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Remittances and Competition: A Policy Analysis Matrix Approach

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Abstract- The phenomenal growth of remittances in recent times has caught the attention of governments particularly in the developing countries, international organizations, Non-Governmental Organizations (NGOs) and the private sector, due to its importance as a viable source of external financing. The main problem identified in transferring these monies is that the competitive environment for money transfers in Nigeria is highly constrained. This is due to a near-monopolistic hold on the market by one money transfer organization (MTO) and the fact that banks are the only entities legally authorized to perform international payments. Findings from the policy analysis matrix results shows divergence in the revenue, costs and profits were negative (-2989360,-172074, -268246, - 2549040). This indicates that the society value remittances more than the market. The PCR was negative which shows that the system is not competitive and a negative SRP shows a tax on inbound transfer. The study concluded that money transfer service as rendered by banks and their partners in Nigeria is not competitive. Governments and policy makers can contribute to improving competition, lowering transaction costs, and reducing informality.

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Remittances and Competition: A Policy Analysis Matrix Approach

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Abstract- The phenomenal growth of remittances in recent times has caught the attention of governments particularly in the developing countries, international organizations, Non-Governmental Organizations (NGOs) and the private sector, due to its importance as a viable source of external financing. The main problem identified in transferring these monies is that the competitive environment for money transfers in Nigeria is highly constrained. This is due to a near-monopolistic hold on the market by one money transfer organization (MTO) and the fact that banks are the only entities legally authorized to perform international payments. Findings from the policy analysis matrix results shows divergence in the revenue, costs and profits were negative (-2989360,-172074, -268246, -2549040). This indicates that the society value remittances more than the market. The PCR was negative which shows that the system is not competitive and a negative SRP shows a tax on inbound transfer. The study concluded that money transfer service as rendered by banks and their partners in Nigeria is not competitive. Governments and policy makers can contribute to improving competition, lowering transaction costs, and reducing informality.

I. INTRODUCTION

Worker's remittances consist of goods or financial instruments transferred by migrants living and working abroad to residents of the home economies of the migrants. It is limited to transfers made by workers who have stayed in foreign economies for at least one year while transfers from migrants that are self-employed are excluded (IMF, 1999). The phenomenal growth of remittances in recent times has caught the attention of governments particularly in the developing countries, international organizations, Non-Governmental Organizations (NGOs) and the private sector, due to its importance as a viable source of external financing.

Official remittances flow to Nigeria in 2013 reached \$32 billion up by 6.2 percent from \$30 billion in 2012, according to a new migration and development brief on remittance trends by the World Bank. Other large remittance recipients in sub-Saharan Africa include Senegal (\$1.4 billion), Kenya (\$1.2 billion), South Africa (\$1 billion), and Uganda (\$700 million). According to thereport, entitled 'Migration and Remittance Flows: Recent Trends and Outlook, 2013-2016', remittances are an important source of foreign exchange and are helping to cover current account deficits in the region.

The report revealed that Nigeria is the largest recipient, accounting for more than half of total remittances in the region, but as a share of gross domestic product (GDP) the largest recipients are Lesotho, Togo, Cape Verde, Senegal and The Gambia. The estimates further shows the top recipients of officially recorded remittances for 2013 are India, China, the Philippines, Mexico, Nigeria, and Egypt.

Reliable data on remittances are hard to come by in sub-Saharan Africa. Some central banks use remittance data reported by commercial banks but do not adequately capture flows through money transfer operators, post offices, and mobile money transfer operators. Some countries do not report data on remittances in the IMF balance of payments statistics.

Remittance corridors to sub-Saharan Africa and within Africa are the most expensive, remittance Prices Worldwide, data for select intra-African remittance corridors suggest that the cost of sending remittances within Africa can be very high, with just the fee ranging from 5 percent to 15 percent of the amount sent. The global average cost for sending remittances remains under 9 percent (World Bank, 2013).

Apparently, remittance flows occur within an existing regulatory environment and an intermediation marketplace for money transfers. The regulations for money transfers in Nigeria are mostly based on the Foreign Exchange Act of 1995 and the Banks and Other Financial Institutions Decree of 1991, amended in 1999. The Act authorizes banks to perform foreign currency payments under its narrow definition of "authorized dealers" in foreign currency. Section 14 of the Foreign Exchange Act (Monitoring and Miscellaneous Provisions) regulates outbound payments under specific circumstances or conditions. By establishing a very low limit of N5, 000 (US\$40 in August 2007) as the unrestricted allowance for outbound transfers, the Act implicitly restricts most transfers. Hence, Banks are the main entities allowed to perform remittance transfers.

Currently 21 commercial banks are operating in Nigeria after the Bank consolidation of 2009. 18 out of 21 commercial banks have agreements with Money Transfer Operators (MTOs). Twelve banks work with Western Union, five with MoneyGram, and one with Coinstar and Vigo Corporation (Vigo is owned by Western Union). Thus, Western Union is the largest competitor, controlling approximately 80 percent of money transfers through banks. Banks that work with

the same international MTOs, seek to compete among themselves, using their competitive advantages in such features as services, location, and value-added products, in order to increase their volume and number of transfers. Orozco (2007) reported that 340,000 transactions a month were conducted by banks out of which First Bank Plc recorded 125,000, First City monument Bank 70,000, UBA, 25,000, Union and other Banks combined recorded 30,000 transactions. The differences in the number of transactions attracted might not be unconnected with competitive advantages of one over another Bank. However, how flows transferred into Nigeria impact the market environment in which these transfers operate is not well understood, nor is it clear how much market competition there is in Nigeria over inbound flows into the country.

This paper is a first exploration of policy analysis matrix variables on remittances transfer market in Nigeria and, therefore, is subject to certain caveats. First, this is a pure cross-sectional analysis, and thus, limited, if any, inference on causality could be made. Second, analysis is also limited in scope since it includes only data from formal providers of remittance services as in Orozco (2007). According to some estimates, at least a third of remittances are sent through informal channels (Freund and Spatafora, 2008). Notwithstanding these limitations, the paper offers some interesting evidence that is hoped will stimulate further data collection efforts and analysis.

The rest of the paper is organized as follows. Section 2 describes the Policy analysis matrix. Section 3 explains the methodology/empirical approach. Section 4 presents the results, and Section 5 concludes.

II. POLICY ANALYSIS MATRIX

The concept of Policy Analysis Matrix (PAM) was developed by Monke, et al (1989) and augmented by developments price distortion analysis by Master, et al (1995). A PAM allows for the study of the impact of policy by constructing different enterprise budgets, one valued at market prices and the other valued at social prices. After formulation of the matrix, it provides an expedient method of calculating the measure of policy effects and events of competitiveness and economic efficiency/comparative advantage. It shows a set of values which can be used to calculate profit at the observed private price (market price) or social price. The private price is the actual price at which input are bought from the market or produce sold by a producer. It is the price that reflects the influence of government intervention in form of a tax or subsidy, thus, value added tax of 5% of all charges on all money transfer is encapsulated in private price. If this price is used to calculate profit, it is referred to as private profit ($D = A - (B + D)$).

Social Profit measures the competitiveness from the use of Domestic resources. On the other hand, the

price that does not reflect the effect of a tax or subsidy is called the social price. When this price is used to calculate profit, the profit becomes social profit ($H = E - (F + G)$). Social profit shows whether the producer allocated the scarce resources very well and whether there is long run competitiveness or comparative advantage in producing that commodity. Private revenue is the product of the output produced and the private price while social revenue is the product of the output and social price. Domestic factor costs are the costs of other production resources that are being used in producing a commodity. These include wire transfer (Telex), point of sale (POS) and value added. Wire transfer charges are charged as soon as the transfer succeeds. Average cost of telex is \$30. The average cost of a transaction (Bank service Charge) was US\$12.70, or close to 7 percent of the transfer (Orozco, 2007). Generally, social value of a labour can be calculated as the minimum wage rate prevailing in the economy while the interest rate can be used as the social price of a capital. Output transfers (I) and tradable transfers (J) are obtained from application of the divergences identity (entries in private prices less entries in social prices equal the effects of divergences). Output transfers (I), measures the implicit tax or subsidy on outputs, equals, private revenues (A) less social revenues (E). In turn, tradable input transfers (J), a measure of the implicit tax or subsidy on tradable inputs, equal private tradable input costs (B) less social tradable input costs (F).

Note that social factor prices (G) are found by adjusting private factor prices (C) for observed divergences causing factor price transfers (K). Because the divergences identity requires that $(C - G) = K$, it is also true that $(C - K) = G$. The final result, net transfers (L), can be found by applying either the profitability identity $(I - (J + K) = L)$ or the divergences identity $(D - H = L)$. The net transfer (L) thus can be interpreted either as the net effect of all divergences or as the difference between private and social profitability. This single measure thus shows the extent to which distorting policies and market failures implicitly subsidize a system by transferring resources into the system or tax that system by transferring resources away from the system. Domestic Cost Resources (DCR) ratio is computed at social prices. It provides a measure of the level of comparative advantages achieved by the selected systems $[(DRC = G / (E - F))]$. If the $DRC > 1$, the system has no comparative advantage, $DRC > 1$, shows that the use of domestic resource is socially profitable and the system has a comparative advantage.

Nominal Protection Coefficient (NPC) measure the level of protection for the output. It can be calculated as the ratio of A and E that is, $(NPC = A/E)$. $NPC > 1$ indicates that the system is protected by the government while $NPC < 1$ shows that the system is not protected. Effective Protection Coefficient ratio (EPC)

compares the added value at private price to added value at social price $[EPC = (A-B) / (E-F)]$ which give a combined index of the level of trade distortions on both inputs and outputs. $EPC > 1$ suggests that government policies provide positive incentive to producers (here Banks) while value $EPC < 1$ indicates that producers are not protected through policy interventions. The Private Cost Ratio (PCR) is a measure of private competitiveness. A $PCR > 1$ indicate that the system is not competitive while a $PCR < 1$ indicates that the system is competitive. It is the ratio of domestic factor

costs to value added in private prices, $(C) / (A-B)$. Subsidy Ratio Producer (SRP) is said to indicate the level of transfer from divergences as a proportion of undistorted value of the system revenue. It shows the proportion of revenues in world prices that would be required if a single subsidy or tax were substituted for the entire set of commodity by macroeconomic policies. It is the ratio of $(L) / (E)$ or $(D-H) / (E)$. A negative SRP indicates tax on the system while a positive SRP indicates a subsidy to the system.

Table 1 : Components of Policy Analysis Matrix (PAM)

	Revenue	Trade Inputs Costs	Domestic Resource Costs	Profit
Private Prices	A	B	C	D
Social Prices	E	F	G	H
Divergences	I	J	K	L

Source: Adapted from Monke and Pearson, 1989.

III. METHODOLOGY

a) Data

Data for this study is extensively secondary. The study dwells on the survey and estimates of Money Transfer Operators through Nigerian Banks as presented in empirical study. The cost of receiving inbound transfer such as value added tax on all charges, telex charges etc., discussed earlier formed major part of data used to analysed the competitiveness of money transfer market using the Policy analysis matrix.

b) Estimates of Migration and Remittances to Nigeria

Estimates of remittances to Nigeria are derived by factoring the migrant population, the number of migrants remitting, and the annual amount remitted, following Orozco (2007). The UN population data analyzed by the Global Migrant Origin Dataset shows

that migrants from countries with large populations are 3.9 percent of their total population. Although this figure also underestimates migration from many of those countries (Indonesia is a striking example), we have applied the average for that population to Nigeria. The resulting number is 5.1 million. Since the release of version four of Global Migrant Origin Database (GMOD), Development Research Centre on Migration, Globalisation and Poverty (Migration DRC) which form the base of Orozco (2007) analysis of estimates of migration and remittances to Nigeria, no other version has been released. Thus, the paper adopts the estimates generated by Orozco (2007) for its policy matrix analysis. With the obtained data on amounts remitted, and other prices, it becomes possible to evaluate the social and private profit as well as analyses the comparative advantages of Commercial Banks' money transfer operation.

Table 1 : Estimated Size of Remittances to Nigeria

Region	Annual \$ Sent per Migrant	Migrant Population	Estimated Total Remittances at 80% Remitting	Estimated Total Remittances at 70% Remitting
East Asia and Pacific	1,314.29	37,878.53	39,826,569.83	34,848,248.6
Europe and Central Asia	1,932.20	954,154.59	1,474,896,580.72	1,290,534,508.13
Latin America and Caribbean	1,200.00	10,950.85	10,454,414.98	9,198,717.10
Middle East and North Africa	1,200.00	145,703.47	139,875,328.62	122,390,912.54
North America	2,400.00	763,401.14	1,465,730,197.24	1,282,513,922.59
South Asia	1,200.00	61,776.72	59,305,651.81	51,892,445.33
Sub-Saharan Africa	325.00	3,197,540.02	831,360,404.14	727,440,353.62
Total	9,571.49	5,171,405.32	4,021,505,089.99	3,518,816,953.74

Source: Orozco (2007)

To figure in table 1 we apply available data on the charges on money transfer (The charges are to some extent homogenous), as well as on how many transactions/ transfer from different regions where data exist. In addition, Percentage of share in total transaction was computed for reported transactions by

Banks/partners (Table 2) were applied to derive the proportion of inbound remittance (in Table 1) that could be attributed to banks/partners. This provide platform to generate Private prices (excluding value added tax), social prices (including value added tax) and the divergences.

Table 2 : Percent share in Transactions of Banks Paying Remittances by Partner

Banks in Nigeria	MTO	Transactions	% share in total transactions
Keystone Bank	MoneyGram	30,000	18.9
Enterprise Bank	MoneyGram		
Spring Bank Nigeria.	MoneyGram		
Union Bank of Africa Plc.	MoneyGram		
United Bank for Africa Plc. (UBA)	MoneyGram		
Mainstreet Bank Nigeria Plc	Coinstar	5,000	1.7
Access Bank Nigeria Limited	Western Union	5,000	79.4
Diamond Bank Plc	Western Union	8,000	
EcoBank	Western Union	8,000	
Fidelity Bank Plc	Western Union	10,000	
First Bank Nigeria Plc	Western Union	125,000	
Zenith Bank Plc	Western Union	5,000	
First City Monumental Bank Plc	Western Union	70,000	
Guaranty Trust Bank Plc	Western Union		
IBTC—Chartered Bank Plc	Western Union		
Skye Bank Nigeria Ltd.	Western Union		
Skye Bank Nigeria Ltd.	Western Union		
Wema Bank Plc	Western Union		
Nigeria International Bank Limited (Citigroup)	N/A		
Stanbic Bank Nigeria Ltd.	N/A		

Source: Orozco (2007) and Author's calculation.

Of the 291,000 reported in survey by Orozco in 2007, Western Union is the largest competitor, controlling approximately 80 percent of money transfers

through banks followed by money Gram with about 19 percent.

IV. RESULTS AND DISCUSSION

Table 3

A	B	C	D
Revenue(₦)	Cost(₦)		Profit(₦)
	Labour	Capital	
Private Price 756800	799260	243860	-286320
Social Price 3065040	252000	292632	2520408
Divergence -2989360	-172074	-268246	-2549040

Table 4 : Policy Analysis Matrix and Ratios for Remittance Transfer

Indicators	Values
PCR	-0.01
SRP	-0.83
DRC	0.10
SCB	0.18
EPC	-0.01

Tables 3 and 4 shows the results of the policy analysis matrix and ratios for remittance transfer. The divergence in the revenue, costs and profits were negative. This indicates that the society value remittances more than the market. Therefore, market failures and policy distortions have reduced the private valuation of money transfer Operator. The result also showed a loss of 2 kobo over every inbound transfer by receivers and a gain of ₦4.6 over a naira invested by Banks. The DRC result is 0.10. This implies an efficient use of domestic resource and also shows that there is comparative advantage. A SCB of 0.18 indicates a very weak competitiveness of the money transfer market. EPC result was 0.01. This reflects that the receivers of remittances were not protected through government policy. The PCR was negative which shows that the system is not competitive and a negative SRP shows a tax on inbound transfer.

V. CONCLUSION AND RECOMMENDATION

In conclusion, Money transfer in Nigeria was not privately competitively probably because the market is dominated by a major Money transfer organization (Western Union) and majority of its partners in Nigeria. A positive social profit therefore shows the potential of the enterprise in improving the welfare of the senders' family back home if the system is not taxed.

Governments and policy makers can contribute to improving competition, lowering transaction costs, and reducing informality. Government need to increase its awareness about the existence of a monopoly in money transfers to Nigeria, and the adverse effects this has on the country and clients.

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