

**IMPACT OF TRANSACTION COSTS ON INTRA SOUTHERN AFRICAN
MIGRANTS REMITTANCES**

**A Thesis
Presented to**

**The Graduate School of Business
University of Cape Town**

**In partial fulfilment
Of the requirements for the
Master of Commerce Degree in Development Finance**

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ABSTRACT

The average charges of officially transferring remittances from South Africa to other Southern African countries have been regarded as expensive compared to other main corridor of south-south remittance, and this has long been recognized as a major drain on the income of migrants and their households.

Using data gathered across the SADC countries remittances corridors, this research explored the factors that account for the high costs of officially transferring remittances from South Africa to the SADC region. The average costs were regressed across all types of regulated financial institutions and money transfer operators with the following financial and macroeconomic variables: Real GDP per Capita, Dual exchange rates dummy, exchange rates, dollarization dummy, stock of migrants, volume of remittances, Exchange Control Restrictiveness Index, and the bank concentration.

The study found that the main factors explaining the high costs of officially transferring remittances from South Africa to the SADC region were the bank concentration, exchange rate volatility, and the exchange control restrictiveness index.

These findings suggest that the costs of officially transferring remittances from South Africa to the SADC region could be lowered by policies to increase competition among South African financial institutions and money transfer service providers, to reduce the country's exchange rate volatility, and to reduce the regulatory barriers that restrict financial services to migrants with non-South African identity documents.

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ABBREVIATIONS AND ACRONYMS

BIS:	Bank for International Settlements
CAB:	Current Account Balance
NELM:	New Economics of Labour Migration
ECRI:	Exchange Control Restrictiveness Index
FDI:	Foreign Direct Investment
GPFI:	Global Partnership for Financial inclusion
GNDI:	Gross National Disposable Income
IFAD:	International Fund for Agriculture Development
IFF:	International Finance Facility
MDGs:	Millennium Development Goals
MTOs:	Money Transfer Operators
NCT:	Net Current transfers
NY:	Net Yearly Income
SDR:	Special Drawing Rights
ODA:	Official Development Aid
SADC:	Southern African Development Community
UNHCR:	United Nations High Commission for Refugees
VEC model:	Vector Error-Correction Model

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DEDICATION

For my wife and sons

1 INTRODUCTION

1.1 Research Area

Access to financial capital is an important determinant of the prospect for the development of the Southern African countries (World Bank, 2006a). Financing the Southern African countries development will require an increase in their investment rates above their respective saving rates, while bridging the investment gap with additional financing from abroad still remains a necessity (Hammouda & Osakwe, 2006).

Transnational financial transfers to the Southern African region take a number of forms and pass through a number of channels. The channels of highest profile are the Official development aid (ODA), the foreign direct investment (FDI), and the portfolio debt and equity, mostly in the South African market (Mohapatra, Ratha & Silwal, 2011).

Hammouda and Osakwe (2006, pp 2-3) stated that “Southern African countries would prefer to use domestic savings to finance their required investments, mainly because these savings are less volatile than most sources of external financing and do not increase their vulnerability to external shocks over which they have no control. Also, domestic savings are not subject to ‘conditionalities’ which could severely limit the policy choices and instruments available to governments.”

Despite these advantages of domestic savings as a source of financing, the authors added that “history and recent experiences have shown that they are not enough to meet the resource needs of Southern African countries.”

To supplement their domestic savings, Southern African countries resort to the ODA and to private capital flows, or external borrowing. However, given the debt situation of most Southern African countries, their limited access to private capital markets and the continued reduction of ODA to the region, recent efforts have been directed towards new and innovative ways to fill this regional financing gap.

Several proposals have been made on innovative and alternative approaches to financing African development goals in general and the Southern African one especially.

Proposed by the British government, the International Finance Facility (IFF) is one of the popular alternative proposals for financing the Southern African development goals. Hammouda and Osakwe (2006) explained that the main objective of this approach is “to front-load future aid commitments by borrowing from international capital markets.”

The IFF will ensure that financial resources from future aid pledges are available for use by recipient countries in a timely manner. The main advantage of the proposal is an increase in stability and predictability of the aid.

Considering that the IFF is expected to be realized through the issuance of bonds, its critics argue that with a large interest to be paid on these bonds, it is unlikely that the IFF will create additional resources for development. On the contrary, it might actually have a negative net effect on aid flows, especially if the premium is not paid by the donor governments.

Global taxes have also been proposed as alternative sources of development finance. These include “global environmental taxes”, “taxes on currency transactions (Tobin tax)”, and “air-ticket taxes”.

Global taxes have a long history in public finance literature. They were originally proposed as an incentive mechanism to reduce carbon emission, damage to the environment, and financial market volatility. However, in recent years global taxes have come to be considered as a potentially viable source of development finance. Atkinson (2004) revealed that, “a tax on gasoline of about 0.01 Euro per litre levied on high-income countries could raise \$50 billion dollars per year. Similarly, a tax of 2 basis points (0.02 percent) on currency transactions could raise \$28 billion per year.”

Hammouda and Osakwe (2006) concluded that “the main obstacle to implementation of these taxes is that they require universal agreement by high-income countries, and it is not clear that they will all support such proposals”. So far, only few countries have pledged to implement global tax proposals.

The issue of new Special Drawing Rights (SDR) with a development focus has been proposed and supported by George Soros and the Zedillo Panel. The main

objective of the new SDR, according to the panel should be “to fund global public goods and supplement aid flows to the developing countries.”

The proposed use of new SDRs for development finance is quite different from the role that they have played historically, which is to increase international liquidity. According to proponents of the proposal, the issue of new SDRs in favor of developing countries would reduce the real cost to these countries of borrowing and free-up some resources for financing their development.

The creation of new SDRs in favor of developing countries as emphasized by Hammouda and Osakwe (2006) “would require approval by 85 percent of the IMF members while it is quite difficult to get the approval of large shareholders with veto power such as the United States.”

An increase in “private donations” has also been suggested as an alternative approach to financing poor countries development. However, given the fact that most private donations in rich countries are directed to domestic concerns rather than international development, Hammouda and Osakwe (2006) are of the view that, it is unlikely that a substantial amount can be raised from this source.

The last and perhaps most plausible proposal to finance development is to increase the flow of migrants’ remittances. This option is attractive because migrant remittances are seen as being a more stable source of external capital flows than ODA and FDI and are often countercyclical.

Since the late 1990s, remittances sent home by international migrants worldwide have exceeded ODA, and in several years approached the magnitude of FDI flows, and they have become a large source of external funding for many developing countries (World Bank, 2005b).

Hammouda and Osakwe (2006) indicated that migrants’ remittances are already playing a vital role in financing development in some developing regions such as South Asia, the Middle East and North Africa.

In Sub-Saharan Africa in general, and the Southern African region especially, its role as indicated by the authors is increasing but it is still less important than ODA.

Linking remittance to migration, the International Fund for Agricultural Development (2007) defined remittance as “the portion of migrant worker earnings sent home to his or her family.”

Relating remittance to the amount of money transferred, The World Bank (2007) defines remittance as “the cross-border person-to-person payment of relatively low value.”

The association of remittances with cross-border migration implies that remittances inflows into the Sub-Saharan Africa in general and the Southern Africa especially are not only from developed countries.

According to Barajas et al (2010) and Chami, Fullenkamp and Jahjah (2003), about twenty percent of Sub-Saharan Africa migrants are within the Sub-region and also remit regularly. As at the end of 2006, South Africa, Ivory Coast, Uganda, Angola and Botswana were the main sources of migrants’ remittances within Sub-Saharan Africa (Migration Policy Institute, 2006).

In 2013, The United Nations High Commission for Refugees recorded nineteen million African migrants within the continent, of which four million were in Southern Africa (UNHCR, 2014).

According to the UNHCR (2014), the largest number of the recorded Southern African migrants (around 2.5 million) were in South Africa; and that figure is in line with Shimeles (2010) and Crush and Williams’ (2010) figures of people movement in the Southern African region.

According to Shimeles (2010), at least 65% of people movement in the Southern African region takes place within the region, with over 60% moving in South Africa. Later that same year Crush and Williams (2010) found that 80% of non-Southern African migrants stock is concentrated in the Democratic republic of Congo (DRC) and Tanzania; both countries having extensive borders with non-Southern African countries.

These analyses of migration trends and patterns feature South Africa as the main destination of more than half of intra SADC migration.

Since colonial times, South Africa has remained the first choice of destination for both skilled and unskilled Southern African labour migrants, due to work opportunities in the mining, manufacturing, agricultural industries and education (Adepoju, 2007; Crush, 1999). Since then, the flow of remittances from the Southern African migrants in South Africa has been an important and growing source of finance for migrants and their relatives back home (Genesis, 2005). Truen and Chisadza (2012) estimated the volume of migrants' remittances from South Africa to the SADC region at the equivalent of US\$1.5billion per annum (R11, 154 billion).

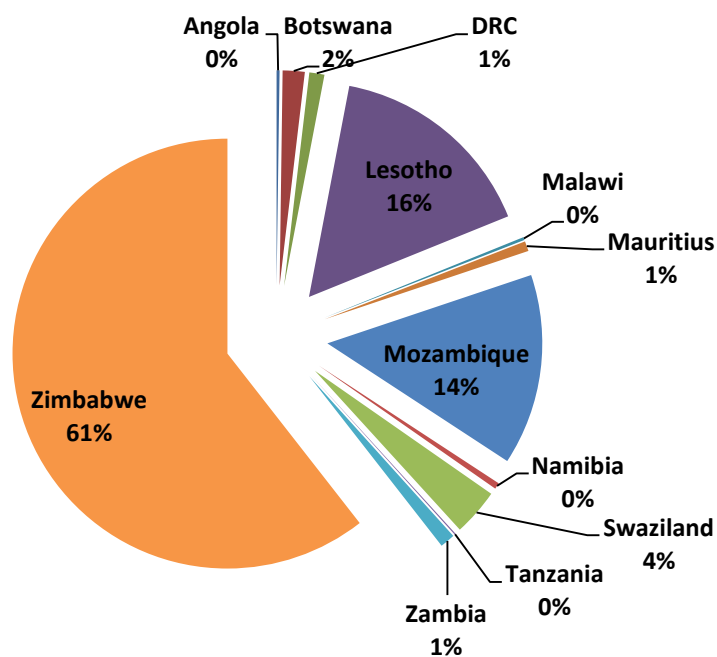


Figure 1: Total remittances % of R 11.2 billion (Prepared by the author using data from the FinMark Trust 2013, Fact Sheet: Remittances from South Africa to SADC, p.5)

This remittance flow represents a source of opportunity for many Southern African migrants and a financial lifeline for their households. Yet these migrants and their families are failing to realize the full potential of this financial flow for several reasons, one being the costs of their transfers (Ratha & Shaw, 2007; World Bank, 2005b).

World Bank (2013a) recorded that migrants originating in Southern Africa and living in South Africa face high charges when remitting. At an average of just over 20%, these charges are almost four times the global average costs of remittances.

These high charges associated with the official transfers monies from South Africa to the Southern African region have long been recognized as a constraint on the development and a major drain on the income of migrants and their families; and has led to demands for policies reducing these charges (Ratha & Shaw, 2007).

The World Bank (2012) revealed that “the overall flow of transfers would increase and a greater share of these transfers would reach the intended beneficiaries, if the official migrants’ remittances transfers’ charges were reduced.”

Watkins and Quattri (2014) argued that if migrants’ remittances could be made cheaper, easier, transparent and secure, they could become a more sustainable source of capital flows and effectively contribute to the achievement of the Millennium Development Goals.

1.2 Problem Statement

Intra Southern African migrants’ remittances are sent through a few major corridors within the region, the most important being from South Africa to the rest of SADC, particularly the South Africa-Zimbabwe corridor.

The average charges of official remittances from South Africa to the SADC countries range between 41% and 74% of the amount remitted (Langham & Kilfoil, 2011). These formal intra-SADC “cross-border products” are considerably more expensive than in other corridors and are indeed prohibitively expensive for small amounts (Genesis, 2003).

As well as being recognized as a constraint on regional mutual development and a major drain on the income of migrants and their households, these high remittance costs have emerged as a major concern for scholars and policy makers (Orozco, 2002).

In spite of this interest the cost structures facing Southern African migrants when remitting from South Africa are largely unknown, and there is little systematic evidence on the relationship between the factors that might affect these costs (Watkins & Quattri, 2014).

While there is considerable variation across remittance corridors between South Africa and other SADC countries, Gillis and Pillay (2012) concluded that “several inter-connected factors combine to maintain South Africa’s high charge structure”. These include the lack of transparency on the part of the South African money

transfer service providers including banks, limited competition between South African international money transfer services, South African regulatory practices that restrict market entry by other money transfer operators, and critically, a lack of financial inclusion, mostly for migrants with non-South African identity documents (Aycinena, Martinez, & Yang, 2010; Genesis, 2003; Gillis & Pillay, 2012; and Watkins & Quattri, 2014).

1.3 Purpose and Significance of the Research

The objective of this study is to determine the factors that explain the high costs of official remittances from South Africa to the SADC countries, and to propose policies aimed to reduce these transaction costs.

By examining the relationships between remittance costs and selected national macroeconomic and financial variables that might influence, determine, explain or sustain their high level, this research aims to provide exploratory empirical evidence on the impact of these costs on the intra SADC migrants remittances.

I consider that a precise quantitative research might help eliminate a current reliance on predictions which might not be a suitable guide for effective policy directions.

1.4 Research Questions and Scope

This research is framed by the following primary question:

What is the impact of transaction costs on migrants' remittances from South Africa to the SADC region?

That main question gives rise to the following three sub-questions:

1. What are the major variables explaining (or influencing or determining or sustaining or affecting) the current high costs level of remittances from South Africa to the SADC countries?
2. Of the variables identified as the determinants of the costs of officially transferring remittances from South Africa to the SADC, which ones have large and statistically significant negative effects on remittance costs?
3. What key policy options might address the negative influence of the variables affecting remittance costs from South Africa to the SADC countries?

1.5 Research hypothesis

The present study hypothesizes that;

- The high charges associated with South Africa to SADC region migrants' formal remittances have a negative impact on the recorded remittances, and this negative impact suggests that migrants either refrain from sending money home or else remit through cheap and risky informal channels.
- The main determinants of the costs level of remittances from South Africa to the SADC countries are the exchange rates volatility, the bank concentration, the foreign exchange restrictiveness index, the stock of migrant workers in the host country and the volumes of remittances.
- The bank concentration, the exchange rate volatility and the foreign exchange restrictiveness index have large and negative effects on the costs of remittances from South Africa to the Southern African region.
- Policies aimed at reducing the transaction costs of migrants' remittances, and hence increasing the volume of official remittances from South Africa to the SADC countries, should do so by increasing competition, reducing the exchange rate volatility, and supporting the development of a regulatory environment aimed to extend financial services to the majority of migrants.

1.6 Research Assumptions

Unlike South-South remittances, the determinants of the costs of remittances from developed to developing countries have been investigated by many scholars.

For the present South-South remittances research, the following key assumptions are made:

1. Seeing that the determinants of the costs of remitting from South Africa to the SADC countries retained for this study have been used in various previous empirical studies on the costs of remittances, mostly in the North-South money transfer corridors, the fundamental premise of this research is that these determinants are applicable to the remittance corridor studied and that this analysis will not suffer from omitted variables bias.
2. Any proxies developed adequately represent the applicable determinants.

3. An econometric analysis is the optimal method for analysing and conducting research into the determinants of the costs of remitting from South Africa to the SADC countries.

2 LITERATURE REVIEW

2.1 Economics of migrants' remittances

The continuing growth in migrants' remittances mostly from developed countries to the developing world has prompted scholars to produce a significant body of research exploring their dimensions, determinants, effects and the government policies designed to influence them.

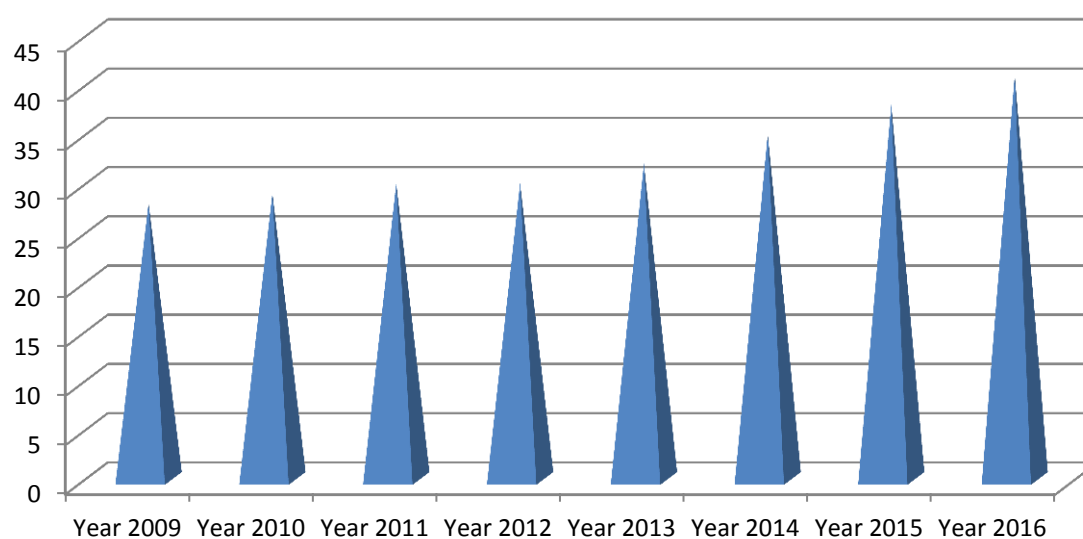


Figure 2: Remittance flows to Sub-Saharan Africa (US\$ billions)
Source: World Bank Migration and Development Brief 21, October 2013.

The literature on migrants' remittances is divided between microeconomic and macroeconomic approaches (Rapoport & Docquier, 2005).

The microeconomic approach studies the individualistic and familial motivations determining the likelihood and the size of migrants' remittances. The macroeconomic approach on the other hand concentrates on how remittances respond to key macroeconomic variables and on macroeconomic effects that remittances have in recipient countries (Rapoport & Docquier, 2005).

2.1.1 Microeconomic determinants of remittances

The microeconomics approach answers questions like “why do migrants send money back home?”

Three motives or reasons have been theorised by scholars to explain why migrant remit money back to his or her country of origin. The first is altruism. An

altruistic migrant cares for the family members left back home. This motivation has been well delivered and well received in the literature. “The altruistic motive refers to the migrant’s assistance to the family back home to meet basic family needs” (Chami, R., Fullenkamp, C., & Jahjah, S., 2003).

According to this school of thought international migrants’ remittances are sent out of affection and responsibility towards the remaining member of family.

Chami, Cosimano and Gapen (2006), Johnson and Whitelaw (1974), Lucas and Stark (1985), Bouhga-Hagbe (2004), and the study in Guyana by Agarwal and Horowitz (2002) confirmed that altruism towards family members at home is an important motivation for remitting.

The altruistic or livelihood school of thought implies a utility function in which the migrant cares not only about his or her own consumption but also of the other members of his or her household back home.

The altruistic motive model as developed by Rapoport and Docquier (2005) advanced that the amount of migrants’ remittances “increases with the migrant’s income and the level of altruism, and decreases with the domestic income of the remaining household and its level of altruism.”

Exchange or self-interest is the second motivation identified for remittance. Under this motive, the migrant is understood to send money without explicitly considering the well-being of the remaining household but rather considering his or her own personal interest.

The main assumption of this school of thought as developed by Vargas-Silva (2009) is that when investment opportunities are restricted in the immigrant’s host country, as is the case for many immigrants due to their legal status, language barriers, or market knowledge, then investment prospects in their home country become appealing.

The resulting ownership of physical assets such as land, house and livestock would obligate migrants to remit to their remaining household in order to make sure that they would take good care of the remitter’s acquired assets or investments.

Brown (1994) found from a survey of remittances by Tongan and Western Samoan migrants in Sydney that most of these transfers were motivated by self-interest, and in particular for asset accumulation and investment in their home countries. The self-interest motive model as developed by Rapoport and Docquier (2005) hypothesized that the amount of money remitted by the migrant “would increase with the quantity of service to be rendered by the remaining household, but would react ambiguously to an exogenous increase in the recipient’s pre-transfer income”; thus the maximal amount that migrant would agree to remit would increase with his income, and an increase in the remaining household income would raise the amount of money transferred.

Both altruistic and self-interest models considered migration and remittances as individual decisions. However, a third motive to remit considers migration and remittances as resulting from social and familial interactions; a kind of informal arrangement between migrant and the remaining household.

“The New Economics of Labour Migration (NELM)” as developed by Stark and Bloom (1985) assumes that due to the underdevelopment of financial and insurance markets, which characterize most developing countries and where most of the migrants are from, it has become a convenient strategy for families to send “one or more members to a non-correlated labour market and bear the initial costs of migration.” Subsequently, “the migrants will share a portion of their income with the remaining household through remittances.” In this case, the arrangement between migrants and the remaining household takes the form of an informal insurance contract, and the remittances under this familial arrangement represent the repayment by the migrants of the costs of their emigration paid previously by the remaining household (Rapoport & Docquier, 2005; Stark, 1991; Brown 1994; Poirine, 1997; Russell, 1986; and Solimano, 2003, 2004).

The insurance model as developed by Rapoport and Docquier (2005) advances that the income risk increases both “the propensity and the proportion of labour earnings sent home for family-provided insurance as well as for self-insurance.”

As to the timing of remittances, the insurance model predicts that “migration and attached remittances are more likely where income at origin is more volatile, and that remittances should be sent on a relatively irregular basis.”

Rapoport and Docquier’s (2005) insurance model held that migration reduces the remaining household income uncertainty by “one-half”, and generates “a gain in utility that exactly compensates for the migration cost incurred.”

Speaking of the utility, the co-insurance model predicts that under the “no moral hazard condition, the insurance contract will not distort individual effort, but generates an increase in the recipient’s expected utility, which may be interpreted as the value of the insurance contract from the recipient’s standpoint.”

Considering that international migrants remittances are seen as premium for future risks and as securing livelihood in the event of external shocks for both senders and receivers, this informal co-insurance contract needs to be protected against any opportunistic behaviour of the part of the migrant (assuming the remaining household covered the sender’s migration costs).

Rapoport and Docquier (2005) considered the most obvious threat that the remaining household may use to secure the remittances to be the possibility of depriving the migrants of their inheritance and/or return.

Investigating whether remittance flows served as co-insurance to both migrant and the remaining household, Amuedo-Doranates and Pozo (2002) found in the case of Mexican migrants in the United States of America that remittances were in part transferred to Mexico to purchase family-provided insurance and migrant’s self-insurance.

The insurance motive rationale developed above, is also used to explain remittances as repayments of family loan-investments in migrant’s education. In this specific case, the familial implicit contract aims at increasing family income rather than at reducing uncertainty.

Investigating the remittance as the repayment of an informal and implicit loan contracted by the migrant for human capital development, Poirine (1997) argued that “the remaining household invests first in the education of a future migrant and expects that the rate of return for the investment in human capital will be higher than the one expected from investments, for instance, on a farm.”

Poirine's study emphasized that while poor families might be unable to make the investment firstly in a family member's education and then later to his or her migration costs, wealthy families have less incentive to send a family member abroad to increase family income.

2.1.1.1 Empirical evidences

Several microeconomic studies of remittances focused on the migrant-worker and household behaviour have provided empirical evidence on the motivations behind migrants sending remittances back to their home countries.

When empirically testing the hypotheses of the three microeconomic schools of thought aforementioned, studies by Hoddinott (1994), Lambert (1994), Lucas (1987), Lucas and Stark (1985) and Massey and Parrado (1998) showed that "migrants and their families engage in migration for improving their well-being and that remittances are perceived as the economic linkage between them."

Microeconomic researches in different countries and regions by Durand, Parrado, and Massey (1996), Durand, Kandell, Parrado and Massey (1996), Merkle and Zimmerman (1992), Swamy (1981), Oberai and Singh (1980), and Lucas and Stark (1985) indicated that "the education and income level of the migrant and the remaining household are the main determinants of remittances". Other important determinants found to shape the amount remitted include "the length of actual or expected stay of the migrant abroad, the number of dependents at home and marital status."

Lucas and Stark's (1985) study on Botswana found that remittances were positively related to the incomes and the level of altruism of the migrants.

Lowel and de la Gaza (2000) investigating the motivations behind remittances from migrants residing in the United States of America found that immigrants with under age children left in their origin countries were more than 50% likely to be remitting money back home to take care of them.

The recent study by Singh, Haacker, Lee, and Le Goff (2010) of motivations behind migrants' remittances to Sub-Saharan Africa also found that these remittances were largely altruistic in nature, consistent with the counter cyclical literature on remittance inflows.

Findings by Lucas and Stark (1985), Lowel and de la Gaza (2000), and Singh et al. (2010) reject the pure altruism hypothesis and suggest a mixture of motivations behind migrants remitting to his or her home country.

Cox, Eser and Jimenez (1998) investigated the altruism versus self-interest motives for both ascending (“from children to parents”) and descending (“from parents to children”) transfers in Peru and tested the effect of remaining household’s pre-transfer incomes on the size and probability of remittances.

Analyzing the timing of transfers, the authors established that “transfer receipts and earnings move in opposite directions over the life-cycle, suggesting that liquidity constraints indeed matter.”

Probit results for transfers from child-to-parent showed that “the probability of transfer was inversely related to parental income”, a finding which is consistent with both altruism and exchange. But the effect of income on the amount transferred, conditional on receiving a transfer, was first positive, then negative. The same pattern applied to parent-to-child transfers, leading the authors to conclude that “the bargaining-cum-altruism framework appeared more powerful than the strong form of the altruistic model.” The same study also found that remittance transfers were targeted towards “the unemployed and the sick”, a finding consistent with both altruism and insurance.

Recently, the microeconomic determinants of intra Southern African migrants’ remittance inflows (mostly from South Africa to the SADC countries) have been looked at by Owusu-Sekyere (2011). Unlike Singh et al. (2010) the author found that self-interest motives overrode altruism as why Southern African migrants remit from South Africa to their home countries. Sekyere’s findings are also in line with Glytsos (1997) conclusions which stressed “that temporary migrants remit more for self-interest reasons while permanent migrants remit more for altruistic reasons”, bearing in mind the close proximity of countries of the SADC to South Africa leading to a high incidence of temporary migration and thus self-interested remittances according to Glytsos (1997).

Lambert (1994) and Gubert (2002) investigated the insurance motive in Cote d’Ivoire and Mali respectively. Lambert’s study demonstrated that risk-aversion positively influenced migration. In the case of Mali, Gubert found that

“remittances were instrumental in providing insurance to the remaining household in a way that depended on the nature of the shock (e.g. climatic change, sickness of a household member, etc.)”.

A Study by Arezki and Brückner (2011) using panel-based evidence from 42 countries in Sub-Saharan Africa has added to the empirical evidence on consumption-smoothing effects. Examining the impact of variations in rainfall on remittances, the authors found that “the associated income shocks had significant positive effects on remittances”. Evidence from Somalia provided a powerful illustration of the social insurance and safety net functions of remittances. Watkins and Quattri (2014) states, “ During 2011, humanitarian aid agencies responded far too slowly to a famine that eventually claimed some 260,000 lives, half of them children below the age of five. By contrast, the Somali diaspora increased remittance transfers at speed, keeping many people alive, reducing levels of malnutrition, and providing a foundation for economic recovery”.

Recent survey evidence by Adams and Cuecuecha (2013) indicated that remittances were counter-cyclical and, over time, helped to smooth household consumption and welfare, especially for food crop farmers in the case of Ghana.

Using data from Kenya, Hoddinot (1994) analysed inheritance as an enforcement device in securing remittances. While his findings strongly supported the importance of securing inheritance to secure remittances, the author also found that only rich families were using this tool.

Table 1 provides a summary of the different models and their variables proposed by different scholars to explain why migrants send part of their income to family and relatives in source countries. The table gives the predicted signs for the effects of explanatory variables on the decision to remit.

MOTIVES	INDIVIDUAL MOTIVES				FAMILIAL ARRANGEMENTS	
	Altruism	Exchange	Inheritance	Strategic motive	Insurance	Investment
Migrant's Income	+	+	+	+	nde	+
Migrant's education	nde	-	nde	+	nde	+
Time since arrival	- or =0	nde	nde	- or= 0	nde	nde
Distance from family	- or= 0	nde	-	nde	nde	+
Number of migrants/heirs	-	nde	Inverse U-shape effect	nde	nde	nde
Recipient's long run income	-	+ or -	nde	-	nde	= or -
Adverse short run shocks in recipients' income	+	+ or -	Nde	+	+	+
Recipient's assess (land, cattle, etc)	nde	nde	+	nde	nde	nde

Table 1: Models for explaining migrants' desire to remit" (Taken from "The economics of migrants' remittances by Rapoport and Docquier, 2005, Discussion Paper number 1531, presented by the IZA, University of Bonn, Germany, P.20).

nde: Not determined

2.1.2 Macroeconomic determinants of remittances

The microeconomic perspective reviewed in the previous section examined the patterns of remittances and the motivations for making them, including their effects on poverty.

According to Buch, Kuckulenz and Le Manchec (2002), the main problem of micro economic studies of which most found that “remittances help families to survive rough times, to undertake property investment, to access better education and healthcare, or to finance small business activities”, is that they tend to undervalue the macroeconomic impact of remittances by focusing on isolated households or communities. The authors pointed out that several researches, such as Durand, Parrado et al. (1996) and Durand, Kandell et al. (1996), Haderi, Papapanagos, Sanfey, and Talka (1999) and Taylor, Arango, Hugo, Kouaouci, Massey, and Pellegrino (1996) studies on migrants remittances had found that remittances often provide a significant source of foreign currency, increase national income, and support the balance of payments.

According to Rapoport and Docquier (2005), the sizeable upward trend followed by remittances and their relative size with respect to GDP and other financial flows has stolen the momentum from microeconomic analysis and has shifted attention onto the macroeconomic perspective. The macroeconomic perspective examines the impact that remittances have on the labour participation and economic growth but also on how they respond to the key macroeconomic variables.

A number of researches, such as Connell and Conway (2000), Djajic (1986), Quibria (1996), Russell (1986), Taylor (1999), McCormick and Wahba (2000), Reichert (1981), Rivera-Batiz (1982), Martin (1990), Boone (1995), and Glytsos (1997) have looked at macroeconomic effects of migrants remittances and found that remittances could have “a strong positive impact on the current account in increasing national income by providing foreign exchange and raising national savings and investment”. Remittances could also provide “hard currency to finance imports and so prevent potential balance of payment crises”, but they can also have less beneficial features, such as leading to “a Dutch disease effect”. That is to say, through remittances, an economy can spend more than it produces, import more than it exports or invest more than it saves, and this might even be more relevant for small economies.

Thus, remittances might perform a similar function as private and public capital flows since they provide both “foreign exchange and additional savings for economic development”.

Considering that migrant remittance is only a single element in a complex interaction between home country and the rest of the world, reflecting the exodus of a factor of production on one hand, and international financial inflow on the other, each of which may have opposite macroeconomic implications; and considering that only a few existing macroeconomic models might seem suitable for a simultaneous treatment of the impact of labour migration and remittance on “growth”, “fiscal and monetary policy”, “balance of payments”, and “the exchange rate”; Kireyev (2006) identified “the Keynesian model”, “the Mundell-Fleming model”, “the Rybczynski effect”, and “the national accounts approach” as starting possible theoretical frameworks for assessing the macroeconomics impact of labour migration and remittances.

The Keynesian model

The rationale of this model is that an increase in income and demand driven by migrants’ remittances would have a magnified effect on real GDP growth. Rapoport and Docquier (2005) emphasized that the magnitude of this effect “would depend on the Keynesian multiplier (which, itself, depends on several parameters such as the marginal propensity to import and to save), and on the size of the transfer shock, which itself depends on the amounts received and on the recipients’ marginal propensity to consume the received remittances”.

Kireyev (2006, p.19) stressed that: *“In the Keynesian model, investment (I) and exports (X) are completely autonomous from the level of output (Y). Therefore, an increase in the country’s overall income by way of receiving migrants remittances (R) would be represented either as an autonomous increase in the country’s export receipts or as additional investment. Savings (S) and imports (M) would consist of an autonomous component independent of Y, and an income induced component. In a spending-output space, where S and M are seen as leakages and I and X as injections, an additional inflow R would initially lead to an increase in equilibrium output from A to B. However, the final equilibrium would crucially depend on the impact of R on the marginal propensities to import (m) and to save (s). Most likely,*

both would also increase, and the concomitant leakage will push the final equilibrium back from B to C, with the output level only marginally higher than the original. If $m + s = 1$, then the Keynesian multiplier equals unity, and the whole amount of R will be leaked with Y unchanged. The more open the economy, the smaller the multiplier and the less significant the impact of remittances on output.”

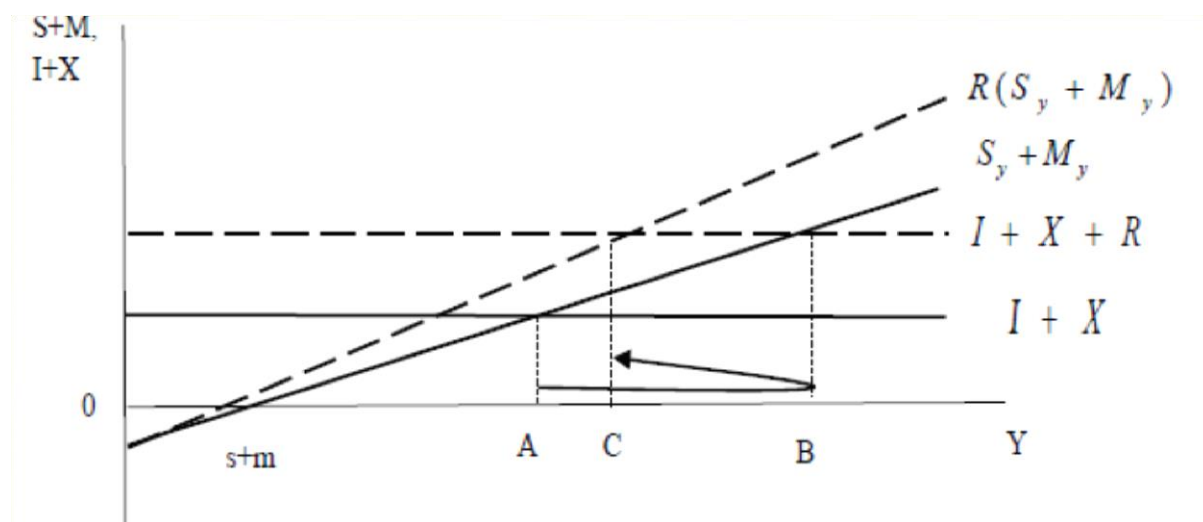


Figure 3: The Keynesian model (Taken from “the Macroeconomics of remittances: the case of Tajikistan”. By Alex Kireyev, 2006, International monetary Fund Working paper 06/02 (2006), p.15.)

The Mundell-Fleming model

This alternative framework for analysing the short-run economy-wide consequences of remittances model is not very different from the Keynesian model, merely being the application of the Keynesian approach to a small open economy. The model shows what causes short-run fluctuations in aggregate income (or equivalently, shift in the aggregate demand curve) while maintaining the price level constant (or fixed).

The Mundell-Fleming framework extends the short-run model of national income by including the effects of international trade and finance, while assuming that the effect of international transfers on real growth would depend on the exchange-rate regime and the degree of capital mobility. Typically, “the model portrays the relationship between the nominal exchange rate and an economy's output in the short run; and it has been used to argue that an economy cannot simultaneously

maintain a fixed exchange rate, free capital movement, and an independent monetary policy".

Kireyev (2006, p.19) explained the model as follow: *“The Monetary policy is an efficient instrument for stimulating real growth under a flexible exchange rate arrangement and inefficient with a fixed exchange rate regime. In the real income (Y) and real interest rate (i) space, the real (IS), monetary (LM) and external (BP) sectors are in simultaneous equilibrium, when output is at Y_1 and the interest rate is at $(i)_1$. The BP curve is perfectly inelastic as capital flows do not respond to changes in the interest rate. Driven by the inflow of remittances(R), the expansion of money supply to LM_R in principle should immediately produce a substantial growth in output to Y_2 , making more domestic credit available. However, the inflow of foreign exchange and the corresponding rise in demand for local currency will cause pressure on the exchange rate toward its appreciation. The resulting decline in export demand and the incipient balance of payments deficit will hamper all, or at least a significant part, of the initial impact of the monetary expansion on growth and can reduce output from Y_2 to Y_3 , where $Y_3 > Y_1$ or at the extreme and depending on elasticities, it can even be that $Y_3 \leq Y_1$. Money demand adjusts to the lower output level. But as the interest rate declines, real sector activity may pick up driven by higher investment financed by remittances. Therefore, even with contracting export demand, the ultimate outcome of the adjustment to the inflow of remittances depends on the behaviour of the real sector. With increased investment helping growth, and appreciation hampering it, the outcome is ambiguous. In the best-case scenario, the whole economy moves to a new equilibrium with just a slightly higher output level at Y_3 , and an interest rate equal, higher, or lower when compared to its pre-remittances level.”*

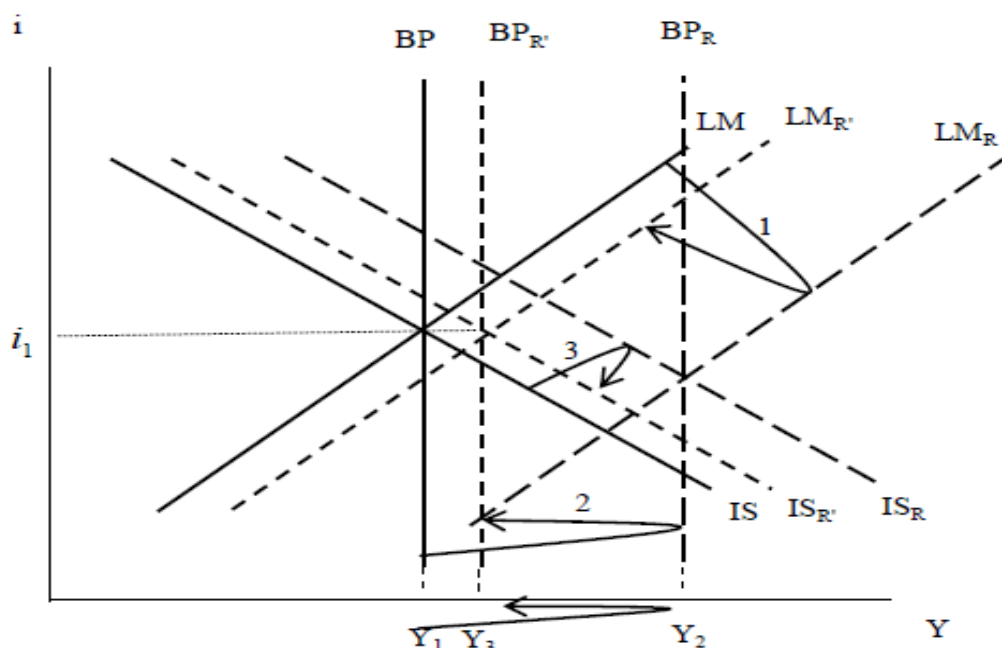


Figure 4: The Mundell-Fleming model (Taken from “the Macroeconomics of remittances: the case of Tajikistan”. By Alex Kireyev, 2006, International monetary Fund Working paper 06/02, 2006, p.15.)

The Rybczynski effect

The third framework for analyzing the macroeconomics of migrants’ remittances is based on the work of Rybczynski (1955) which modeled the comparative statics associated with a change in the endowment of a factor of production.

The fundamental questions that Rybczynski (1955) considered were related to the way that the prices of final goods, their production and consumption depended on the endowment of their factors of production. Rybczynski also considered how the prices of factors of production and the wealth of consumers may vary with changes in the factor endowments, and finally what may be the welfare implications of these changes.

Reconsidering Rybczynski’s theoretical analysis within the framework of the “Heckscher-Ohlin model”, Kireyev (2006, p.20) explained the Rybczynski effect as follows:

“In an extension of Heckscher-Ohlin model, labour emigration can be seen as a decreased availability of the factor of production in the home country, with the impact on growth depending on the behaviour of other factors and the degree of substitution among them. If the economy produces two key goods, one labour intensive and the other capital intensive, using two factors, labour (L) and capital (

K) , an exodus of labour will shift the PPF inwards along the axis of the labour-intensive commodity, from L_1 to L_2 .

The impact of a lower labour supply on capital is ambiguous: on the one hand, less capital may be needed for the labour-intensive good; on the other hand, new capital inflow can substitute for the declining factor. Assuming that a decline in labour would be accompanied by an increase in capital, thus the PPF would shift in an asymmetrical manner, from PPF_1 to PPF_2 . As in the case of a small country, the relative price between the two goods will not change (P^L/P^K), and the production point will move from the point of tangency A to B. As the final shape of PPF_2 is unknown, the position of B is also uncertain. As is shown in figure 5, the output in the labour-intensive good declines and the output of the capital-intensive good increases.

This is the well-known Rybczynski theorem in reverse: contraction in one factor will lead to an absolute contraction of the output and exports of the product that uses that factor relatively more intensively and an absolute expansion in the output and exports of the good that uses another factor intensively.

As labour is assumed to be an abundant factor, its contraction should have an ultra-antitrade production effect. However, the total impact on trade requires the estimation of both production and consumption effects. As a general rule, if the consumption effect is pro-trade, the country's participation in trade will decline with the decline in the abundant factor. The welfare implication of the decline in the abundant factor should be positive, as per capita income of those left in the home country would increase. The described move from point A, which is at the PPF, i.e. full employment, towards point B inside the frontier, can also be viewed as the reverse of reality as countries that are a source of migrants are usually characterized by high unemployment.”

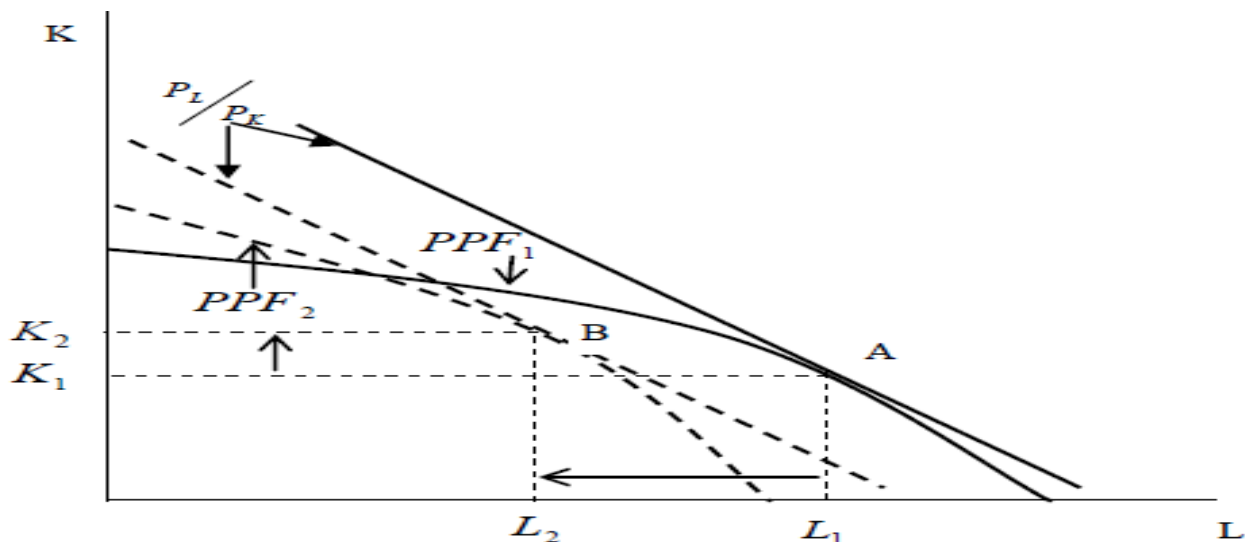


Figure 5: The Rybczynski effect Taken from “the Macroeconomics of remittances: the case of Tajikistan”. By Alex Kireyev, 2006, International Monetary Fund working paper 06/02, p.15.)

The national accounts approach

The national account framework is built on the assumption that the direct impact of migrants’ remittances on the recipient country’s economy is an increase in its aggregate demand defined as the gross national disposable income (GNDI), which includes both net factor income and unilateral transfers.

The GNDI is represented by the following function: $Y = (C + I)_p + (C + I)_g + (X - M + NY + NCT)$, where the last two components, the net factor income (NY) and net current transfers (NCT) capture remittances and the last bracket represents “the current account balance (CAB).

Unlike aid, which works into the economy through the official accounts, remittances, as private capital flows seem to encourage private consumption without stimulating much investment, which in turn translates into huge import inflows and stagnant domestic production.

It is generally considered that as long as the economy of a country is not operating at its full potential, an increase in consumption should be supported either by higher domestic output or higher imports (Kireyev, 2006). Therefore, one immediate implication of migrants’ remittance inflows would be a higher private component of the aggregate demand.

The national accounts approach implies a better insight into the components of the current account. More specifically, its focus on the trade balance (which is the difference between exports (X) and imports (M)) and its relation with the current account via net factor incomes and net unilateral transfers allows for more detailed analysis of phenomena such as import dependence and weakness of the productive structure.

Kireyev (2006) assumed that once remittances were received in the home country they could be saved, consumed, or invested, and presented the following three possible scenarios:

Firstly, if all migrants' remittances were saved by the remaining household, the author argued that the private sector consumption would decline. If they were saved in US dollars outside the banking system, remittances inflows would not have any monetary implications, but if they were deposited in a financial institution, "the foreign currency component of broad money supply would increase. If remittances were converted into local currency but saved outside the banking system, they would create upward pressure on the exchange rate, but without impact on recorded money supply. If they were converted into local currency and deposited in banks, they would contribute to both exchange rate appreciation and an increase in money supply".

In the second scenario, if all migrants' remittance inflows were consumed, the author argued that the private consumption "would increase only if investment declined with an unchanged current account or the current account deteriorated with unchanged investment". Any increase in investment in parallel with growing consumption would lead to significant "current account deterioration".

In the third and final scenario, if all migrants' remittance inflows were invested, the author argued that there would be "an increase in private investment, and that increase in private investment at the given level of overall income might be the result of either a decline in consumption with unchanged current account or deterioration in the current account with unchanged consumption".

2.1.2.1 Empirical evidences

The empirical literature on the implications of remittances for the overall economy is much less rich than that from microeconomic analysis and is also largely fragmented.

So far, three strands of the literature have emerged, all aiming to estimate the effects of key macroeconomic variables on remittance flows using either a single equation time series model, if its focus is on one particular country) or a panel data approach ,if its focus is on a group of countries (Melkadze. 2012).

The first school of thought embraced by scholars such as Djajic (1986), Quibria, (1996), Taylor, Arango, Hugo, Kouaouci, Massey and Pellegrino (1996), Taylor (1999), Glytsos (1999) argues that “remittances are similar to other international capital flows, since both kinds of cross-border activities lead to higher foreign exchange and induce higher investment and/or consumption in the home country”. The group standard macroeconomic view is that “when remittances constitute a significant source of foreign exchange, they may clearly affect the equilibrium level of the gross national product and other macroeconomic variables”.

Glytsos (1999) was amongst the first to propose a very simple macro econometric estimation of the aggregate effect of remittances for seven Mediterranean countries. Using data for 1969 to 1993, the author found a positive impact of remittances on consumption, investment, imports, and output.

An earlier study by Durrand, Parrado and Massey (1996) also found that “remittance could stimulate economic activity both directly through investment and indirectly through consumption”. The authors emphasised that even if a large percentage of remittances were used for private consumption, some smaller portion would be used in productive investment; and when applied to large sums of remittances this investment portion might play a significant role in the economy. The authors argued further that “large use of remittances for consumption would stimulate the demand for goods and services in the receiving country, leading to an increase in production, employment and disposable income”.

Classifying the beneficial effects of migration and overseas remittances at the national level, Capistrano and Sta Maria (2007), Cattaneo (2005) and World Bank (2007) corroborated the view that “the most significant benefits of the inflows of remittances to a country are that they increase its foreign exchange earnings, exert a positive impact on the balance of payments, and promote economic growth through their direct effects on savings and investment (in human and physical capital) and their indirect effects through consumption”.

Relating migrant’s remittance inflows to their impact on the balance of payment, the African Development Bank Group (2009) study demonstrated that these inflows cushioned the impact of the slowdown that followed the 2008 global financial crisis (or external economic shocks) and enabled the receiving African governments to increase their foreign-exchange reserves, to cover their current-account deficits and to finance their debt servicing.

It has also been shown that if international migrant’s remittances are spent on local goods and services, they can also indirectly promote community development through spill over mechanisms. According to Ratha (2003) the increased consumption of migrant households occasioned by remittances spent on local goods and services can generate multiplier effects and benefit other members of the community through the increase in demand which stimulates local production, thereby promoting job creation and local development.

An earlier study by Woodruff and Zenteno (2001) stressed that international migrant’ remittances could also “ease credit constraints by providing working capital for the recipients to engage in entrepreneurial activities, and resulting in job creation and enhancement of the development of the remittance-receiving community”. Ghosh (2006), and Sørensen, van Hear and Engberg-Pedersen (2002) developed the argument that international migrants’ remittances, especially through migrant associations could also “contribute to the creation of new social assets and services and community physical infrastructures, such as schools, health centres, roads and other community projects”.

Several studies including Gupta, Patillo and Wagh (2007) and Ratha (2007) and others have found a positive association between the share of remittances in GDP and the reduction of poverty.

Recent research by Adams and Cuecuecha (2013) in Ghana revealed that after controlling for other variables, receiving international remittances not only increased household spending on health and education, but most importantly “halved the likelihood of a household being poor”.

Contrary to the first school of thought, the second group of scholars focuses on the adverse effects caused by international migrants’ remittances. Lucas’ (2005) empirical study summarized the core arguments of this school of thought as *“the negative side [of remittances] is the potential for diminished labour supply and effort induced by higher transfers, together with a Dutch disease-like effect in keeping the exchange rate high and discouraging domestic production of tradable goods”*.

The historical controversy on the “German transfer problem”, well-known as the paradox in international trade theory has been applied to analyse the impact of international remittances transfers on relative prices and trade flows. Its essence is that, “if remittances generate demand greater than the economy’s capacity to meet this demand, and if this demand falls on tradable goods, the import bill will rise; and if it falls on non-tradable goods, relative prices will increase”. Thus, international migrants’ remittances can draw resources away from the traditional tradable sector and into the non tradable sector; and this according to McCormick and Wahba (2000), Reichert (1981), and Rivera-Batiz (1982) “can deteriorate the economy’s payment position and worsen the welfare of families not receiving remittances”.

Bracking and Sachikonye (2008) argued that one of the harmful effects of international migrants’ remittances is that “those who do not receive remittances will find themselves relatively and even absolutely poorer as the inflationary effect generated by those who receive remittances increases aggregate consumption”.

Other potential negative welfare implications of international migrants’ remittances inflows as identified by Martin (1990) and Boone (1995) include the encouragement of continued migration of the working age population and high dependency of the economy and the families on these kinds of financial funds. Just as with foreign aid, Boone (1995) stressed that international migrant remittances might “support inefficient governments and perpetuate an economic dependency that undermines the prospects for development”.

Even the conventional belief that international migrant's remittance flows are usually "countercyclical" and can therefore act as a "stabilizer" is challenged by the second group. Employing a panel data set including 87 developing countries, Buch and Kuckulenz (2004) found that at exception of being more stable, migrants' remittances shared similarities with the FDI and ODA. Additionally, by investigating a group of 12 countries receiving remittances, Sayan (2004) found no clear-cut evidence to support the counter cyclicity hypothesis of migrants' remittances. His mixed results suggested that some countries seemed to receive more remittances when a recession has happened, but some countries did not.

Chami, Cosimano and Jahjah (2006) pointed out that even if international migrants remittance inflows were countercyclical, their effects were rather complicated.

Using a "stochastic dynamic general equilibrium model" to investigate the influence of countercyclical remittances on the conduct of fiscal and monetary policy, and to trace their effects on real and nominal variables in a business cycle setting, Chami, Cosimano and Gapen (2006) found that "remittances raised disposable income and consumption, and insured against income shocks, thereby raising household welfare". However, remittances increased the correlation between labour and output, thereby producing "a more volatile business cycle and increasing output and labour market risk".

In relation to the impact of international migrants remittances on economic growth, Chami, Fullenkamp and Jahjah's (2003) study based on a microeconomic model that allowed them to predict the behaviour of households receiving remittances, argued that since remittance flows are not profit driven (unlike FDI), their effect on growth may not be positive as alleged by the pro remittances school of thought. Using a panel of 113 countries during 19 years, the authors' estimation results revealed that remittances tended to be negatively correlated with GDP growth, and concluded that "remittances did not seem to serve as capital for economic development, but as compensation for poor economic performance".

The third group of scholars tries to bring together the contradictory arguments reviewed above. Using a Keynesian model Glytsos (2002) studied the macroeconomic effects of migrants' remittances on "the balance of payments", "saving-investment balance" and "structural change" of selected Mediterranean countries, and found that the effects were mixed and dependent on individual countries' characteristics. Similarly, investigating both political and economic effects of remittances, Kapur (2005) found both negative and positive effects at the household, community and national levels.

Pioneering this school of thought, Glytsos (1997 and 2002), McCormick and Wahba (2000), El-Sakka and McNabb (1999), Russell (1986), Rajan and Subramanian (2005), Gupta, Patillo and Wagh (2007), Pradhan, Upadhyay and Upadhyaya (2008), and Singh et al. (2010) emphasized that "migrants remittances can influence growth and investment directly and indirectly". However, it is noteworthy that conditions that initially promote migration, such as low income and low productivity, may also discourage investment. According to Glytsos (1997), the effects of migrants' remittances on economic growth will therefore depend strongly on the government's policy to organize and control flows of remittances and to promote an economic environment conducive to investment in productive activities that would encourage migrants to remit.

Similarly, Singh et al. (2010) found that although remittances might negatively affect economic growth, "countries with well-functioning institutions were better placed to optimise the benefits of remittance inflows towards enhancing economic growth".

2.1.3 Theoretical and Empirical literatures on remittance costs

Without discarding the various counter-arguments put forward by several scholars to contest the benefits of remittances, Rajan and Subramanian (2005), Gupta, Patillo and Wagh (2007), and Pradhan, Upadhyay and Upadhyaya (2008) were of the view that migrants' remittances offer a range of benefits from a national economic perspective, and have focused their attention on policies that can maximize these benefits. One of these potential policies which is almost uniformly promoted is to reduce the transferring costs of international migrants' remittances considered expensive (IMF 2005, Orozco 2002, and Ratha 2003).

A remittance channel naturally comprises “a sender”, “a recipient”, the “intermediaries” in both countries, and “the payment interface” used by the intermediaries. The various players are illustrated in figure 6.

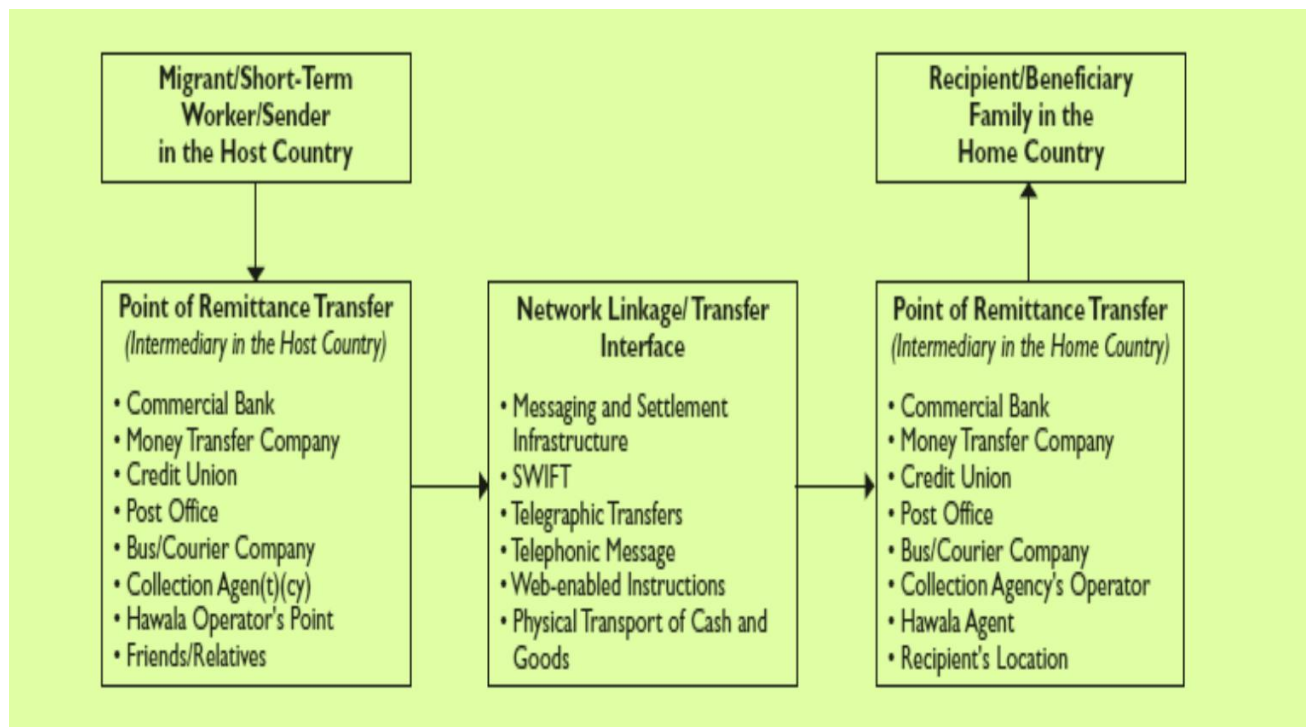


Figure 6: Remittance Channels (Taken from “International transactions in remittances: guide for compilers and users”. [Washington, D.C.]: International Monetary Fund, 2009. Page 7)

According to Aycinena, Martinez and Yang (2010), the structure of price is what really matters in the migrant’s choice of instrument when using a remittance channel, as shown above. The typical remittance transfer fee structure is that the migrant pays a fee per transaction that has fixed and variable components, the latter varying with amount sent, and this fee varies greatly from country to country in terms of type of channels, ownership, participants, processing method, and the settlement system.

According to the general payment systems literature, the choice of payment system instrument or channel depends on the net benefits received from using it. Zinman (2007), and Ching and Hayashi (2006) clearly established that consumers reacted negatively to the payment system instrument or channel costs and tended to choose the one that minimized their total transaction costs. However, Kosse and Vermeulen (2013) found that for remittances specifically, the choice of payment

system instrument or channel depended not only on the benefits offered to the migrant but also on the socioeconomic and environmental factors of the recipient country.

Typically as shown in figure 6, international migrants utilize a whole range of formal and informal channels (methods of transfer) to remit. Formal channels include money transfer services by banks and non-bank financial institutions, such as bureaux de change, and dedicated money transfer operators (MTOs) like Western Union and MoneyGram. Informal channels include those money transfers which occur through private and unrecorded channels (hawala). Such private transfers also include remittances brought by friends, relatives and even the migrant himself/herself during visits home or sent through transport companies (Jost & Sandhu, 2000).

It was demonstrated by the IMF (2005) study that in most markets, banks were not offering an attractive and affordable service to international migrants; and in markets where there was a dearth of choice and few official nonbank MTOs were operating, higher volumes of remittances moved through unauthorized or informal means. The study concluded that throughout the world, migrants relied on the cheaper, more competitive services of MTOs and other nonbank MTOs (informal channels) in order to send money back home to their relatives.

Similarly, the World Bank (2014) through the Remittance Prices Worldwide database confirmed that MTOs were consistently cheaper than banks for transferring international migrants' remittances.

Comparing the costs of transferring international migrants' remittances across all channels, De Luna Martínez, Endo, and Barberis (2006), and Langham and Kilfoil (2011) revealed that the remittance services offered by formal Money Transfer Operators (MTOs) and banks were generally more expensive than informal channels, corroborating Orozco (2003), Sander (2004), and Freund and Spatafora's (2008) estimates of the total cost of official international migrants remittances ranged from 2.5% to 26% of the amount remitted while informal ones ranged from 2% to 5%.

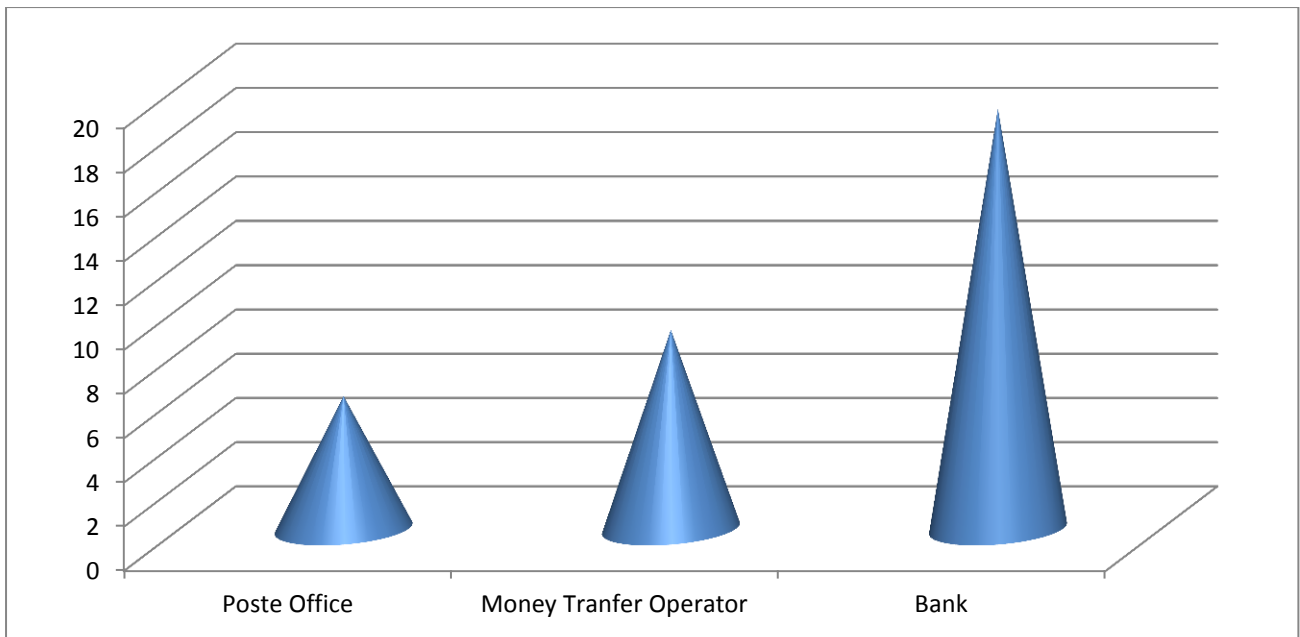


Figure 7: Average % cost of transferring US \$200 by type of remittance service providers. Source: World Bank Send Money Africa, January 2014.

As shown in figure 7, the average costs of officially transferring the equivalent of the US\$200 by type of remittance service providers from the OECD countries to the developing world ranged from 8 to 20% of the amount remitted.

Watkins and Quattri (2014) reckoned that the charges on remittances from developed world to Sub-Saharan Africa were well above the global average level. This is confirmed in figure 8 below using World Bank figures. The Sub-Saharan African migrants sending the equivalent of the US\$200 home could expect to pay 12% in charges, which was well above the global average.

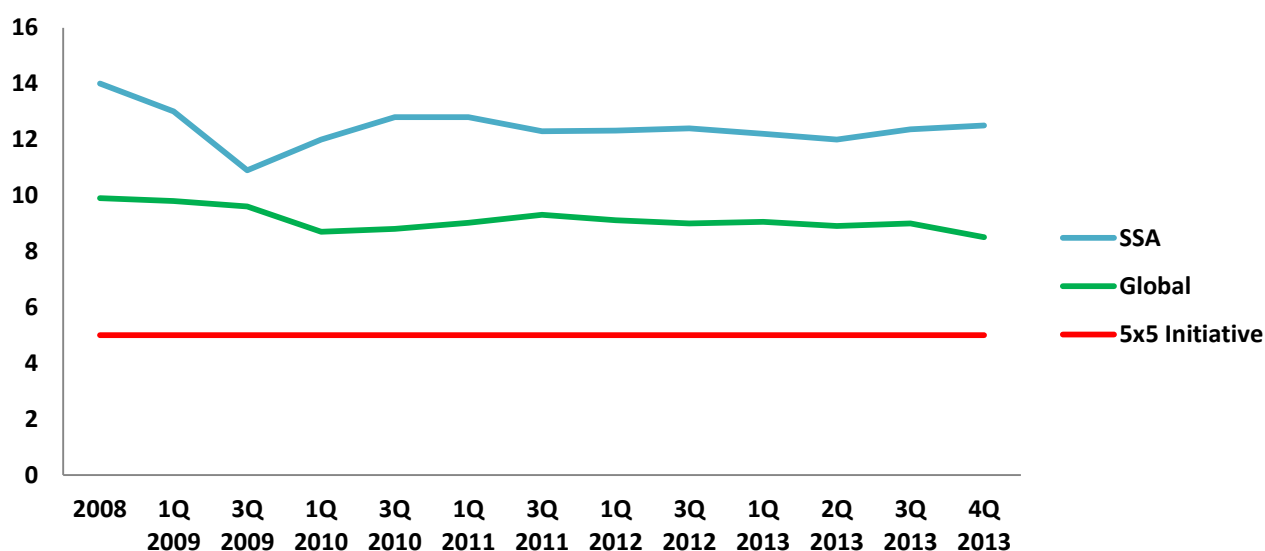


Figure 8: Average cost of transferring US \$200. Source: Remittance Prices Worldwide database of the World Bank.

It is not just on intercontinental remittances markets that African migrants face excessive charges when remitting. People crossing borders within the continent face charges far higher than those for Developed World-Africa remittances corridors. According to the World Bank (2014) most of the world’s top ten overcharging remittance corridors are in Sub-Saharan Africa. Among the many corridors, “migrant workers from Malawi, Mozambique and Zimbabwe employed in South Africa, and Ugandans remitting money home from Kenya face charges well in excess of 20% if conducting the transfer through banks” (Watkins & Quattri, 2014).

Destination	Source	Total Cost in %
Angola	South Africa	21
Zambia	South Africa	21
Nigeria	Ghana	22
Mozambique	South Africa	23
Botswana	South Africa	23
Kenya	Tanzania	24
Rwanda	Tanzania	24
Uganda	Tanzania	24
Malawi	South Africa	25

Table 2: Cost to send US\$200, 3Q2013: Africa’s most expensive bank remittance corridors. Source: World Bank ‘Remittance Prices Worldwide Third Quarter 2013’ dataset.

Destination	Source	Total Cost in %
Rwanda	Kenya	8
Lesotho	South Africa	15
Zimbabwe	South Africa	15
Swaziland	South Africa	15
Angola	South Africa	16
Zambia	South Africa	19
Mozambique	South Africa	19
Malawi	South Africa	27
Nigeria	Ghana	39

Table 3: Africa’s most expensive MTOs remittance corridors. Source: World Bank ‘Remittance Prices Worldwide Third Quarter 2013’ Dataset.

Freund and Spatafora (2005) argued that these high charges associated with international migrants’ remittances have a negative impact on the recorded (official) remittances, and this negative impact suggests that “migrants either refrain from sending money home or else remit through cheap and risky informal channels”.

While the level of informal international migrants’ remittances is unknown because they flow through unrecorded (informal) channels, Celent (2002), Bézard (2005), and Freund and Spatafora (2008) estimated that they might vary widely, ranging from 50 to 250 percent of recorded international migrants remittances.

Ramsamy (2014) estimated that over 90% of the equivalent in Rands of the US\$ 1.5 billion of international migrants remittances from South Africa to the rest of SADC were sent through unrecorded (informal) channels.

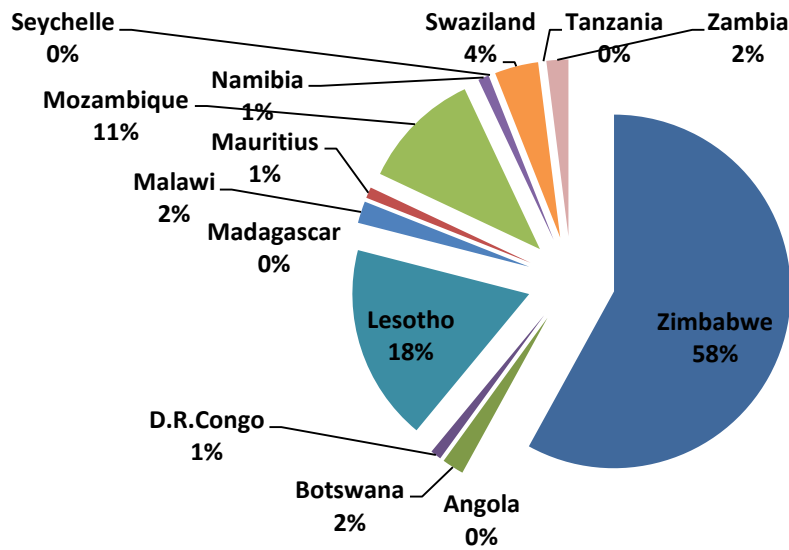


Figure 9: Informal Remittances from RSA to SADC countries as % of R7.56 billion (taken from “making financial markets work for the poor”, 2014, by Ramsamy, 2014, p.18).

2.1.3.1 Factors driving international migrants remittances costs

Whereas it is known that international migrants’ remittances have a negative relationship to the costs of transferring them, the literature dealing with the determinants of these costs, both on the north-south and south-south international migrants remittance corridors in general, and the overcharged Intra Southern African especially, are still not transparent.

Freund and Spatafora (2008) were the first who sought to shed light on the determinants of international migrants’ remittances transaction costs by using cross-country data. They found that the stock of migrant workers in OECD countries, the size of the host economy, the exchange rates spread, the dual exchange rates, the level of competition in the financial industry, and financial development in the migrants’ home countries were the main drivers of the costs of remittances from OECD to the developing world.

Similarly, Beck and Pería (2011) investigated the factors determining the costs of remitting through 119 country corridors. The authors not only confirmed that “international corridors with larger numbers of migrants and more competition among remittances service providers exhibit lower average costs for migrants remittances, but that remittance costs were higher in richer corridors and in corridors with greater bank participation in the remittances market”. The study

had also found significant relationships: the higher the standard of living, the higher the costs of goods and services and the higher the costs of remitting. This study corroborated both Huang and Vargas-Silva (2006), and Castillo (2001) findings.

Employing “variance decompositions”, “impulse response functions” and “Granger causality tests” derived from a VEC model to test if home or host country macroeconomic conditions affect remittances, Huang and Vargas-Silva (2006) using data from Brazil, Colombia, the Dominican Republic, El Salvador and Mexico found that the macroeconomic conditions in the host countries influenced remittances more significantly than those of the above mentioned receiving countries; and concluded that migrants are more influenced by the economic conditions of the host country than that of the home country when deciding on the amount to remit back home.

Similarly, Castillo (2001) estimated a “cointegrating equation” between remittances, the bilateral Mexico-United States real exchange rate and the GDPs of the two countries, and found “a negative association between remittances and economic conditions in Mexico and a positive relationship with those in the US”.

Examining the determinants of international migrants’ remittance costs, Harrison, Sussman and Zeira (1999) found the cost of remitting to be higher in countries that imposed controls on international remittances, since these operate like a tax that is passed onto recipients.

Similarly, analysing the social, economic, financial, political and institutional factors in both sending and receiving countries, The Dalberg Global Development Advisors (2014) conclusions confirmed that the poor competitive dynamics driven in part by regulatory conditions, mostly in the host country were overwhelmingly responsible for sustaining the high costs of international migrants’ remittances globally. These findings corroborate the conclusions of several surveys and interviews of international migrants remittance service providers in key migrants destination countries (France, the United Kingdom, and the United States) which revealed that “the migrants’ lack of access to formal financial services and the requirement for identification documents, the exclusive bank-MTOs partnership and regulations related to anti-money laundering and combating the financing of

terrorism (AML-CFT) not only raised but they also sustained the high costs of transferring money globally”.

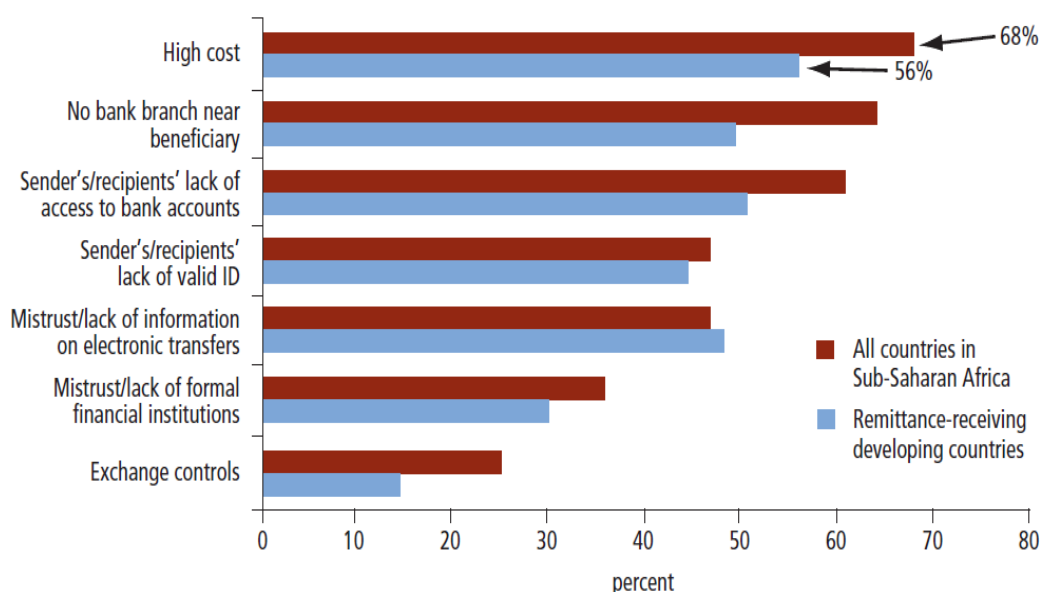


Figure 10: Factors inhibiting the use of formal Channels in Sub-Saharan Africa. Source: World Bank, 2013b.

As already emphasized the literature covering the determinants of the overcharged south-south remittances in general and the intra Southern African remittances in particular are very scarce. However, this research is not the first to address the determinants of the Intra Southern African migrants' remittances inflows.

Using annual data for 10 SADC countries from 1994 to 2008, Kemegue, Owusu-Sekyere and Van Eyden (2011) investigated the factors that drove or constrained remittances from South Africa to the SADC countries. The study found that “when cross-sectional dependence and individual effects were controlled for, formal remittance inflows from South Africa to the SADC countries in the panel were mainly driven by the quality of financial service delivery, investment opportunities in the home country, and migrant expectations of home country exchange rates”. The conclusions of this study partially corroborate the earlier findings by Aggarwal, Demirgüç-Kunt, and Martinez Peria (2011), Beck and Martinez Peria (2011), IFAD (2007), and Orozco (2002) related the African high international migrants' remittances costs to its small number of firms handling remittances, to its low level of financial development, and to its regulations and controls.

Considering the positive effects of international migrants' remittances on both poverty reduction and economic growth in recipient countries, and understanding some of the factors in both sending and receiving countries responsible for raising and sustaining the high costs of transferring international migrants remittances, Kosse and Vermeulen (2013), Freund and Spatafora (2008), Yang (2011) and many more have suggested policies and reforms towards reducing these costs of transferring international migrants remittances.

The aforementioned scholars suggested a wide range of reforms and policies including measures to increase competition among remittance service providers, to improve information for migrants on the relative costs of different money transmission services, and to reduce the regulatory barriers preventing access to financial services by the majority of international migrants.

The Group of Twenty (G20), which account for almost 80 per cent of global remittances, addressed this issue through its G20 plan to facilitate international migrants' remittances agreeing to work to reduce the global average cost of international migrants remitting back to their home countries. The plan includes "a recommitment to the five per cent remittance cost-reduction target, support for country-led actions to address the cost and improve remittance services, and an emphasis on the use of remittance flows to drive financial inclusion and development" (G20, 2014).

South Africa, the only African country member of the G20, and signatory of the group plan to facilitate international migrants remittance flows, in partnership with the G20 Global Partnership for Financial inclusion (GPFI), the World Bank, and other relevant organizations' developed the country's plan to advance access to more affordable remittances. Following findings of financial sector inquiries on the dominance of big banks in the South African retail payments system, entry restrictions and payment processing procedures which undermine competition, especially in serving low-income individuals, and the big challenge to develop the payments system that can cater for the unbanked, the following actions, among many have been proposed: "Extend interoperability and transparency of access requirements to payments system, promote competition by allowing second and third-tier banks and entry by foreign banks, investigate the possibility of a complex monopoly in operation of payments system, and require bank and

payment regulators to consider the competitive impact of their regulation” (G20, 2014).

3 RESEARCH METHODOLOGY

3.1 Research Approach and Strategy

For many statistical studies, analysts are happy to describe associations among variables. This is particularly true for forecasting studies. But in this study causal relationships were not explored but rather relationships between the independent and dependent variables i.e. between selected national macroeconomic and financial variables that might influence or determine the costs level of transferring migrants remittances from South Africa to the SADC region, using a set of data over a ten year sample period.

The research design therefore constituted an econometric study seeing that the econometric approach measures the impact that one or more variables has on a dependent variable using time-series data (Leedy & Ormrod, 2010).

3.2 Data Collection, Frequency and Choice of Data

Numerous factors have been identified in the literature review as possible determinants of costs of remitting by international migrants' from South Africa to the rest of the SADC region. These factors include social, economic and financial variables.

Information related to the stock of international SADC migrants in South Africa and their estimated volume of remittances was gathered from The FinMark Trust Survey 2012.

The data retrieval for the remaining economic and financial variables included in the present study was from the following database sources:

- The World Bank: <https://www.worldbank.org/>
- The International Monetary Fund: <https://www.imf.org/>
- The Penn world Table 7.1:
https://pwt.sas.upenn.edu/php_site/pwt71/pwt71_form.php

The data covered the sample period of 2001 to 2010, which equates to 10 years. This choice of time frame was dictated by the availability of the data.

3.2.1 Description of the Variables

The literature review suggested several variables and evaluated their relationship. The present section explains the dependent and explanatory variables that were included in the present study econometric model.

3.2.1.1 Dependent variable: Transaction costs (FEE)

The measure used for the transaction costs was the average costs (expressed as a percentage of the amount sent) charged by the South African Banks or/and Money Transfer Operators for sending the equivalent in South African Rands (ZAR) of US\$200 as remittances to the migrants households in the selected SADC countries. It was constructed as an average over the 2008–2010 periods (the only available years). It was sourced from the World Bank remittances Prices worldwide.

3.2.1.2 Independent variable: Real GDP per Capita (Y)

The Real GDP per capita is a core indicator of economic performance and commonly used as “a broad measure of average living standards or economic wellbeing”. It is obtained by dividing GDP at current market prices by the population.

The Real GDP per capita, proxying the level of economic development and standard of living in a country was expected to be positively related with the costs of transferring remittances. However the possibility of the opposite relationship was not ignored; that the finance literature also recognizes that high standards of living may also be associated with greater efficiencies and lower costs of financial intermediation and, hence, lower costs of transferring remittances.

The real GDP per capita of the selected Southern African countries were from the Penn World Table Version 7.1.

3.2.1.3 Independent variable: Dual Exchange Rate Dummy (DualER)

When faced with a sudden shock to its economy, a country can opt to implement “a dual” or “multiple” foreign exchange rate system with both a fixed official rate and a floating or illegal or parallel rate at which its currencies are exchanged during the same period of time. A dual exchange rate dummy was used as a

binary indicator specifying that a country had more than one exchange rate that could be used simultaneously for different purposes and/or by different entities.

Dual exchange rates were expected to be negatively related to the costs of remitting. Various reviewed studies had suggested that the larger the black market premium (that is, the difference between black market and official exchange rates), the more remittances will be remitted through unofficial, rather than official channels (Page & Plaza, 2005).

The dual exchange rate dummy for the selected Southern African countries was taken from the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions, 2013 (ARREAR).

3.2.1.4 Independent variable: Bank Concentration (CONC)

Bank concentration is defined as the share of assets of the country's three largest banks (Beck, Demirgüç-Kunt, & Levine, 2009). The measure is calculated by taking the assets of the three largest banks in a country as a share of the assets of all commercial banks.

Bank concentration was used as proxy for factors that might influence the degree to which money transfer service providers can determine their prices and was expected to be negatively related to the costs of transferring remittances. The rationale for this expectation was that “money transfer service providers will be better able to influence prices if there is little competition in the remittance market and if consumers are not well informed”. The higher the bank concentration is, the less competitive will be the market in question and more expensive will be costs of transferring remittances from that economy.

The bank concentration variables for the selected Southern African countries were from the World Bank's Financial Structure Database 2013.

3.2.1.5 Independent variable: Dollarization Dummy (DOLLAR)

Dollarization is a situation where the citizens of a country officially or unofficially use a foreign country's currency for transactions. The main reason for dollarization is because of greater stability in the value of the foreign currency over the domestic one. A dollarization dummy was used as binary indicator set to unity for any year when a country is officially dollarized. Dollarization was expected to

be positively related to the costs of remitting. The literature suggested that low exchange rates risk should reduce the costs of transferring remittances by lowering the exchange rate spreads.

The dollarization dummy for the selected Southern African countries was from the World Bank's Financial Structure Database 2013.

3.2.1.6 Independent variable: Exchange Control Restrictiveness Index (ECRI)

The Exchange Control Restrictiveness Index measures *de jure* capital account and exchange control restrictiveness imposed by the country. It creates a measure of the intensity of exchange controls in a given SADC country. The index also correlates with several measures of financial development and some measures of institutional development.

The Exchange Control Restrictiveness Index as proxy for capital control or the breadth of regulation of remittance service providers in sending and in receiving countries was expected to be negatively related to the costs of transferring remittances. This was because greater exposure to regulations was expected to increase the costs of transferring remittances through the regulated institutions. However the literature also recognizes that "a broader regulatory framework might make the remittance market more transparent and more competitive, thus decreasing the costs of remitting".

The ECRI of the selected Southern African countries members were from ARREAR 2013.

3.2.1.7 Independent variable: Workers Remittances (WR)

The African Institute of Remittances (AIR) defines remittance as "a cross-border person-to-person payment of relatively low value" (AIR, 2013).

The reviewed literature conjectured a negative relationship between the volumes of remittances and the high costs of making international migrants' remittances.

The estimated cross sectional data on migrants' remittances from South Africa to the selected SADC countries were from The FinMark Trust Survey 2012.

3.2.1.8 Independent variable: Stock of SADC migrants in South Africa (M)

The stock of SADC migrants is the total number of migrant workers originating from the selected Southern African countries living in South Africa.

The level of international remittances received in a country was expected to depend heavily on the number of migrants produced by that country. The relationship between remittances share and share of migrants should therefore be positive and significant.

The reviewed literature conjectured a negative relationship between the stocks of migrants and cost of international migrants' remittances.

The estimated cross sectional data on stock of migrants originating from the selected SADC countries in South Africa were taken from FinMark Trust Survey 2012.

3.2.1.9 Exchange rate (ExchR)

This is the price of the selected SADC countries currencies in terms of the US Dollar. The reviewed literature suggested that the exchange rate volatility is positively related to costs of international migrants' remittances.

The exchange rates of the selected Southern African countries members of SADC to the US dollar were from the Penn World Table 7.1.

3.3 Sampling

The sample of countries for the present study consisted of an unbalanced panel data of eight SADC countries for which macroeconomic and financial variables were available. These were Angola, Botswana, Lesotho, Malawi, Mozambique, Zambia and Zimbabwe.

All variables were constructed as an average over 2001–2010, except for transaction costs (fee) which was constructed as an average value over 2008-2010 (the only available years), stocks of migrants and migrants remittances, where the estimated cross sectional data from the FinMark Trust survey 2012 was used as the only data available.

The sampling frequency for all the variables was on an annualised basis. The data collection spanned a 10 years period from 2001 to 2010 which resulted in 80 data

points per sample item of which some were cross sectional data and some data points were missing.

3.4 Data Analysis Methods

According to Zikmund (2003), “the aim of data analysis is to reveal any consistent patterns in large quantity of raw data so that the results can be studied and interpreted in a brief and meaningful manner”.

The data analysis methods selected to use in this research focused on the analysis of a number of explanatory variables and the relationship that each variable had on the dependent variable, being the international migrants remittance costs (FEE).

As described above, the data on stock of migrants and their accompanying volume of remittances were available on cross-section, while the data on transaction costs, macroeconomic and financial variables were available on a panel or longitudinal basis. As a consequence, it was not possible to run directly a panel or cross sectional regression of remitting costs onto the macroeconomic and financial variables assumed to be influencing, determining, explaining or sustaining their high levels. To resolve the problem, the design strategy was to pool the panel data to form an average value of each variable, and then enter these as regressors for transaction cost (FEE) in a cross-sectional context.

To examine the determinants of remittance costs, I estimated the average cost of sending the equivalent in South African Rand (ZAR) of US \$200 remittances from South Africa on a set of average macroeconomic and financial variables in the sending and receiving countries.

3.4.1 Model Specification

The model used in this study was a version of that used by Freund and Spatafora (2005, 2008) to estimate the determinants of the cost of international migrants’ remittances from developed countries to the developing world.

Like Freund and Spatafora (2005, 2008), no precise theoretical model of the determinants of the costs of transferring international migrants remittances from South Africa to the selected Southern African countries was made. However, based

on the literature review, it was expected that the following would have powerful positive impacts on the high costs of remitting from South Africa to the SADC region: poor competition in the financial services industry proxied by bank concentration (CONC), great capital control proxied by the exchange control restrictiveness index (ECRI), exchange rate volatility (EXCHR), the dual exchange rate dummy (DualER), and the GDP per capita.

This model also expected that the dollarization or lack of exchange rate risk, proxied by the dollarization dummy (DOLLAR), the stock of migrants (M) and their accompanied volume of remittances (WR) would have a powerful negative impact on the high costs of transferring remittances from South Africa to the SADC region.

Based on the above underlying expectations, the estimated impact of transaction costs on international migrants' remittances from South Africa to the Southern African region was specified by the following equation:

$$Fee_i = \alpha + \beta_1 Conc_i + \beta_2 ECRI_i + \beta_3 Dollar_i + \beta_4 Y_i + \beta_5 M_i + \beta_6 WR_i + \beta_7 DualER_i + \beta_8 exchR_i + \varepsilon_i \quad (1)$$

Where α and β s are coefficients to be estimated, and ε represents the stochastic error term. The underlying theory predicted that $\beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 > 0, \beta_5 < 0, \beta_6 < 0, \beta_7 > 0, and \beta_8 > 0$.

By estimating the coefficients in equation (1), the study intended to capture an array of factors that might influence the high costs of transferring remittances from South Africa to the selected SADC countries, and these variables were expected to behave accordingly to the theoretical and empirical findings discussed in the literature review chapter.

3.5 Research Reliability and Validity

According Morse, Barrett, Mayan, Olson and Spiers (2002), a research without rigor is worthless, becomes fiction, and loses its utility. Therefore, a great deal of attention must be applied to reliability and validity in all research methods.

Though the present quantitative research was classified as exploratory, it followed the rigorous process of definition, clarification, choice of instruments and

treatment of data beforehand by checking their relevance and assessing their reliability by use of statistical tests.

3.6 Limitations

The present study evolves a cross-country regression of intra SADC migrant remittances on potential explanatory variables influencing their costs. As such, its primary limitation was related to the methodology used. As a simple cross-sectional analysis, the research could only make limited, if any inference on causality between the factors investigated.

Considering that the only available estimates of both stock of migrants and their accompanied volume of remittances were from only one source i.e. the FinMark Trust survey and considering again that the transaction costs data used in the present study were only from the banks and formal money transfer service providers; while it is widely believed that a much greater proportion of remittances are sent through informal channels, surely limit the scope of the present study.

Notwithstanding these limitations, I believe that the research offers some interesting evidence that will hopefully stimulate further data collection and analysis.

4 RESEARCH FINDINGS, ANALYSIS AND DISCUSSION

Annual time series data was extracted for the dependent variable and its selected determinants for the period 2001 to 2010, providing 80 observations for each series. The data was then imported into EViews as series objects for further analysis. The results of the findings are presented by means of correlation analysis, descriptive statistics and regression analysis. The present section discusses the empirical findings from the econometric analysis. First the overall results are discussed followed by an evaluation of the results on an individual variable basis.

	FEE	EXCHR	ECRI	DUALER	DOLLAR	CONC	M	WR	Y
FEE	1								
EXCHR	0.267	1							
ECRI	-0.10	0.105	1						
DUALER	0.134	-0.32	0.521	1					
DOLLAR	-0.28	0.655	0.535	0.218	1				
CONC	-0.49	-0.30	0.178	-0.45	0.004	1			
M	-0.36	0.575	0.510	-0.34	0.962	0.25	1		
WR	-0.40	0.557	0.472	-0.36	0.952	0.29	0.99	1	
Y	0.08	-0.36	-0.34	-0.10	-0.29	-0.30	-0.39	-0.38	1

Table 4: Correlation Matrix

The results show a correlation between the costs of remitting from South Africa to the selected Southern African countries members of SADC together with its selected explanatory variables. The second row of the above matrix reveals that 26.7% of the high costs of remitting from South Africa to the selected Southern African countries are explained by the South African exchange rate volatility. The

positive coefficient sign shows the direct relationship of exchange rate volatility with international migrants' remittance costs. The continued depreciation of the South African currency against the US dollar is expected to increase the costs of remitting from South Africa to the SADC region.

The strong negative correlation of Exchange Control Restrictiveness Index and bank concentration with the average transaction costs of remitting from South Africa to the selected Southern African countries are justified respectively by the breadth and exposure to regulation imposed on remitters and money transfer service providers, and by the poor or little competition in the South African remittance market.

The negative correlations between international migrants remittance costs and the stock of migrants and their accompanying volume of remittances are justified by their negative relationships with the average costs of remitting, which means that the larger the stock of migrants is, the higher the volume of remittances and the lower their costs.

The dollarization dummy had a positive relationship with the average transaction costs, which means that remitting to a dollarized economy should cost less than to another economy.

This sub-section is concluded by emphasizing that the correlation between explanatory variables in average showed a low level of multicollinearity which suggested good identification of variables and supported the hope that the regression analysis would throw more light on the signs and significance of the variables.

	CONC	DOLLAR	DUALER	ECRI	FEE	M	EXCHR	WR	Y
MEAN	76.6937	0.125	0.25	29.375	15.3029	388712.1	1109.005	1348.375	14269.21
MEDIAN	73.625	0	0	29.27	14.5367	94622.5	48.25321	286.95	10854.17
MAXIM	100	1	1	56.35	18.6967	1909081	4317.968	6693.7	46151.14
MINIM	64.5	0	0	8.56	13.1133	10202	5.967314	24.2	2524.263
Std.Dev.	12.2446	0.35355	0.46291	20.3571	2.20474	638804.9	1980.995	2269.84	14260.49
SKEW	0.89887	2.26778	1.15470	0.07528	0.43645	1.955177	1.153378	1.879084	1.503532
KURT	2.62969	6.14285	2.33333	1.22059	1.59649	5.297364	2.33229	5.089345	4.244203
J.BERA	1.12301	10.1496	1.92592	1.0636	0.91060	6.85625	1.92232	6.16306	3.530157
PROB.	0.57035	0.00625	0.38176	0.5875	0.63425	0.032448	0.382449	0.045889	0.171173
SUM	613.55	1	2	235	122.4233	3109697	8872.043	10787	114153.7
SUM Sq.	1049.5	0.875	1.5	2900.89	34.02599	2.86E+12	27470399	36065212	1.42E+09
OBS.	8	8	8	8	8	8	8	8	8

Table 5: Descriptive statistics

Under the assumption that the data used was valid and reliable, this summary of descriptive statistics should represent the true statistical values for all the variables in the sample.

Close to the majority of series data used for the analysis had major fluctuations. The highest dispersions were observed with GDP per capita, the stocks of international migrants, workers' remittances money, and the exchange rates. The high dispersions of stocks of migrants and their accompanying volume of remittances are explained by over 60% of the people originating from one country, which was Zimbabwe. Zimbabwe recorded 1,909,089 migrants compared to 10,202 Angolan migrants.

The important dispersion of GDP per capita is explained by the extreme difference of standards of living between the selected Southern African countries. Ranging from US\$9576 for Botswana to US\$330 for Zimbabwe.

The high dispersion of exchange rates is explained the by the dollarization of the Zimbabwean economy.

This sub-section is concluded by stressing the asymmetrical character of the data series since the skewedness coefficients of all the variables were non-zero, except for ECRI.

The descriptive statistics shows that the dual exchange rates, the exchange rates, the bank concentration, the transfer fees, and the exchange control restrictiveness index all had kurtosis below 3.0 and their Jarque-Bera tests confirmed that these data series were normally distributed. On the other hand the dollarization, stock of migrants, workers' remittances and GDP per capita all have the kurtosis above 3.0 and their Jarque-Bera tests confirmed that these series are not normally distributed.

Regression Analysis

The results of the regression analysis are summarized in the table 6, and show the significant influence of the expected variables on the costs of remitting from South Africa to the selected Southern African countries members of SADC.

Expl. variables	Regression 1	Regression 2	Regression 3	Regression 4
ExchR	0.000544 (0.962422)	0.000872 (0.974960)	0.000610 (0.851987)	0.595289 (1.055313)
DualER		-1.076797 (-0.257390)		-2.131919 (-0.579806)
CONC		-0.048027** (-0.408493)		-4.209873** (-0.473209)
Log of M	2.445678** (0.832917)		2.03E-05** (0.692137)	
Log of WR	-2.325864* (-1.225052)		-0.006331 (-0.808795)	
Dollar		-6.839379** (-1.108470)		-6.094712** (-1.213087)
ECRI	-0.022677** (-0.394253)	0.051277 (0.513091)	-0.006340** (-0.081759)	0.995050 (0.497100)
Log of Y	0.802034 (0.380076)		5.94E-05 (0.177500)	
Numbers of Obs.	8	8	8	8
R squared	0.640128	0.570428	0.660307	0.596320
Durbin-Watson	3.296036	2.267794	1.851985	2.255311

Table 6: Regression Results

Robust t-statistics in parentheses. **Significant at the 5 percent level. *Significant at the 10 percent level

The results reported in the above statistics summary show that the coefficients of bank concentration, dollarization, dual exchange rates and Exchange Control Restrictiveness Index had the expected negative sign and were all statistically significant at the 5% level of significance.

The bank concentration outcome suggests that competition and market structure did matter. The low number of South African regulated money transfer service providers proxied by bank concentration was negatively associated with its high average cost of remitting to the selected Southern African countries.

Considering that the South African remittances market is not competitive enough to tackle the high costs of transferring migrants' remittances to the SADC region, scholars expect the government policy to increase competition in the South African remittance market to reduce the transaction costs associated with remitting to the SADC region.

The dollarization suggests that the stability of the recipient countries currencies could possibly reduce the costs of remitting to these countries. Unfortunately, the dollarization of the Zimbabwean economy has apparently not positively affected the costs of remitting from South Africa to Zimbabwe.

The existence of a dual exchange rate suggests that the foreign exchange rates risk of the recipient countries should augment the costs of remitting to such a country. The Angolan result confirms that the country's dual exchange rates negatively affected the costs of remitting from South Africa to Angola.

The South African exchange restrictiveness index result confirmed that the great exposure to regulations imposed on the senders and money transfer service providers in South Africa negatively affected the costs of remitting to the SADC region. The result suggests that the lightening of the regulations (i.e. change in the South African exchange control regulations and the country's anti-money laundering identity requirements) would be expected to reduce the costs of remitting from South Africa to the SADC region.

The workers' remittances result suggests that the market-size effects might also be important in the South African context. Even with low levels of competition in the remittance market, greater remittances might reduce the costs of transferring remittances from South Africa to the SADC region. The Zimbabwean R6.7 billion

were transferred from South Africa at an average cost of 13.76% compared to the Malawian R24, 2 million transferred at an average cost of 17.8%.

The unexpected strong and significant negative association of migrants' stock with remittance costs contradicted the expected market-size effect in the South African remittance market. The 1,909,081 Zimbabweans living in South Africa paid at average 13.76% to remit home compared to 117,552 Swazis, 397, 070 Lesotho, and 10,202 Angolan who paid respectively 13.11%, 13.18 and 13.76.

Based on the large number of Zimbabwean migrants in South Africa, the close proximity of Zimbabwe to South Africa, and the low share of bank participation in the South Africa-Zimbabwe remittance corridor, one would have expected that the South Africa-Zimbabwe remittance corridor would be among the cheapest in the region, but the statistical results showed otherwise. This might suggest that the larger number of Zimbabwean migrants associated with the lower competition in the South Africa-Zimbabwe remittance corridor sustain the high costs of remitting from South Africa to Zimbabwe.

The South African GDP per capita showed a strong but not significant positive association with remittance costs. The result suggests that the relatively high South African level of income might be associated with the high costs of transferring to the SADC region.

In the whole sample of countries investigated the coefficient of determination was 0.66 (Regression 3), which means that about 66% of the variation in the costs of remitting from South Africa to the 8 selected SADC was accounted for by the variables included in the model.

Overall, the results from the descriptive statistics (Table 5) and the regression analysis (Table 6) suggest that the bank concentration, the exchange rate volatility, and the exchange control restrictiveness index were the main factors determining and sustaining the high costs of remitting from South Africa to the selected Southern African countries. These results suggest a wide range of corrective policies, including measures to increase competition among money

transfer service providers, to reduce exchange rate volatility, and to reduce the regulatory barriers preventing access to formal financial services.

Summarizing, the statistical analysis suggested that the high cost of transferring remittances from South Africa to the SADC region was not primarily due to the restrictions or inefficiencies in the receiving countries, but rather due to a set of interconnected factors in South Africa.

Nowadays, the South African remittances market is affected by regulations that are widely considered excessive, unclear, unsystematic and not harmonized. This situation is causing significant inefficiencies in the South Africa remittance-sending market.

The main finding of the research is that “unless the regulatory regime is modified it is unlikely that the South African remittance market can be formalised or that new entrants will take advantage of the considerable revenue streams that might be available”.

5 RESEARCH CONCLUSION

This section provides the summary of the study on the impact of transaction costs on migrants' remittances from South Africa to a sample of the southern African countries members of SADC.

The study sought to capture the investigated impact by regressing the average costs of remitting from South Africa to Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, Zambia and Zimbabwe with the potential explanatory variables influencing them.

The econometric analysis found three important factors negatively influencing the costs of transferring remittances from South Africa to the selected southern African countries, which were the bank concentration, the exchange control restrictiveness index and the exchange rate volatility.

Taken as proxy for factors that might influence the degree to which money transfer service providers determine their prices, the bank concentration, both in its negative correlation and strong coefficient supported the main idea that the South African remittances market is not competitive enough for it to tackle the high transfer costs problem. The result suggested that if accompanied with other measures, the policy to increase competition could be expected to reduce the costs of remitting from South Africa to the selected southern African countries. More generally, a more competitive financial sector across the region would positively affect the costs of financial services within the region, and likely drive strong growth of official remittances.

Taken as proxy for the breadth and exposure to regulation, the Exchange Control Restrictiveness Index was found to be the second factor sustaining the high costs of remitting from South Africa to the selected southern African countries. The result suggested that the greater exposure to regulations by remittances service providers and migrants in the South African market sustains the high costs

charged by the regulated financial institutions and push an important number of migrants to remit through informal and unregulated channels. The lightening of regulation imposed on the financial institutions, and policies encouraging South African financial institutions to promoting financial inclusion by the majority of migrants would be expected to reduce the costs of remitting from South Africa to the SADC region.

Exchange rates volatility was found to be the last factor negatively affecting the costs of remitting from South Africa to the selected Southern African countries, explaining 26.7 per cent of the high costs of these transfers.

The literature suggested that a stable and responsible macroeconomic policy leading to the lowering of exchange rate volatility would possibly reduce the costs of remitting from South Africa to the SADC region.

In the whole sample of countries investigated the coefficient of determination showed that about 66% of the variation in the costs of remitting from South Africa to the 8 selected Southern African countries were accounted for by the variables included in the model which were: the bank concentration, the dual exchange rates, the GDP per Capita, the Exchange Control Restrictiveness Index, the exchange rate, the stock of migrants, the volume of remittances and the dollarization.

While it is acknowledged that the cost structures facing Southern African migrants remittances from South Africa is still largely unknown, and that little if any inferences have been drawn on the relationship between the factors that might affect these costs, the present study has found that there is considerable variation across remittance corridors between South Africa and the rest of the SADC region, and that several inter-connected factors combine to maintain South Africa's high charge structure. These include lack of transparency on the part of money transfer service providers (banks included), limited competition, regulatory practices that restrict market entry and critically, a lack of financial inclusion for migrants particularly those with non-South African identity documents.

6 RECOMMENDATIONS FOR FUTURE RESEARCH

The data and methodology limitations of the presented research highlighted the following future research directions into the determinants of the costs of Intra Southern African migrants' remittances:

1. Conducting Granger causality testing to determine the factors explaining the high costs of transferring remittances within the southern African region.
2. Expanding the empirical model to include factors that relate to political and social realities of the region and considering the impact of these factors on the lives of citizens of the region in general and on migrants especially.

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APPENDIX

Average values of data from 2001 to 2010

COUNTRIES	FEE	WR	Y	M	DUALER	EXCHR	DOLLAR	CONC	ECRI
ANGOLA	13.76333	27.7	3609.342	10202	1	71.42363	0	64.5	47.58
BOTSWANA	16.79667	182.7	9576.438	52533	0	5.967314	0	71.1	16.42
LESOTHO	13.18	1754.3	1253.106	397070	0	7.740673	0	100	8.69
MALAWI	17.8	24.2	519.304	71693	1	118.1522	0	70.85	45.59
MOZAMBIQUE	15.31	1588.6	643.633	486839	0	25.08279	0	89.15	42.12
S. AFRICA	-	-	6860.118	-	0	7.740667	0	73.1	42.12
SWAZILAND	13.11333	391.2	3321.466	117552	0	7.740673	0	76.15	9.69
ZAMBIA	18.69667	124.6	1210.48	64727	0	4317.968	0	65	8.56
ZIMBABWE	13.76333	6693.7	329.779	1909081	0	1	1	76.8	56.35