Do Migrant Remittances Promote Corruption in Pakistan?

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ABSTRACT

Remittances play a very important role in a political economy perspective that how do remittances impact corruption in the recipient economy? This paper explored the hypothesis that whether the remittances worked as a cure by decreasing corruption being a political resource (accountability perspective), or remittances worked as a curse by allowing the government to divert spending from public goods provision (substitution perspective). The autoregressive distributed lag (ARDL) method is used to check whether a long-run equilibrium exists among selected indicators from 1984 to 2018. The Error Correction Model was used to get the short-run regression results. Empirical analyses have shown the support for remittances being a curse, not a cure for Pakistan in the long run whereas, short-run results revealed reversed resource curse hypothesis.

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1.   Introduction

In recent years international migration has risen due to many factors. Therefore, it is interesting to know about the economic and political consequences of migration (Edo, Ragot, Rapoport, Sardoschau, & Steinmayr, 2018). Remittances are taken as a new development opportunity and are considered as a monetary resource by foreigners to their home (Abduvaliev & Bustillo, 2020; Kapur, 2003; Ratha, 2003). Since the 1990s, international migration is continuously on the rise from the people of underdeveloped and developing countries to developed countries for a better future. With this rise, there is also a significant rise in remittances by foreign workers to their home countries. According to the World Bank, remittances to low-income countries have increased and expected to reach the highest record in the year 2018. Remittances to developing countries reached $528 billion (with an increase of 10.8%).

Since the recent past, there is rising research concern that how remittances affect the economy of the home country of migrants. Generally, it may be perceived that remittances positively influence different macroeconomic variables through reducing poverty, improving the standard of living of people by increasing incomes, and hence increasing investment and saving. Remittances directly go to households whereas, other foreign resources such as aid and loans go to public institutions in the recipient country. Consequently, the corruption of public officials did not hamper the efficacy of remittances (Kapur, 2003). Consequently, it has also seen that

remittances leave unfavorable macroeconomic effects by the appreciation of the exchange rate, rising inflation, and by negatively affecting labor market participation (Barajas, Chami, Fullenkamp, Gapen, & Montiel, 2009; Chami et al., 2008). For instance, migrant's home country diverts government expenditure from the welfare of the public to political patronage (Ahmed, 2012). According to theoretical and empirical research, the positive and negative macroeconomic effect of remittances is a controversial issue. That is why the government takes less interest in structural reforms for increasing foreign remittances.

1.1   Case of Pakistan

Remittances are a major sources of foreign exchange reserves for any country. Remittances proved to be a lifeline for Pakistan's economy. The financial sector of Pakistan is supported by the inflow of foreign remittances (Shahbaz, Qureshi, & Aamir, 2007). Since the late 1970s, remittances proved to be a vital component of Pakistan's balance of payment (Nishat & Bilgrami, 1991). Pakistani migrants on average send around $2 billion monthly which supports our balance of payment particularly oil imports. Remittances play an integral role in economic growth and investments. More than $25 billion annually acts as its backbone for the economy which is already running with the problem of inflation and decline in its exports. According to the State bank of Pakistan, in April 2019, Pakistan received US$1778.90 million on account of worker's remittances. Remittances develop a country's approach to the international capital market for developmental projects by improving the country's creditworthiness (Ratha, 2003; Woodruff & Zenteno, 2007; Yang, 2005). An appropriate understanding of the impacts of remittances on the recipient economy may help policymakers to draft an appropriate economic policy.

2.   Review of Literature

Theoretically, it has been well documented that institutional environments have an influence in strengthening and enhancing the remittance impact in the economy, particularly in developing countries (Borja, 2020; Kadozi, 2019). Remittances can contribute to human development generally, but corruption and weak institution can reduce its effectiveness (Ajide, 2019). Borja (2020) empirically conducted a study that confirms that remittances significantly affect human development and reduce corruption. This study is using a panel of 26 Latin American and the Caribbean countries over the period of 1985–2016 and investigates the effects of remittances and corruption on five development indicators.

Ajide and Olayiwola (2021) conducted a study to investigate the impact of remittances on control of corruption in Nigeria for a period of 1986-2016. This study uses ARDL modeling framework, dynamic OLS estimation, variance decomposition and impulse response analysis to examine the relationship between the two variables and concluded that remittances significantly improves the control of corruption in Nigeria. Ricciardulli (2019) explores that how government responds to remittance inflows by using an instrumental arable approach to test the validity that substitution among spending occurs. This study uses a panel data of 195 countries from 2000 to 2015 to conduct two-stage least square regression with instrumental variables. Results show that remittances influence a government's spending practices, but do not result in substitution.

Tusalem (2018) uses data provided by the Philippine National Statistics Office and the National Statistical Coordinating Board of the Philippines to prove empirically that the number of migrants (by province) and the amount of remittances sent by migrants are positively associated with governmental effectiveness and higher levels of human development at provincial level . Determinants of corruption were explored for a panel of 92 developing and developed countries by Ghaniy and Hastiadi (2017). Various political, social, and economic variables were used to determine Corruption. Economic freedom, democracy, level of education and development

stimulated corruption whereas political stability and income inequality reduced corruption in developed and developing countries. The research concludes several factors behind corruption.

Another study revisits the causes of corruption in 122 countries in cross-sectional and panel settings (Majeed, 2016). The result of the study reveals that remittances leave a significantly positive effect on corruption levels. This impact is not uniform among the whole sample countries rather remittances significantly promote corruption in most corrupt countries and in the least corrupt countries this relationship is not significant and positive. Government expenditures seem to hurt public sector corruption.

Tyburski (2014) analyzed the possibility of remittances to alleviate or aggravate corruption in migrant's home countries. The results of the analyses reveal that foreign direct investment, remittances, and other capital inflows do not directly aggravate public sector corruption. Remittances give rise to the political "tug of war'' for the placement of their benefits. Empirical data from 127 developing countries have been taken from 2000 to 2010. The results of the study endorse that remittances do impact corruption, but it reveals that the link differs significantly between different states. Natural experiments over the remittance inflow from oil-producing countries to non-oil producing Muslim countries exhibits that remittances worsen the governance, particularly in those countries where democratic system is weak (Ahmed, 2013). The government may reduce the expenditure over public services like education and health due to the higher income of the households (derived from remittances) (Ahmad, Shafiq, & Gillani, 2019; Shafiq & Gillani, 2018). The result of the study confirms general speculation that foreign monetary inflows can increase corruption in the countries having weak governance.

Another study highlights the nature and significance of remittances with regard to significant consequences for the recipient country. Panel data results of 111 countries suggests that remittances do give rise to corruption, mostly in non-OECD countries. Generally, the literature highlights the favorable impacts of remittances for recipient economies, the results of this study suggest that these funds leave harmful impacts on domestic institutions (Berdiev, Kim, & Chang, 2013). The relationship between institutional quality and remittance has been explored by Abdih, Chami, Dagher, and Montiel (2012). Their analysis indicates that the flow of foreign remittance leaves a negative effect on institutions. Individuals try to resolve their economic problems through remittance money and do not monitor the quality of domestic institutions. According to analyses individuals use this unearned money for rapid development in public sectors.

Important research used political-economic theory to reveal that remittances inflow reduce corruption through changing those structural benefits that are associated with society and corrupt state relationships. Remittances improve the ability of recipient households and individuals to put political pressure over the government for reforms and hold the government accountable for corruption. Secondly, the policymakers get a chance to remove corruption with the help of remittances and shift the spare capital for economic development (Tyburski, 2012).

Ahmed (2012) postulates the theory of political survival of the governments through worker's remittances and foreign aid as international capital flows. The analyses reveal that unearned foreign income such as remittances may enhance the government's consumption of political patronage to ensure its survival. Empirical results truly establish a macro-level link between the political survival of the government and unearned foreign income. Labor exporting developing countries have a strong impact of remittances over their economies. Muhammad and Ahmed (2009) studied the dynamic impact of remittances on economic growth in Pakistan through imports, investment, and consumption. It shows that remittance inflow has favorable impact on economic growth through multiplier effects. Barajas et al. (2009) discussed that

individuals are less interested to check and analyze the domestic government's performance due to the availability of remittances. The analyses indicate a moral hazard issue by shifting the cost of the poor governance to the sender of remittance. The analyses conclude that high remittance inflow may weaken good governance in the domestic economy.

None of these studies investigated the combined impact of political and economic variables along with remittances on corruption. Moreover, empirical analysis of the selected variables lacks in case of Pakistan leaving a significant gap filled by this study.

3. Data and Methodology

3.1 Theatrical Foundation

The study of the impact of remittances over public sector corruption is an interesting phenomenon. Some studies support the theory that remittances promote corruption in government institutions such as the phenomenon of natural resource curse (Barajas et al., 2009; Chami et al., 2008). Governments may divert government expenditure from public welfare to political sponsorship (Ahmed, 2012). However, some studies show remittances as a prospective cure for corruption as the households may hold governments accountable. According to this perception, remittance is taken as a political resource by the migrants and their beneficiaries for reducing corruption from bottom-up (Tyburski, 2012). To evaluate the effect of remittance on corruption, the work of Berdiev et al. (2013) is followed with some modifications.

3.2 Data Description and Methodology

The time-series data set has been employed in this study over the 1984-2018 periods. The dependent variable is the corruption index. The corruption index ranges values between 0 to 6, where the lower value indicates a higher corruption and vice versa. The lower value shows that "higher government officials are demanding special payments" and "illegal payments are usually anticipated throughout the lower level of governments" specifically in the form of "bribes attach with export and import licenses, policy protection, tax assessment, loans or exchange controls" (Knack & Keefer, 1995). International Country Risk Guide (2018) has been used to retrieve this data. On the other hand, the data on remittances is taken from World Bank and measured in the percentage of gross domestic product. Larraín and Tavares (2004) included FDI which impact large infrastructural developments and private projects, which further increase the rent-seeking activity. The FDI is also incorporated as the ratio to GDP. Economics development promotes education and literacy, which in turn increases the detection and rectification of corrupt practices (Treisman, 2000). Therefore, we also have added GDP per capita growth in the study. Less share of government resources per resident may influence people to involve in illegal activities (Fisman & Gatti, 2002). Therefore, we have added government expenditure in our model. The data on remittances, FDI, government consumption (all these variables are measured in percentage to GDP ratio), and GDP per capita growth are obtained from the World Bank. To examine the effect of political variables on corruption or to determine the political factors of corruption, we have taken the Law and Order index, Democratic Accountability index, and Government Stability index. The index for Law and Order takes a value between 0 to 6, where the highest value indicates "better court systems, political institutes, and provisions to ensure succession of power'' and shows "the extent to which people are embraced with the establishment of institutions to formulate and implement adjudicate disputes and laws"(Knack & Keefer, 1995).

Chowdhury (2004) conducted a study that shows that people in a democratic system are more likely to punish corrupt officials of government by dismissing them from their posts. We have considered this effect by including the Democratic Accountability index. To measure, "how

stable the political environment of a particular country", we have used the Political Stability index. The data on these three indexes are taken from the International Country Risk Guide (2018). Now considering the corruption as dependent and list of independent variables, we have the following model:

$$corruption_t = f(remittances_t, x_t, \epsilon_t) \qquad (1)$$

In this given equation corruption is dependent variable that shows corruption in the country. The variable "remittances" denotes remittances/GDP; x_t shows a vector of economic and political indicators; ϵ_t is the error term. Therefore:

$$cor_t = \alpha + \beta_1 rem_t + \beta_2 fdi_t + \beta_3 ce_t + \beta_4 y_t + \beta_5 dem_t + \beta_6 lo_t + \beta_7 gs_t + \epsilon_t \qquad (2)$$

Where cor_t is corruption index, rem_t is remittances, fdi_t is FDI inflow, ce_t is government expenditures, y_t is GDP per capita growth, dem_t is democracy index, lo_t is law and order index, gs_t is government stability index and ϵ_t is a residual term.

Pesaran, Shin, and Smith (2001) developed the ARDL method which is appropriate for small samples (Haug, 2002). It does not considered the integration order of underlying variables i.e. I(0), I(1), or their mixture. It simultaneously gives long and short run parameters (Jadoon, Batool, & Mehmood, 2014). However, this technique is not suitable for variables showing integration order 2 i.e. I(2). As compared with the Johansen cointegration technique which needs a large sample to find a valid result, this technique could be applied with limited sample data (Ghatak & Siddiki, 2001). Additionally, in ARDL, the estimations are even feasible if the explanatory variable is endogenous (Pesaran et al., 2001). So, equation (2) is estimated through the ARDL method and its formulation can be written as follows:

$$\Delta X_t = \beta_1 + \beta_2 X_{t-1} + \beta_3 Z_{t-1} + \sum_{k=1}^{i} \beta_4 \Delta X_{t-k} + \sum_{k=1}^{i} \beta_5 \Delta Z_{t-k} + \epsilon_t \qquad (3)$$

Here X is dependent variable and Z shows a vector of independent variables. The Bound test (Pesaran et al., 2001) is applied to study the long-run line between selected indicators. It is based on the F test for cointegration analysis. The null hypothesis states that the coefficients β2 and β3 are jointly equal to zero which implies absence of long-run link between variables. The calculated F-statistic is matched with critical valued. The null hypothesis would be rejected if calculated F-static. is greater than upper bound and vice versa (Boutabba, 2014).

4.   Results and Discussion

Once we are using time series data, it is required to examine its time-series property to examine the integration order. Hence Augmented Dickey-Fuller (ADF) test is used for stationarity analysis (Table 1). It can be seen that rem_t , ce_t , dem_t , lo_t and gs_t are non-stationary at the level and become stationary at the first difference. However, cor_t, fdi_t, and y_t are stationary at level with the order of integration is I(0).

These mixed results justify the utilization of the ARDL to ontain short and long-run relationship between selected variables. For the said purpose, Eq. (1) is estimated by employing the lag length three based on AIC and SBS criteria. To check cointegration i.e. corruption, remittances, government expenditure, foreign direct investment, GDP per capita growth, democracy index, law and order index, and government stability index has long-run relationship. Panel (B) of the table reports the estimated value of F-statistics which is based on a redundant variable test is equal to 14.61. This result confirmed cointegration between the variables, as the estimated F-statistics (14.61) is greater the UBL provided by Pesaran et al. (2001).

Table 1
Unit Root Test Results

Variables	Constant/Trend	Level	First Difference
cor_t	C	-2.660*	-5.851**
rem_t	c,t	-2.149	-5.298**
fdi_t	c,t	-4.345**	
ce_t	c,t	-1.158	-4.614**
y_t	c,t	-2.050**	
dem_t	c,t	-1.795	-5.307**
lo_t	c,t	-3.101	-4.336**
gs_t	c,t	-1.686	-5.039**

* and ** indicates significance at 10% and 5% level respectively. Whereas c, t indicates a constant and trend term.

Table 2
ARDL Bound Cointegration Test

Model/functional form (No trend and restricted intercept)		F-Statistics	
f(cor/rem, fdi, ce, y, dem, lo, gs)		16.611	
Bounds Critical Values	**Significance level**	**LCB**	**UCB**
	1%	2.54	3.91
	2.5%	2.22	3.49
	5%	1.97	3.18
	10%	1.70	2.83

Table 3
Short-run ARDL Results

Variable	Coefficient	t-stat	p-value
D(ICR(-1))	1.090	5.859	0.002
D(ICR(-2))	-0.258	-1.947	0.109
D(CE)	-0.079	-2.659	0.045
D(CE(-1))	0.390	6.058	0.002
D(CE(-2))	-0.394	-5.506	0.003
D(DEM)	-0.045	-1.811	0.130
D(DEM(-1))	0.051	2.739	0.041
D(DEM(-2))	-0.026	-1.896	0.117
D(FDI)	-3.670	-3.167	0.025
D(FDI(-1))	-3.324	-3.479	0.018
D(GS)	0.109	3.821	0.012
D(GS(-1))	-0.039	-1.308	0.248
D(LO)	-0.399	-4.626	0.006
D(LO(-1))	0.392	2.801	0.038
D(R)	-0.306	-4.410	0.007
D(R(-1))	-0.251	-4.634	0.006
D(Y)	-0.209	-6.053	0.002
D(Y(-1))	0.041	2.717	0.042
D(Y(-2))	-0.029	-2.256	0.074
CointEq(-1)	-0.998	-5.730	0.002
R^2		0.989	
Adjusted R-square		0.934	
DW		1.970	
Diagnostic Tests			
Serial Correlation LM Test			6.420 (0.082)
ARCH Test			3.702 (0.038)
Jarque-Bera Test			1.595 (0.451)
Ramsey Reset Test			0.039 (0.853)

Table 3 shows the outcome of ECM. Firstly, the lag length is decided according to AIC and SBC criteria. The first difference of the variables elucidates the impact of independent variables

on the explained variable in short-run. This model specification was selected using various diagnostic tests (Table 3).

For long-run coefficients, we normalized remittances, government expenditure, foreign direct investment, GDP per capita growth, democracy index, law, and order index, and government stability index by ICRG (Table 4). The lagged dependent variable in the given table is positive at the 1% level, indicating that corruption is persistent. This finding is matched with the results of Chowdhury (2004) and Berdiev et al. (2013). It can be seen from Table 4 that remittances favorably associated to the ICRG in the long run. The rationing behind this phenomenon is that individuals with high remittances do not take interest in domestic institutions. It is better to resolve economic issues with remittances and may use this unearned money to "grease the wheel" for speedy work in public sectors (Abdih et al., 2012). It is also because once the domestic households have remittance income which makes government corruption less costly for them to bear; as a result, such corruption is likely to increase. These results are matched with the findings of Majeed (2016) and Berdiev et al. (2013). However, the effect of remittances on ICRG is negatively significant in the short run. This result shows that a higher level of remittances contributes to a greater reduction in corruption in the short-run (Tyburski, 2012).

The GDP per capita is negatively but significantly effecting the corruption both in short and long run. But the magnitude of the long run coefficient is large as compared to the short run coefficient. It is due to allocation of more resources for detection and prevention of corruption due to rise in income level (Elbahnasawy & Revier, 2012). The consumption expenditures of government are positively linked with corruption in the long run. The size of government is an important determinant of corruption. If countries make full use of economies of scale in the delivery of public services. A large government sector may create opportunities for corruption. Thus the large size of public sector is associated with the greater corrupt behavior (Seldadyo & De Haan, 2006). Similar results are found in Ali and Isse (2003). While in the short run it affects corruption negatively but significantly. But the magnitude of the coefficients is large in the short run. When public resource management is 'close to the people; citizens are more interested in keeping government official work under control (de Macedo, Bonaglia, & Bussolo, 2001; Fisman & Gatti, 2002). The FDI shows different impact on corruption in the short and long run. In the short run, FDI has a negative impact on corruption. This result shows that as FDI inflow increases in the home country, it has deterred corruption significantly (Larraín & Tavares, 2004). However, FDI has a positive and significant impact on corruption in the long- run (Ali & Isse, 2003).

While the political variables have an amalgam effect on corruption both in the short and long run. From Table 4, it has been observed that the democracy index has a negative but insignificant effect on corruption in the long run. This might be because, in democratic regimes, the citizens have a chance to remove the corrupt politicians through the election process. A similar relation is found by Shabbir, Farooq, and Ahmed (2015), Chowdhury (2004), Saha, Gounder, and Su (2009), Kalenborn and Lessmann (2013), and Majeed (2016). But in the short run, the first lag of the democracy index is significantly and positively affecting the corruption (Ghaniy & Hastiadi, 2017). Then the impact of the Law and Order index can be observed which indicates the positive but insignificant relation in the long run, whereas in the short run it has a negative impact on corruption. This result shows that quality of law enforcement is linked with a lower level of corruption. It is matched with the findings of Majeed (2016), Berdiev et al. (2013), and Elbahnasawy and Revier (2012). But its first lag has a positive impact on corruption. Government stability has a favorable impact on corruption both in the short and long run at 10% and 5% significance level, respectively. This shows that greater political stability leads to greater corruption (Elbahnasawy & Revier, 2012).

Table 4
Long-run Regression Results

Variable	Coefficient	t-stat	p-value
CE	0.078	4.051	0.010
DEM	-0.034	-1.147	0.303
FDI	5.535	2.449	0.058
GS	0.071	2.142	0.085
LO	0.079	0.905	0.407
R	0.181	4.182	0.009
Y	-0.227	-5.503	0.003

5. Conclusion

In literature, many factors have been identified which cause corruption and help to enlighten the worldwide existence of corruption. An extensive literature is available on the determinant of corruption but still, the role of remittances as a factor behind corruption has been virtually ignored, particularly in the case of Pakistan. To fill this research gap, we have observed the influence of remittances on level of corruption using time series data for Pakistan from 1984 to 2018. The results suggested that remittances increase corruption, particularly in the long run which supports the resource curse hypothesis while in the short run these have a adverse effect on corruption which is in favor of reversed resource curse hypothesis. However, the literature discusses the favorable impacts of remittances for receiving countries. These external funds have harmful impacts on the domestic institution's quality in the long run however in the short run our findings are also in line with the literature. The results also support the earlier findings in the literature on sources of corruption. As the influence of remittances on corruption is different in the long run from the short run, therefore we stress over the importance of future research to explore and realize the nature and implication of remittances along with other social and political determinants of corruption given that these flows have significant consequences for recipient countries.

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