

Impact of Foreign Remittances on Financial Development of Pakistan

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Abstract

This research investigates the impact of remittances on financial development of Pakistan. Overseas remittances have positive and major relation with GDP of Pakistan at the same time as inflation and exchange rate has unconstructive effect on economic growth. The multiple regression investigation is used to identify the relationship between the dependent and independent variables. In this study, we considered economic growth as the dependent variable. For independent variables worker's remittances, foreign direct investment, inflation, and exchange rate and agriculture growth.

Keywords: Foreign Remittances; Economic Growth; Pakistan.

1. Introduction

Remittance is the international migrant's transfer of funds to their family members in their home. It has been growing extraordinarily since last twenty years. Reference [12] Foreign exchange earnings are the main source for developing countries. Foreign remittances are the basic of lack reduction, improved health care and education. Remittances are the fundamental source of rising investment and use in recipient countries [5].

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Reference [35] described that inventions in the financial market and the emergent tendency of expanding economics to achieve highest remittances which have led to promoting development and higher income making are trends that have attained importance in economic literature [25] also contributes to the journalism by pointing out that stream of remittances in the existence of banking sector innovation leads to the development of process [35]. Remittances [12] can participate to advanced investment in individual and physical investment. If remittances [5] are exploit for consumption not for savings as is the environment of the rising countries than these can be risky. While the original work of [2] that introduced the model of financial enlargement in promoting development, various extraordinary studies such as [35] have integrated it in abstract as well as experimental literature.

The basic purpose of this article is to explore the relation among exchange rate and financial enlargement of Pakistan. Theoretically an optimistic relationship exists between high exchange rate and financial development, which recommend that decline enhance economic development. However Pakistan mostly exports raw materials and cultivation based commodities, whereas import costly commodities similar to oil, mechanism and advanced goods. Likewise demands of Pakistani good in foreign markets are fewer; because exporting goods have not met the necessary worldwide standards. In the light of known data, trade stability of Pakistan frequently remains less; we take gross domestic product as dependent variable even as independent variable foreign direct investment, foreign remittances, inflation and exchange rate. Financial growth is the vision of all state of the world as it stage vital role in the poverty decline and improving of value of life.

Reference [24] explained the remittances from overseas have develop into a very significant element of the stability of expenditure for increasing countries in current years. For several countries they have exceeded a mixture of types of funds flows. Global Development Finance [GDP 2003] shows that remittances to increasing countries are elevated than official relieve flows and are also superior than mainly other types of private wealth flows and are also upper than most other types of confidential money flows. Remittances have developed quickly for India too in the precedent decade, making it one of the major recipients of remittances in the nation.

Reference [43] described on the one furnish the long run and short run causality between economic and financial development and on the other hand institute the erogeneity of economic growth with vector Error-correction model (VECM) for Pakistan. The erogeneity of economic enlargement implies that the economic system is unsuccessful in terms of financial increasing for Pakistan. Vector error correction terms (VECTs) have been consequent from Johansen's multivariate co-integrating testing method.

References [3,4] describe the Pakistan mostly exports raw resources and agriculture based supplies, while trade in exclusive merchandise like oil, equipment and high-tech supplies. Moreover, demands of Pakistan crop in overseas markets are less; since exporting crops have not met the mandatory worldwide values. In the illumination of given data, business balance of Pakistan frequently remains pessimistic, hence leads to fewer financial development. Pakistan adopted balanced exchange rate system.

By exchange devaluation, the oversees commodities since luxurious; accordingly, community change from the utilization of oversees goods to the domestic goods. Correspondingly, the limited goods will develop into

cheaper for the foreigners and the sell overseas will increases. Pakistan insignificant exchange rate is developing day by days this obviously indicates that more Pakistani exchange is essential to buy one dollar. Therefore Pakistani rupee experiences disapproval beside dollar.

Remittances receiving top ten countries among Pakistan. Remittance are growing day by day that our country migrants send to their residence country. Foreign trade capital playing main role in the stabilization of economic area of Pakistan. Financial development outcome in the currency appreciation and better the living standards whereas failure the financial development leads to the decline of the currency. Authorized exchange rate of PKR declined from PKR10/\$ and 90/\$ 1980 and 2011.

What is the microeconomic impact of remittances? Is there facts and remittances promote productive investment? How does financial development manipulate the growth effect of remittances? But here the question arises that does financial Development cause economic growth or does economic growth cause financial development.

The basic purpose of this research is:

1. To explore the relation among exchange rate and financial enlargement of Pakistan.
2. To examines the impact of remittances on the financial development of Pakistan by using the 31 years data for the duration of 1980-2011.

This article is explained as follows: Section 2 is the literature review; Section 3 explains data collection methodology and model speciation. Section 4 discusses the experimental results. Section 5 clarifies the conclusion

2. Review of Literature

Reference [3] Analyzed the foreign remittances on financial growth of Pakistan. During 1978 to 2011, Use secondary time series of data. The relationship between the variables is recognizing to use analysis the multiple regressions. GDP as a dependent variable while Independent variables as inflation, FDI, and exchange rate. Positive relationship between foreign remittances and GDP of Pakistan while negative relationship between inflation and exchange rate reason on economic growth. Unrelated relation with gross domestic product of Pakistan has positive outlay foreign direct. Foreign remittances increase 1% will raise GDP by 0.25%. Pakistan wants stable and creative government to raise foreign investment inflow to improve investment and financial development.

Reference [31] analyzed the raising value of remittances in total worldwide capital flows, Sufficient has not been relationship between remittances and growth. The relationship between remittances and development to take benefit of remittances how influence the financial growth sector of Pakistan. Remittances top about 100 rising countries. We discover that remittances advanced growth in countries with less economic growth development system by providing another way to finance asset and helping rising above liquidity constraints.

References [12,13] A new indicator of economic growth measuring the effectiveness household banking system and explain that the impact of changes on financial development is positive (negative) in countries someplace bank efficiency is high (low). [4]this article attempt the impact of inflation, NER (nominal exchange rate), foreign domestic investment and capital stock on financial development of Pakistan using time series duration 1975-2011. Dependent variable GDP and independent variable exchange rate, FDI, capital stock.

Reference [35] Explained that remittances and economic growth have been a necessary and overgrowing basic in accelerating the financial method of various transitional economics. Financial that have sufficient source of remittance from their expatriate compulsory the well-recognized technology for economic dealing that finally result in financial development. In the long run foreign remittances along with economic development raising the expenditure level of the domestic people that outcome in the higher financial development by suggest more savings. The research analysis the new measurement for policy market mainly, operational for innovations in the economic sectors.

Reference [18] Researches the task of exchange rate on the financial development in China. He takes data from 28 areas for the period of 1992-2008. Reference [30] World Bank states that address related issues of the function of the financial method in motivating fiscal development using micro data.

Reference [22] Investigated that the investments of recurring migrants may be a significant resource of establish assets for microenterprises. Likewise, in a learn of 30 communities in west-central [33] terminate that income from employment in the United States provided a significant basis of establish assets in 21% of the innovative business formations. Reference [46] moreover search that remittances are accountable for nearly20% of the asset invested in microenterprises during city Mexico.

Reference [26] Discovered that entrance stage of price rises is 3% to 6% and behind that level and enlargement in inflation has harmful impact on economic growth. Reference [16] things to see that increasing price rises not just impact economic systems but it moreover indemnity the economic markets or upset its operation [20] statement that in the phase of high price rises, the risk of the store crises is moreover at advanced level, since high price rises stops economic growth to employment which affects the actual market in small run.

Reference [28] Explored the long run and short run connection of economic growth and price rises. Reference [47] Described the association of financial development, economic growth and price rises in holder of Pakistan. They search that provide of funds development affects actual GDP increase and as well as price rises. Their causality investigation reveals that economic growth Granger reasons price rises.

In case of [14] informed that price rises has harmful impact on economic growth. Also, he comments that macroeconomic presentation has unhelpful impact on economic growth which increases revenue dissimilarity and lowers financial development. Reference [1] Constructs bilateral key (economic development) to study association between price rises and economic growth by applying the ARDL limits trying come near to co integration in reason of Iran. The outcome shows that growing price rises deteriorates the presentation of fiscal market and reduces economic growth.

Reference [6] Investigated the association among economic growth and price rises in container of Zambia. By applying the ARDL limits difficulty, he gossip the attendance of co integration exist economic growth and price rises.[19] as well discloses that the association among both variables is negative whereas the VECM Granger establishes bidirectional causality come near. Reference [39] unveils that honesty of a financial lowers cost level by moving actual production development.

Reference [42] Introduced the idea of implications of globalization for financial plan. He mentions two channels for price rises and fiscal rule. First and growth in international opposition enhances the procedure of international, on additional give; it affects in doubtful regarding the financial procedures. Also, Wanger information that international reduces prices rises.

Reference [43] Explains the [9] examined the affiliation among economic growth and financial increasing for Greece, Thailand, Philippines, Korea, India and Egypt for the period 1955-1997. They used co integration and error improvement model (ECM) for causality and erogeneity aims. They wore the ratio of supposed liquidity to nominal GDP and real per capita GDP as proxies of economic and fiscal development, correspondingly.

Reference [7] Studied the determinants of price rises in reason of Poland by incorporating worldwide. She search that international acting an significant role in the purpose of price rises in reason of Poland and various other east European countries, and international declines price rises. Moreover he explain the association among international and price rises in reason of central East European countries. She clarification that in reason of developing countries, it is the production level which determines price rises; if the production level is greater than worldwide has strong outcome on price rises and vice versa.

Reference [3] Explores the association among exchange rate and financial increase in Pakistan. He finds extend optimistic association among exchange rate and financial growth in Pakistan. He assumes firm exchange rate strategy for the financial enlargement of the country. Reference [17] Investigates possessions of exchange rate on FDI in Asian countries. Reference [13] Discussion regarding the relation of actual exchange rate volatility on non-fuel exports in Iran. Reference [4] Also thought concerning economic development and exchange rate.

Reference [41] have to understand these restricted variables eight. Our study, but, differ from individual and other before studies in that we are not investigating how the situations influence an optimistic (or pessimistic) nexus.

Reference [9] Explained the associated among fiscal growth and Manage dummies were used for the unweight average of savings and land rates. They may utilized the real interest rate and the summary variable of keep back and liquidity requirements by utilizing the mainly component pattern.

This study learns to the questions of the force of remittances on enlargement in two significant ways. First, we create a new determine for remittances, covering about 100 nations, significantly civilizing information margins on remittances flows. And second we examine the significance of remittances in developing economic increase, looking in particularly at the communication among remittances and the economic area, and phases unseen in the literature. Specially, we investigate how rusticated economic area expansion influences a country's ability to

acquire benefit of remittances.

3. Methodology

This section comprises of two sub sections. Section 3.1 explains data and 3.2 describe the research methodology.

3.1. Data

This study utilized the secondary data which is collect form World Bank Data and international monetary fund. We focused on secondary time series data for our study is of 31 years which is from the economic year 1980-2011. Multiple regression line analysis is used to find the relationship between the variables. Economic growth is treated as a dependent variable. Workers’ remittances, FDI, inflation, agriculture growth and exchange rate as independent variables.

Table 1: Variables Measurement

Variables	Measures
Dependent variables	
Economic growth	GDP
Independent variables	
Foreign direct investment	Net inflow
Workers’ Remittances	Net inflow
Inflation	CPI defature %annual
Exchange rate	
Agriculture growth	Annual agriculture growth rate

Notes: This table shows that economic growth is our dependent variables and it is measured by GDP. Independent variables are foreign direct investment, workers’ remittances, inflation, and exchange rate and agriculture growth.

Data Source: Self calculated International Monetary fund and world Bank Data

An augment in the quantity of produce and services created per head of the people above a phase of time. Worker’s remittances is a move of wealth by a oversees worker’s to a personality in his or her residence country. Money sent residence by migrants competes with worldwide support as a one of the biggest economic inflows to increasing countries. Foreign direct investment (FDI) is a scheming right in a trade venture in one nation by a unit based in another nation. Inflation a continual swift raises in prices, as deliberate by some broad key (CPI) above months or years, and mirrored in the likewise declining purchasing influence of the exchange. Annual entitlement change in CPI, quarterly percentage modify in exchange rate with value to US dollar. Agriculture enlargement means set that assistance to the yield manufacturer with the assist of different agriculture resources.

Table 2: Summary Statistics

Variable	Obs.	Mean	St. dv	Min	Max
EG	32	4.468	1.934	1	8
REM	32	4.38	3	1	9.7
AG	32	3.531	3.359	-5	12
EXC	32	55.343	20.10	21	86
FDI	32	1.03	1.49	2.9	5.6
INF	32	9.5	4.4067	3	20

Notes: This table represents the summary statistics, obs is observation, mean represents central tendency of data, st.dv is the standard deviation, min is the minimum and the max is the maximum is the particular set of data.

Data source: Self calculated on World Bank Data and IMF

Table 2 represents the summary statistics of all variables the model. Coefficients that abridges given in sequence set, which can either be a demonstration of the entire population or a sample. Measures of central tendency enclose the mean, median and mode; on the other hand measures of variability also include the standard deviation, the minimum and maximum variables these are depended and independent variables. Mean is the basic statistical average of a position of two or additional numbers. We can calculate the Mean by using Arithmetic mean and Geometric mean. Standard deviation is used to discover the distribution in a data set. Standard deviation is the square root of variance.

Maximum and minimum shows the highest and lowest value in a data set. The sample size comprises of 32 observations from the period of 1980 to 2011. The minimum and maximum value of economic growth is (1) and (8) correspondingly, whereas the mean value is (4.46875) and standard deviation is (1.934). Worker’s remittances having minimum value (1), maximum value (9.7), mean value (4.38) and standard deviation (3). In agriculture expansion having minimum value (-5), maximum value (12), mean value (3.53125) and standard deviation (3.3599). Official Exchange Rate minimum and maximum (21) and (86) mean value (55.34) and standard deviation (20.1055). FDI minimum and maximum value o is (2.9) and (5.6), mean (1.03) and standard deviation are (1.49). Moreover, minimum and maximum values of inflation are (3) and (20) and mean (9.5) and standard deviation is (4.4067).

3.2. Research Methodologies

To test or check the impact of independent variables or dependent variable multiple linear regression model are used. This section is further divided into two sub section. Where section 3.2 .1 explains research hypotheses and sub section 3.2.2 represents empirical model.

3.2.1. Research Hypotheses

H1: There is positive relationship between worker’s remittances and economic growth.

H2: There is positive relationship between agriculture growth and economic growth

H3: There is negative relationship between exchange rate and economic growth.

H4: There is positive relationship between foreign direct investment and economic growth.

H5: There is negative relationship between inflation and economic growth.

3.2.3. Empirical model

$$Y=\beta_0+\beta_1X_1+ \beta_2X_2+ \beta_3 X_3+ \beta_4X_4+ \beta_5X_5+\epsilon_t$$

$$EG= \beta_0+\beta_1 (REM) +\beta_2 (AGt) +\beta_3 (EXCt) +\beta_4 (FDI) + \beta_5 (INF) + \epsilon_t$$

Where:

EG= Economic Growth

REM= Worker’s Remittances

AG= Agriculture Growth

EXC= Exchange rate

FDI= Foreign Direct Investment

INF= Inflation

ϵ_t =Stochastic Error Term

β_0 = intercept

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$, are the coefficient parameters

4. Discussion and Analysis

This section explains the results and analysis of our study. Initial of all data is tested correlation is associated of two variables or one variable are other variables. To test the impact of explanatory variable on dependent variables multiple linear regression form are used correlation.

Table 3: Correlation among explanatory variables result

Variables	REM	AG	EXC	FDI	INF
REM	1				
AG	-0.25	1			
EXC	0.78	-0.34	1		
FDI	0.29	-0.014	0.26	1	
INF	0.53	-0.08	0.25	0.25	1

Notes: This table represents the correlation results, REM is work remittances, AG is agriculture growth, EXC is stand for exchange rate, FDI is the foreign direct investment and INF is the inflation.

Data Source: Self calculated data on IMF and WBD.

Correlation is used to determine how two random variables are associated. As standard deviation is always optimistic, the symbol of the correlation among two variables should be the same as that of the covariance among the two variables.

If the correlation is optimistic, that variables are optimistic correlated. If it is pessimistic than they are the pessimistic correlated. Furthermore, it can be proved that the correlation is always among +1 and -1. REM stand for remittances and AG is the agriculture growth, EXC is the exchange rate, FDI mean foreign direct investment, and INF is the inflation rate. Remittances are all variables positive relation but agriculture growth relationship is the negative among the worker's remittances.

Independent variables EXC, FDI and INF negative relationship between agriculture growths. Independent variables FDI and INF is the positive associated among foreign direct investment.

Table 4: impact of independent variable on dependent variable by utilizing multipul linear regression

Variables	Coefficient	T value	P value
REM	3.47 (2.5)	1.38	0.178
AG	0.35 (.086)	4.11	0.00
EXC	-.0339 (.034)	-1	0.325
FDI	7.8 (1.92)	0.41	0.688
INF	-.1909 (.084)	-2.25	0.033
Intercept	5.31 (1.56)	3.4	0.002

Notes: $R^2=0.4969$, Adjusted $R^2=0.4002$, No of obs. 32, $F(5, 26) = 5.14$ COEF stand for coefficient and presents the contact of independent variable on dependent variable, P value is probability. These are three statistical significance level at 1%, 5% level, and 10% level. Show the variables are statistically significant level. **Data source:** Self calculated on IMF and WBD.

Economic growth is a dependent variable and independent variables are foreign remittances, FDI, inflation, agriculture growth and exchange rate. It is found that foreign remittances has positive and significant effect on economic growth of Pakistan, hence ($\beta_1=3.47$). It means 1 % increase in foreign remittances will raise GDP by to 3.47%. Agriculture growth 0.35 has strongly effect on economic growth. Foreign direct investment positively but insignificantly effect economic growth. Both inflation and exchange rate have negative and significant effect on economic growth of Pakistan. One percent increase in inflation will decrease GDP by 0.1909 percent. And one percent increase in exchange rate leads to decrease GDP by 0.0339 percent. The value of R^2 (i.e. the coefficient of determination) is 0.4969 that means 49% of the variations in the dependent variable (i.e. EG) are due to independent variables and others are due to error term.

5. Conclusion

The purpose of this research paper examines the impact of remittances on the financial development of Pakistan by using the 31 years data for the duration of 1980-2011. Multiple regression method is used to verify the affiliation among dependent variable (economic growth) and independent variables such as worker’s remittances, foreign direct investment, agriculture growth, inflation and exchange rate. Worker’s remittances

agriculture growth and foreign direct investment are positively effect on economic growth of Pakistan. FDI is positive but insignificant effect on financial development of Pakistan, while worker's remittances and agriculture relation with significantly outcome of financial development of Pakistan. For developing a country it needs to trade in huge quantities of raw materials and money goods for its development. Balance of business is the mainly significant reason. Numerous families source of revenue in Pakistan depend on foreign remittances getting from their family members who are operational in dissimilar countries across the world, as .it has enormous impact on their health, education and livelihood.

References

- [1] Aboutorabi, M. A. (2012). The Effect of Inflation on Financial Development: The Case of Iran. *Journal of Basic and Applied Scientific Research*, 2(8), 8394-8400.
- [2] Ahmad, A., Ahmad, N., & Ali, S. (2013). Exchange Rate and Economic Growth in Pakistan (1975-2011). Ahmad, Arslan, Najid Ahmad, and Sharafat Ali." Exchange Rate and Economic Growth in Pakistan (1975-2011)."(2013), 740-746.
- [3] Ahmad, N., Ahmad, A., & Hayat, M. F. (2013). Foreign Remittances and Economic Growth in Pakistan: An Empirical Investigation.
- [4] Ahmad, N., Hayat, M. F., Luqman, M., & Ullah, S. (2012). The causal links between foreign direct investment and economic growth in Pakistan. *European Journal of Business and Economics*, 6.
- [5] Anwar, S., & Sun, S. (2011). Financial development, foreign investment and economic growth in Malaysia. *Journal of Asian Economics*, 22(4), 335-342.
- [6] Allard, C. (2007). Inflation in Poland: How Much Can Globalisation Explain? In: Adam B.
- [7] Arestis, P., Demetriades, P., Fattouh, B., & Mouratidis, K. (2002). The impact of financial liberalization policies on financial development: evidence from developing economics. *International Journal of Finance & Economics*, 7(2), 109-121.
- [8] Bettin, G., Lucchetti, R., & Zazzaro, A. (2009). Income, consumption and remittances: evidence from immigrants to Australia: HWWI Research Paper.
- [9] Bettin, G., & Zazzaro, A. (2012). Remittances and financial development: substitutes or complements in economic growth? *Bulletin of Economic Research*, 64(4), 509-536.
- [10] Bittencourt, J. S., & Langer, M. C. (2011). Mesozoic dinosaurs from Brazil and their biogeographic implications. *Anais da Academia Brasileira de Ciências*, 83(1), 23-60.
- [11] Boyd, J., & Champ, B. A. (2003). Inflation and financial market performance: what have we learned in the last ten years?
- [12] Chaudhary, G. M., Shah, S. Z. A., & Bagram, M. M. M. (2012). Do Exchange Rate Volatility Effects Foreign Direct Investment? Evidence from Selected Asian Economies. *Journal of Basic and Applied Scientific Research*, 2 (4), 3670-3681.
- [13] Chen, J. (2012). Real exchange rate and economic growth: evidence from Chinese provincial data (1992-2008).
- [14] Demirgüç-Kunt, A., Laeven, L., & Levine, R. (2003). Regulations, market structure, institutions, and the cost of financial intermediation: National Bureau of Economic Research.
- [15] Demirgüç-Kunt, A., & Maksimovic, V. (1998). Law, finance, and firm growth. *The Journal of Finance*,

53(6), 2107-2137.

- [16] Fontaine, T. Tracing the Diaspora's Involvement in the Development of a Nation: The Case of Dominica.
- [17] Gupta, P. (2006). Macroeconomic Determinants of Remittances: Evidence from India. *Economic and Political Weekly*, 2769-2775.
- [18] Hinojosa-Ojeda, R. A. (2003). Regional integration among the unequal: a CGE model of US-CAFTA, NAFTA and the Central American Common Market. LA, University of California, inédito.
- [19] Khan, M. M., & Ali Hyder, A. (2006). Suicides in the developing world: Case study from Pakistan. *Suicide and Life-Threatening Behavior*, 36(1), 76-81.
- [20] King, R. G., & Levine, R. (1993). Finance, entrepreneurship and growth. *Journal of monetary Economics*, 32(3), 513-542.
- [21] Kim, D. H., Lin, S. C. and Suen, Y. B. (2010). Dynamic relationship between inflation and financial development. *Macroeconomic Dynamics*, 14(3), 343.
- [22] LLove, I. (2003). Financial development and financing constraints: International evidence from the structural investment model. *Review of Financial studies*, 16(3), 765-791.
- [23] Lueth, E., & Ruiz-Arranz, M. (2006). A Gravity Model of Workers' Remittances: International Monetary Fund.
- [24] Mansoor, A. M., & Quillin, B. (2006). Migration and remittances: Eastern Europe and the former Soviet Union: World Bank Publications.
- [25] Massey, D. S., Parrado, E. A., BUSTAMANTE, J., HART, J., & MARTIN, P. (1998). International migration and business formation in Mexico. *Commentaries. Authors' reply. Social Science Quarterly*, 79(1), 1-34.
- [26] Qayyum, U., & Nawaz, M. (2014). Remittances and Economic Growth: The Role of Financial Development: Pakistan Institute of Development Economics.
- [27] Romer, P. (1993). Idea gaps and object gaps in economic development. *Journal of monetary Economics*, 32(3), 543-573.
- [28] Satti, S. L., Shahbaz, M., Mujahid, N., & Ali, A. (2013). Impact of Financial Development and Globalization on Inflation: The Role of Remittance and Economic Growth in Bangladesh.
- [29] Shen, C.-H., & Lee, C.-C. (2006). Same financial development yet different economic growth: why? *Journal of Money, Credit and Banking*, 1907-1944.
- [30] Stiebale, J. (2011). Do Financial Constraints Matter for Foreign Market Entry? A Firm-level Examination. *The World Economy*, 34(1), 123-153.
- [31] Tahir, M. (2008). An investigation of the effectiveness of financial development in Pakistan. *The Lahore Journal of Economics*, 13(2), 27-44.
- [32] Woodruff, C. M., & Zenteno, R. (2001). Remittances and microenterprises in Mexico. UCSD, Graduate School of International Relations and Pacific Studies Working Paper.
- [33] Zaman, K., Khan, M. M., Ahmad, M., & Khilji, B. A. (2012). The relationship between agricultural technologies and carbon emissions in Pakistan: Peril and promise. *Economic Modelling*, 29(5), 1632-1639.