currently the exchange rate is being determined by the market forces i.e. through the demand and supply of currency.[48] Market based exchange rate system is the main mechanism with least interferences by the State Bank of Pakistan.[49]

The question whether the depreciation of currency was **just or not** always needs to be seen in the context of circumstances in which such a step was taken. It is quite astonishing to note that whenever the currency was devaluated, there existed imminent financial crisis which could have led to financial default of the country. Every time the currency was depreciated, there was not much else at those precise moments that could have been done immediately to ease out the crisis situation. Same is the case with the recent depreciation of the currency.

---

[48] Dr. Tasneem Zafar, Professor Civil Services Academy, interview by author Lahore, 22 November, 2019.

[49] Keynote Speech of Dr. Reza Baqir, Governor, State Bank of Pakistan, https://youtu.be/j-p70YtQvfQ (accessed 23 October, 2019).

Due to the various reasons mentioned above, which reveal poor and substandard performance of major macro-economic variables, recent depreciation of rupee was inevitable. There was not much else that could have been done to stall rapidly widening trade and fiscal deficit. In such circumstances there is no other option but to resort to such measures and as unpleasant as they may seem, these were a right and a just step. Though depreciation was unavoidable but perhaps the extent of depreciation is debatable. Moreover, if Pakistan had to go IMF, then long delay in taking this course of action is incomprehensible. This delay further accelerated the depreciation of PKR. However, it must be pointed out that there is no justification for poor financial and economic governance in the country. The disease cannot be cured through administering pain killers only without addressing the root causes of infection. Our economic and financial woes make it necessary that a painkiller in the shape of currency depreciation be frequently and periodically administered. The depreciation of currency through knee jerk reactions to impending economic crisis may be just but can never be a solution.

Critical Analysis

As what has been explained in the foregoing sections regarding devaluation/ depreciation of currency in Pakistan, one thing becomes abundantly evident that whenever the currency has been depreciated it has always been a sign of deteriorating economic situation in Pakistan. Stable exchange rate is always seen as a sign of economic stability which leads to increase in foreign investment and encourages local economic activity. The way our currency has consistently devaluated ever since the creation of Pakistan, shows some seriously endemic problems with economy which probably till now have not been adequately addressed. The same pattern of depreciation can again be seen since December 2017, where the value of rupee has almost shed 47% of its value against its parity against US Dollar. Data regarding depreciation of currency given above shows that depreciation has become a regular feature to tackle the crisis of current account deficit and adverse balance of payment. Moreover, both current account deficit and fiscal deficit have a significant and major negative impact on the economic development and sustainable growth. There is a two-way relationship between current account deficit and budget deficit. First is fiscal deficit leads to current account deficit and second is increase in current account deficit results in increase of fiscal deficit and both these scenarios cause reduction in economic growth.

It is normally argued that through currency depreciation the exports of a country will become more competitive due to reduction in their prices in foreign markets. Moreover, there will be increase in the value of imported goods due to depreciation so their demand in home market will fall. This will improve trade balance and current account situation of a country. This is the most favourite argument presented to support the depreciation of currency in a situation of crisis. But for this to be true it is necessary that the Marshall-Lerner condition and J curve theory are satisfied. The Marshall–Lerner condition is as follows: “that a devaluation will improve the balance of trade if the sum of foreign elasticity of demand for exports and the home country elasticity of demand for imports is greater than 1”.[50] Whereas J curve theory states that in order for depreciation to give desired outcome it is necessary that exports and imports of a country are elastic enough to respond to a movement in exchange rate. However, in case of Pakistan there is inelastic demand of traditionally exported goods as exports mainly comprise of raw material and primary goods having less value-added component. Hence, devaluation may not give a substantial boost to our exports as the advocates of depreciation predict. A lot also depend on the quality of exports which in case of Pakistan are not very competitive. The problem with poor export growth cannot be cured through deprecation of exchange rate as its nature is structural and chronic. Moreover, imports of Pakistan are also inelastic in demand being based on necessities including petroleum and petroleum products, machinery and capital goods which are not much responsive to change in exchange rate due to depreciation. Thus, the desired results of currency depreciation for a country like Pakistan are hardly visible. Marshall-Lerner condition also does not hold true for Pakistan which is necessary for depreciation to show positive results. Moreover, depreciation increases the quantum of external debt to such an extent that it surpasses the positive impact through rise in exports if any. Hence, depreciation of currency is not a readymade solution for improving trade deficit in case of Pakistan. This situation has been aptly summarized in the statement that “the cure will become worse than disease in the absence of enough elasticity of the exports/imports”.[51]

[50] Matthew McCartney, "The missing economic magic: The Failure of trade liberalization and exchange rate devaluation in Pakistan, 1980–2012", (2015).

[51] Atiq-Ur-Rehman, Iftikhar Hussain Adil, and Hafsa Anis. "Exchange rate, J curve and Debt Burden of Pakistan", *Pakistan Economic and Social Review* vol.50, no.1, (2012): 41-56.

Another issue with depreciation is that it increases the cost of production for both domestic and export goods. This is negatively affecting the domestic sectors by making them uncompetitive. Additionally, most of the industry relies on imports of raw material for production of export goods but depreciation makes it difficult to generate exportable surplus due to increase in cost of production of such goods. Exports which are dependent on imported capital and intermediate goods suffer badly on account of depreciation due to loss of market competitiveness.

In the circumstances mentioned above, the most important question which needs to be asked and addressed on war footings is why Pakistan so far has been unsuccessful in increasing the volume and value of exported goods. The major cause of this is misjudgment and mismanagement of policies followed by different governments on the basis of inadequate information, knowledge and expertise in the exports sector. Moreover, performance of Pakistan's export sector has been adversely affected by employment of outdated technology, lack of innovation and poor infrastructure. Furthermore, unreliable energy supply, high cost of production and poor governance have resulted in making our exports uncompetitive in the global market. This is due to the fact that focus of our economic planners has always been on one side of the trade equation i.e. imports. The efforts to balance current account just through currency depreciation and restriction on imports has always proved to be counterproductive for the country in the long term. The only viable solution to this predicament is by boosting and increasing exports through restoring the confidence of investors, evolving precise strategy and gaining in areas in which Pakistan's exports are competitive. The overall law and order and security condition needs to be improved further for attracting FDI. Another essential component required for increase in exports is presence of stable currency. There is also need to reduce the product concentration through expansion of product base and going for value-added exports. Pakistan can boost exports through diversification of exports and exploring new markets. This is the most viable policy option available which can lead to correcting the adverse balance of payment and trade deficit.

Without prejudice to the fact that depreciation has proven to be an effective tool, there has been negative impact of depreciation on the different sectors of the economy including employment sector and increase in external debt and liabilities of the economy. It has adverse impact in terms of GDP, inflation, value of imports, value of export, FDI, trade openness and growth rate. Inflation has increased over the period of time. In FY2017-18 it was 3.9% whereas it increased to 8% in FY2018-19.[52] Due to inflation prices of goods rise resulting in decrease of value of money and increase in cost of living. Both domestic and external debt increases as a result of depreciation. Currency depreciation also increases the interest rate which leads to decline in investment, reduction in government expenditure and decrease in consumption. All this leads to decline in aggregate demand and hence a vicious circle of low output leading to rise in unemployment and low GDP results in further recession. It is also difficult for any country to attract foreign investment in case where the exchange rate of the country is not stable.[53]

The problem is not with depreciation itself but the way it is used whenever there is a balance of payment crisis in the economy. Moreover, depreciation could be of assistance only to a limited extent as for the revival of the economy other measures are simultaneously required. The macro-economic performance of Pakistan depicts that the economy has a long history of poor and myopic economic decision making and failure of economic management to cope with changing conditions.

Section - III

International Experience

How Developing Countries Successfully Tackled Depreciation?

It is extremely important and necessary to examine how other developing countries especially those who have shown remarkable economic growth and development in the recent past successfully tackled the situation of trade deficit and followed export-led policies.

Malaysia was hit by the East Asian financial crisis in 1997-1998 which affected many countries including Thailand, Philippines, South Korea and Indonesia. These countries faced high current account deficit and their currency depreciated due to adverse balance of payment situation. Most of the countries sought assistance from IMF in this financial crisis. However, Malaysia did not resort to IMF even though Malaysian currency Ringgit depreciated by 50% against dollar and Malaysia was faced by current account deficit crisis.

---

[52] Ministry of Finance, *Economic Survey of Pakistan 2018-19* (Islamabad: Official Printers, 2018).

[53] Iqbal Mahmood, Major Ehsanullah, and Ahmed Habib, "Exchange rate volatility & macroeconomic variables in Pakistan", *Business management dynamics* vol.1, no. 2, (2011): 11-22.

Malaysian leadership imposed capital controls which led Malaysia back to the path of recovery. This was followed by expansion and diversification of exports which contributed as an engine of economic progress and growth.[54]

China's price elasticity of imports and exports for the period 1994-2002 was estimated as 1.9 in absolute terms which is greater than 1 and it satisfies the Marshall-Lerner condition. Thus in case of depreciation of Chinese currency Yuan the trade balance will improve.[55] However, the main purpose of devaluation for China is to increase her competitiveness and acquire larger share in the international market through exports.

Empirical evidence supports depreciation in case of Bangladesh and the Marshall-Lerner condition holds true for Bangladesh. During the period from 1985 to 2014, growth of exports was double the growth of imports for Bangladesh.[56] There was devaluation of exchange rate during this period and the data showed that trade deficit also declined. During this period Bangladesh moved towards trade liberalization and it adopted export-led growth policy focusing on non-traditional goods. Consequently, depreciation improved trade balance in the long run and it was through diversification of exports.

For Turkey Marshall-Lerner condition holds and depreciation improved the trade balance in the long run for the period under investigation from 2003 to 2016.[57] Turkey followed export-led growth policy and there was a rapid increase in volume of foreign trade which had a positive impact on current account deficit.

Marshall-Lerner Condition and Developed Countries

Empirical evidence and research in respect of most of the western developed countries showed that the Marshall-Lerner condition holds true in the long run. These countries include Belgium, Canada, France, Italy, Japan, Sweden, UK, USA and Germany.[58]

---

[54] K. Elangkovan, and M. H. M. Said, "The Asian Financial Crisis 1997-1998 and Malaysian Response: An Analytical Approach," *Australian Journal of Basic and Applied Sciences* vol. 7, no. 6 (2013): 622-633.

[55] Jin Fan, Q. Zheng, Y. Wang, X. Yuan, and J. Liang, “Does the Marshal–Lerner condition hold in China? Empirical analysis based on China's SAM of 2000”, In *Proceedings of the International Conference on Input-Output and General Equilibrium: Data, Modeling, and Policy Analysis, Brussels*, (2004), iioa.org › conferences › intermediate-2004 › pdf (accessed 23 October, 2019).

[56] Luthfe Ara Begum and Hossain Md Alhelal, "Revisiting the Marshall-Lerner Condition in the Bangladesh Economy: A Cointegration Approach", *Working Paper Series*: WP No. 1608.

[57] Ilyas Siklar, and Merve Celik Kecili, "Estimation of the Marshall-Lerner Condition and J Curve Dynamics for Turkey," *International Journal of Economics and Financial Research* vol. 4, no. 5 (2018): 125-130.

[58] Peter Hooper, Karen Johnson, Jaime R. Marquez, and Peter Hooper, “Trade elasticities for the G-7 countries”, (2000).

Economic planners through the knowledge of trade elasticities can predict the possible outcome as a consequence of change in exchange rate policy. Marshall-Lerner condition is satisfied in case of the developed countries mentioned above, thus depreciation of currency as a policy decision can achieve desired results in case of adverse balance of payment for these countries.

Lessons to be learnt

Pakistan should learn from the experience of other developing countries and seriously follow international best practices. There is a need to put an end to the practice of resorting to depreciation each time a crisis occurs. The importance of having a proactive approach instead of reactive approach can hardly be overstated. On the basis of what has been stated above in this section, there are a number of lessons which can be learnt and acted upon so that Pakistan is successful in decreasing the current account deficit which is the main cause of currency depreciation.

(i) Efforts should be made to meet the Marshall-Lerner condition so that if in future Pakistan ever has to depreciate rupee, the benefit from depreciation is gained and the goal of correcting trade deficit is achieved.

Develop and promote export sector in terms of diversified value added products and with greater access to world markets. As stated above, it

(i) was only due to diversification and shifting to value-added exports developing countries were able to decrease their current account deficit.

Conclusion

A stable currency is one of the significant indicators through which economy of a country can reasonably be gauged. Local businesses, foreign direct investment and economic growth have a positive correlation with the stability of currency. The depreciation of currency in Pakistan, in its historical as well as the recent context, point towards distressing economic performance over the years where government has been unable to erect the structure of economy on sound and sustainable footings. Economic policies of Pakistan have been short term, myopic and regressive in the long run. Pakistan government efforts to avert financial defaults through currency depreciation have provided relief in the short term but have tremendously increased the financial liabilities in the long run while stifling economic growth and increasing inflation. There is an urgent need to devise such economic policies which remain unaffected by political short term motives as a stable currency is a sign of stable economy.

Moreover, through the Marshall Lerner Condition and J curve theory mentioned above, it has been shown that depreciation of currency is beneficial only in certain circumstances and if those conditions are not fulfilled then the desired purpose of depreciation to improve balance of trade and boosting of exports will not be achieved. According to Marshall-Lerner condition the price elasticity of demand for imports and exports of a country should be greater than 1 and as per J curve theory imports and exports of a country should be responsive to a change in exchange rate. However, this is not true in case of Pakistan as shown in preceding sections The imports of Pakistan are inelastic and depreciation of currency leads to increase in import bill. Exports are also inelastic so depreciation will not help to increase them. Thus, in the absence of the requisite conditions being fulfilled, the result of currency depreciation for Pakistan has been increase in import prices, substantial increase in external debt putting heavy burden on the economy and not much increase in exports due to their primary nature. Thus, depreciation of rupee has serious adverse consequences for macro-economic variables like trade balance, capital inflow, inflation, external debt liability, economic growth etc. It shatters investor's confidence and results in capital flight.

Export-led growth is need of the hour. Pakistan has to focus on diversification of exports and those goods should be produced and exported for which there is international demand. Pulling out of loan dependence and achieving sustained growth requires shifting the export structure to high-value added and knowledge intensive goods and services.

Recommendations

Continuously resorting to depreciation of rupee each time when there is trade deficit and balance of payment crisis is not a good option and there is need to take such policy measures which will eventually prove helpful in long term economic growth and stability. There is an urgent need to adopt such policies which help in reducing the current account deficit and stabilizing the value of rupee in order to prevent further rise in inflation, increase in external debt burden, etc. Such measures are as follows:

a) There is an urgent need to increase our exports which is possible through giving good and proper incentives for controlling the trade deficit and balance of payment situation. Reduction in the production cost of exports will make them competitive in the international market. It is essential to ensure timely and speedy provision of gas, electricity and water connections to new industry especially for export purpose.

b) Research and development (R&D) and up-gradation of technology is need of the hour. In a highly competitive global market consistent modernization and innovation hold the key to success. Moreover, technical and vocational training should be given to improve employability in the export oriented sectors of goods and services.

c) Public private partnership (PPP) is required to play its role in producing those export goods for which there is demand by using the latest technology and innovation techniques. Focus should be on how to capitalize strength of a specific region and PPP also helps in extending the spread of positive externalities.

d) Sound and well-formed monetary and fiscal policies are required. They should be so efficient that effective, responsive and stable exchange rate is possible to achieve. Such stability should remain a priority of every government regardless of its political nature.

e) Confidence of the foreign investor is essential to be developed and maintained. Efforts and sincere measures should be taken to increase FDI in Pakistan. Promotion of Pakistani products through business delegation, improving business environment, trade shows and international advertisement should be done. Ease of doing business index of Pakistan is better than a number of South Asian countries. Pakistan ranking has improved from 147th to 136th/190 in the Doing of Business Report 2019 which needs to be further improved.

f) There is urgent need to control speculative activity for stability of rupee in the local market. Supervision of foreign exchange companies must constantly be done. All transactions involving purchase of foreign currency must be documented in order to identify foreign currency hoarders.

g) The significance of law and order and security is critical for industrial growth. The economic zones and corridors involved in movement of commercial goods must be provided adequate security cover.

Bibliography

"Currency Depreciation". *Financial Glossary*. S.v. (assessed 04 October, 2019).

"Is the Government Bankrupt". *The Express Tribune*. https://tribune.com.pk/story/1685257/6-is-the-government-bankrupt/ (accessed 10 October, 2019).

"Nominal Effective Exchange Rate (NEER) Definition". *Investopedia*, 10 October 2019. https://www.investopedia.com/terms/n/neer.asp (accessed 22 October, 2019).

"Real Effective Exchange Rate – REER Definition". *Investopedia,* 13 July 2019. https://www.investopedia.com/terms/r/reer.asp (accessed 22 October, 2019).

"The devaluation of economy". *The Frontier Post*, January 30, 2019. http://thefrontierpost.com/the-devaluation-of-economy/ (accessed 22 October, 2019).

Afzal, Mohammad, And Karamat Ali. "An Historical Evaluation Of "Export-led Growth" Policy in Pakistan". (2008).

Ahmed, Mohammad. "Pakistan's exchange rate policy: An econometric investigation". *The Pakistan Development Review,* (1992).

Ahmed, Shaghil, Iffat Ara, and Kalim Hyder. "How external shocks and exchange rate depreciations affect Pakistan? Implications for choice of an exchange rate regime". (2005).

Atiq-Ur-Rehman, Iftikhar Hussain Adil, and Hafsa Anis. "Exchange rate, J curve and Debt Burden of Pakistan". *Pakistan Economic and Social Review* (2012).

Awan, R. U., M. Shahbaz, and F. Sher. "Does J-curve phenomenon exist in Pakistan? A revisit". *Interdisciplinary Journal of Contemporary Research in Business* vol 9, No. 3 (2012).

Begum, Luthfe Ara, and Hossain Md Alhelal. "Revisiting the Marshall-Lerner Condition in the Bangladesh Economy: A Cointegration Approach". *Thoughts on Banking and Finance* (2016).

Bloomberg, "Pakistan Lets Rupee Devalue as Finances Wobble Before Election". https://www.bloomberg.com/news/articles/2018-07-16/pakistan-said-to-devalue-asia-s-worst-performing-currency-again (accessed 10 October, 2019).

Choudhary, Munir AS, and Muhammad Aslam Chaudhry. "Effects of the exchange rate on output and price level: evidence from the Pakistani economy". *The Lahore Journal of Economics* vol. 12, no. 1 (2007).

Husain, Dr. Ishrat. "PKR: The upsides and downsides of devaluation". *Business Recorder*, 04 October 2017, – https://fp.brecorder.com/2017/10/20171004223247/ (accessed 11 November, 2019).

Zafar, Dr. Tasneem. Professor Civil Services Academy, interview by author Lahore, 22 November, 2019.

Elangkovan, K., and M. H. M. Said. "The Asian Financial Crisis 1997-1998 and Malaysian Response: An Analytical Approach." *Australian Journal of Basic and Applied Sciences* vol. 7, no. 6 (2013): 622-633.

Fan, J., Q. Zheng, Y. Wang, X. Yuan, and J. Liang. "Does the Marshal–Lerner condition hold in China? Empirical analysis based on China's SAM of 2000". In *Proceedings of the International Conference on Input-Output and General Equilibrium: Data, Modeling, and Policy Analysis, Brussels*, (2004).

Frankel, Jeffrey, and Andrew Rose. "An estimate of the effect of common currencies on trade and income." *The quarterly journal of economics* vol. 117, no. 2 (2002).https:///www.app.com.pk/speculations-main-reason-behind-rupee-devaluation-asad-umer/ (accessed 25 October, 2019).

Hamid, Naved, and Azka Sarosh Mir. "Exchange Rate Management and Economic Growth: A Brewing Crisis in Pakistan". *The Lahore Journal of Economics* (2017).

Hooper, Peter, Karen Johnson, Jaime R. Marquez, and Peter Hooper. "Trade elasticities for the G-7 countries." (2000).

Government of Pakistan. Ministry of Finance. *Economic Survey of Pakistan 2018-19*. Islamabad: Official Printers, 2019.

Ishtiaq, Nazeef, Hafiz Qasim, and Adeel Dar. "Testing the Marshall-Lerner Condition and the J-Curve Phenomenon for Pakistan: Some New Insights". *International Journal of Economics and Empirical Research* vol. 4, no. 6 (2016).

Kempa, Bernd. "An oversimplified inquiry into the sources of exchange rate variability". *Economic Modelling* vol. 22, no. 3 (2005).

Keynote Speech of Dr. Reza Baqir. Governor, State Bank of Pakistan. https://youtu.be/j-p70YtQvfQ (accessed 23 October, 2019).

Khan, Abdul Qayyum, and Muammad Ismail. "Analysis of the factors affecting exchange rate variability in Pakistan". *Exchange* vol. 2, no. 3 (2012).

Khan, Rana Ejaz Ali, Ali Abbas Akhtar, and Amir Saeed Rana. "Relationship between Exchange Rate and Budgetary Deficit: Empirical Evidence from Pakistan". *Journal of Applied Sciences* vol. 2, no. 8 (2002).

Levy-Yeyati, Eduardo, and Federico Sturzenegger. "To float or to fix: evidence on the impact of exchange rate regimes on growth". *American economic review* vol. 93, no. 4 (2003).

Mahmood, Iqbal, Major Ehsanullah, and Ahmed Habib. "Exchange rate volatility & macroeconomic variables in Pakistan". *Business management dynamics* vol. 1, no. 2 (2011).

McCartney, Matthew. "The missing economic magic: The Failure of trade liberalization and exchange rate devaluation in Pakistan, 1980–2012". (2015).

Memon, Mohammad Salih, Faiz Muhammad Shaikh, Zahid Hussain Kazi, Syed Abdul Sattar Shah, Ambreen Khaskheley, and Muhammad Shaoiab. "Impact of Currency devaluation on Pakistan's Economy". *International Journal of Management & Information Technology* vol. 10, no. 5 (2015).

Amjad, Rashid. Professor Lahore School of Economics, interview by author Lahore, 22 October, 2019.

The News "October FX reserves fall below $8bln for first time in nearly 5yrs", *The News,* 26 October 2018, https://www.thenews.com.pk/print/385436-october-fx-reserves-fall-below-8bln-for-first-time-in-nearly-5yrs (accessed 01 December, 2019).

Parsley, D., and H. Popper. *Evaluating exchange rate management: an application to Korea. Hong Kong Institute for Monetary Research HKIMR*. vol. 28. Working Paper, 2009.

Lubik, Thomas A., and Frank Schorfheide. "Do central banks respond to exchange rate movements? A structural investigation." *Journal of Monetary Economics* vol. 54, no. 4 (2007).

Rehman, Mushtaq. “Analysis of Exchange Rate Fluctuations: A Study of PKR VS USD”. *Journal of Managerial Sciences* vol. 8, no. 1 (2014).

Shah, Anwar, and Muhammad Tariq Majeed. “Real exchange rate and trade balance in Pakistan: An ARDL co-integration approach”. (2014).

Shahbaz, Muhammad, Faridul Islam, and Naveed Aamir. “Is devaluation contractionary? Empirical evidence for Pakistan”. *Economic Change and Restructuring* vol. 45, no. 4 (2012).

Shahzad, Adnan Ali, Bilal Nafees, and Nazar Farid. "Marshall-Lerner condition for South Asia: A panel study analysis." *Pakistan Journal of Commerce and Social Sciences (PJCSS)* vol. 11, no. 2 (2017).

Siklar, Ilyas, and Merve Celik Kecili. "Estimation of the Marshall-Lerner Condition and J Curve Dynamics for Turkey." *International Journal of Economics and Financial Research* vol. 4, no. 5 (2018): 125-130.

Tariq, Muhammad. "Exchange Rate Fluctuations and Its Impact on Output Growth, Price Level and Foreign Exchange Reserves in Pakistan (1973-2008)". *Phd Diss*, Peshawar: University of Peshawar Khyber Pakhtunkhwa Pakistan, 2012.

Upadhyaya, Kamal P., and Mukti P. Upadhyay. "Output effects of devaluation: evidence from Asia". *The Journal of Development Studies* vol. 35, no. 6 (1999).