Growth Effects of Remittances within Regional Trading Blocs in African Countries

Fatma Mabrouk[1.2.3,*]

[1]*Department of Economics, College of Business and Administration, Princess Nourah bint Abdulrahman University, P.O. Box 84428, Riyadh 11671, Saudi Arabia.*

[2]*Center for Economic and Social Studies and Research. 1003 Tunis- Tunisia.*

[3]*Bordeaux School of Economics. 33600 Pessac, France.*

Abstract: This paper examines the role of remittances induced through regional integration on economic welfare in Africa. The study uses GMM estimates based on one-step dynamic panel to correct for simultaneity bias and data for the period 2007–2018 and finds that remittances have a negative significant impact on GDP per capita (as a measure of economic welfare) in Africa. The impact of formal remittances on welfare is, however, higher in more developed financial markets. The results further show that as the geographical size of the regional bloc decreases, the effects of formal remittances decrease. The result implies that it is easier and cheaper to transfer remittances informally in smaller regional blocs, which may raise the problem of the high cost of sending remittances formally within these regions.

JEL Classification: F14, F15, F24
Keywords: Remittances, Regional Integration, Economic Welfare.

INTRODUCTION

Regional integration has experienced a revitalization in the world since the mid-1990s. This revival also concerns the countries of Africa. Experiences of regional integration during the first waves of the 1960s and 1970s produced mixed and often disappointing results in terms of trade creation, consumption, and the acceleration of economic growth. One of the main objectives of regional integration is to improve people's general welfare, including income per capita, consumption, and labor market outcomes such as employment and wages, and to accelerate sustained economic development. There are several channels through which this effect is expected to work. One of the main channels is the human capital channel (Yang 2008; Zheng & Du, 2020; Iskakov, 2019) which works from regional integration to migration and remittances channel to welfare. Several authors have found that regional integration increases migration (White, 2009; Bryant & law, 2004; Mundra, 2005; Kleinschmidt, 2017; Lavenex & Piper, 2022) and that migration improves economic growth and welfare through remittances and productivity growth (Leon-Ledesma & Piracha, 2004; Chami et al., 2003) or through technology transfers and remittances (Kugler & Rapoport, 2007; Butorina & Borko, 2022). Remittances therefore play an intermediary role between migration and the financing of development in the origin country and a very handy supplementary source of income in the originating countries, raising standards of living and reducing poverty. Remittances can be helpful in reducing unemployment, smoothing consumption, and increasing investments in the recipient countries. Other channels through which remittances can affect economic growth and welfare include financial sector channels (Giuliano & Ruiz-Arranz, 2009; Ojeyinka & Ajide, 2022), investments (Osili, 2004; Ojeyinka & Ajide, 2022), labor supply (Chami et a1., 2003; Salomone, 2006; Habib, 2022) and institutions (Catrinescu et al., 2009; Ikpesu et al., 2022).

While remittances can have desirable positive welfare effects on the country of origin (Brown, 1994; Yang, 2005), they may also have very adverse negative effects on the originating countries (Zachariah et al., 2001). For instance, they may be a disincentive to work, hence reducing productivity in the recipient country (Acosta, 2007; Chami et al. 2008). Remittances may also have no impact, for example, if the financial markets are not well-developed (Catrinescu et al., 2009; Chami et al., 2003 and 2008). The extent to which remittances impact on welfare and development in the recipient country may be impeded by a number of factors, including the level of financial sector development, education level, and ease of labor mobility (Giuliano & Ruiz-Arranz, 2009) among other factors. While the literature on the relationship between remittances and welfare for countries in a regional trading bloc is scant, available evidence shows that welfare effects for countries within a trading bloc are manifestly different compared to those not members of any bloc. Krugman (1991) shows that larger blocs with a membership of more than three experience fewer welfare benefits compared to

*Address correspondence to this author at Department of Economics, College of Business and Administration, Princess Nourah bint Abdulrahman University, P.O. Box 84428, Riyadh 11671, Saudi Arabia;
Emails: FMMabrouk@pnu.edu.sa and mabrouk.fatma@gmail.com

smaller ones. However, De Melo & Panagariya, 1995 and Winters, 1999 show that the welfare losses from trade integration are larger among countries within a regional bloc because of comparative advantage. For countries in which trading blocs have given up revenue streams formerly imposed on cross-border mobility of goods and services, the welfare assessment is critical.

The aim of this paper is to assess the extent to which integration-induced remittances affect the welfare of the country of origin through their impacts on income per capita growth, the main measure of welfare. In this principal way, the paper contributes to the debate over the relationship between remittances and welfare. We begin from the premise that the effects of remittances on welfare in the country of origin are manifestly different for countries that are members of a regional bloc compared to countries that are not members of any bloc, an angle that we have not encountered in the literature so far. Evolving remittances towards regional integration, sustainability, and inclusivity. The rest of the paper is organized as follows: Section two reviews related literature. Section three outlines the methodology, while sections four and five give the results and conclusions, respectively.

Remittances and Economic Welfare

Several studies (Obiakor et al. (2021) ; Yamada et al. (2022); Feld (2021)) have examined the relationship between migration, remittances, and welfare in general (sustainable economic development, poverty, etc.). Bayangos & Jansen (2009) explore the macroeconomic impact of remittances on the Philippines economic growth and trace the principal remittance channels affecting the main macroeconomic variables. Results indicate that remittances play an important role in the Philippines' economy. There is bidirectional causality between remittances and real personal consumption, real disposable personal income, real deposit liabilities, inflation, real GDP, labor force participation, and non-agricultural compensation. De la Fuente (2010) on the other hand, uses data from a sample of 18893 Mexican rural households in 506 communities between 1998 and 2000 and finds that remittances significantly reduce poverty. The author argue that decreased remittances increase the risk of poverty. They find that this result is also true for the vulnerability of rural poor households, and argue that the extra material and financial resources that become available through remittances will offset the reduction of human capital in origin countries. Anzoategui et al., (2014) use data from a household level survey for El Salvador to analyze the relationship between remittances and financial inclusion and find that remittances have a positive impact on financial inclusion by promoting the use of deposit accounts. However, the impacts on loans are not significant, which they attribute to the role of remittance in easing households' credit constraints, thereby reducing their demand for credit. Similarly, Beine et al. (2012) find that remittances have a highly significant positive impact on financial openness in 66 developing countries from 1980 to 2005. They argue that the more remittances a country receives, the more likely it will be "financially open". Nyamongo et al., (2012) examine the role of remittances and financial development in economic growth in 36 African countries with data covering the period 1980–2009 and find that remittances play an important role in growth for African countries. However, they find that the volatility of remittances has a negative effect on growth. While some studies, like the one reviewed above, find the positive impacts of remittances on welfare, others have found that remittances may have different impacts depending on several factors within the recipient country. Catrinescu et al. (2009) examine how remittances contribute to long-term economic growth and welfare in countries where institutions are more developed. With data covering the period 1970–2003 from 162 countries, the results show that institutions play an important role and represent a transmission channel for remittances, which positively affect economic growth. A solid institutional environment helps the efficient and productive use of remittances. Ramirez (2012), on the other hand, examines the role of remittances in economic growth in 23 countries over an 18-year period (1990–2007) and finds that the effects of remittances on economic growth are negative in more developed financial markets. This result is explained by arguing that remittances and the financial sector are substitutes.

Yet other studies have found negative effects of remittances on general welfare, including effects on incentives to work and labor supply. Lopez et al. (2007) use a computable general equilibrium model for Jamaica and find that an increase in remittances reduces labor supply. Acosta (2007) investigates the impact of remittances on the labor market (labor participation and hours worked) using data from a nationally representative household survey "Encuest de Hogares de Propositos Multiples" (2000) and finds a significant relationship between remittances and lower labor force participation among men and women in both rural and urban areas. They also find that increased remittances reduce the hours of work. The author also finds that the indirect effect of migrant remittances is limited and not significant, since remittances can't help create employment opportunities in regions that have limited labor and credit markets. Their results also show that remittances tend to be spent on high leisure consumption for the rural and unskilled poor.

Other studies find that the impacts of remittances on welfare may differ by type of sender and recipient (gender of recipients and skill level of migrants). For instance, Justino & Shemyakina (2012), for instance, examine the relationship between remittances and labor supply using microeconomic data from the living standards survey (2003) in Tajikistan and find that remittances have a negative impact on labor force participation and labor hours supplied for both men and women, but the effect is more intense for men than women. The authors suppose that the first channel of labor supply reduction is labor migration, as opposed to remittances, which act as a disincentive to work. They investigate the effect of remittances on households that do not have migrant workers but do receive remittances and find no effect on labor supply. They also discover that remittances only reduce female labor supply in "conflict zones." The authors explain that armed conflict is associated with significant changes in gender relations, with women getting more involved in paid labor when the men are out fighting or dead from conflict, but remittances can substitute for labor income in such cases. Furthermore, remittances affect the overall rise in the standard of living for immigrant families who stay in the country.

It looks at the implications of lowering income inequality after first looking at the positive impact on the various poverty lines in the population. The effects of remittances on the potential for enhanced status empowerment of migrant and stay-at-home women are being investigated. Yamada et al. (2022) recently looked into the situation in Tajikistan, one of the nation's most dependent on remittances worldwide. After accounting for endogeneity, the study uses a panel dataset gathered across the country and an instrumental variable estimator to confirm a favorable connection between receiving remittances and household welfare. Additionally, it is discovered that homes with a male, older, or less educated head of household have a more obvious effect of remittances on household spending. The pandemic's detrimental impact on household finances is demonstrated by combining predicted coefficients with the anticipated drop in remittance inflows.

Although remittance inflows are currently the main source of foreign money for developing nations, little study has yet conclusively demonstrated how remittances affect household welfare. An examination of household consumption surveys in several developing nations reveals that health spending is very sensitive to the outside resources provided by migrants and leads to an overall improvement in the health condition of households. (Feld, 2021). Osili (2007) examines migrants' decisions to save and/or to remit money to their origin countries and finds that skilled migrants are less likely to invest their remittances in the country than unskilled migrants, due to low savings.

Little evidence exists on the relationship between remittances and welfare within regional integration arrangement setups. The closest we have come across is Coniglio (2002), who tests the impact of regional integration on migration and remittances and finds that increased regional integration between countries increases remittances between the countries, but does not mention the impact of remittances on welfare. Studies on welfare within regional integration blocs, however, show that the effects of remittances on welfare for countries in a regional trading bloc are manifestly different compared to those not members of any bloc. Krugman (1991) shows that declining welfare starts to rise when there are three countries in a bloc. However, Srinivasan (1998) allows for both symmetric and asymmetric blocs and points out that there is no necessary link between the number of blocs and welfare. De Melo & Panagariya, 1995 and Winters, 1999 show that the welfare losses from trade integration and other forms of cooperation are likely to be larger among countries within a regional bloc.

DATA AND METHODOLOGY

Data

In this section, we outline the data used in the study, the definition of variables, and the model. To achieve the objective of this study, we use annual data from 45 African countries over the period 2007-2018 obtained from the World Development Indicators (2019) and CEPII database. We proxy welfare by the Gross Domestic Product (GDP) per capita.

Variables	Definitions	Sources
GDP per capita	GDP per capita, PPP (constant 2005 international $)	WDI (2019)
Population	Population growth (annual %)	WDI (2019)
Openness	Trade (% of GDP)	WDI (2019)
Education	School enrollment, secondary (% gross)	WDI (2019)
Investment	Gross fixed capital formation (% of GDP)	WDI (2019)
Remittances	Personal remittances, received (% of GDP)	WDI (2019)
Inflation	Consumer Price index (2005 = 100)	WDI (2019)
Financial development	Money and quasi money (M2) as % of GDP	WDI (2019)
Consumption	Household final consumption expenditure (annual % growth)	WDI (2019)
Areas	The land area of countries/regions. The area in km ^{2}	CEPII GeoDist

The Model

To correct for reverse causality between remittances and GDP per capita as a measure of welfare, we use the Generalized Method of Moments (GMM), I-step dynamic panel. While increased remittances may trigger improvements in standards of living as measured by GDP per capita, deterioration of standards of living may also trigger increased remittances to smooth consumption in the receiving countries. Based on frameworks posited by Barro (1989, 1991) and Chami et al. (2003), the relationship that we want to estimate is presented below as equation (1).

$$GPD\ per\ capital\ growth_{it} = \alpha_1 + \alpha_2 Remittance_{it} + \alpha_3 X_{it} + RI + \varepsilon_{it} \quad (1)$$

Where i denotes the cross-section dimension (countries) and t denotes the time series period. X is a control variable matrix that includes financial development as measured by money and quasi money (M2) as a percentage of GDP, investment as measured by the ratio of gross fixed capital formation to GDP, openness as measured by the trade share of GDP (total imports plus exports), human capital development as measured by the ratio of secondary school enrollment to GDP, population growth (annual %), inflation as measured by the consumer price index, and aggregate consumption as measured by the consumer price index.

The study considers eight regional bloc variables: Southern African Development Community (SADC), Southern African Customs Union (SACU), Common Monetary Area (CMA), Common Market for Eastern and Southern Africa

(COMESA), Economic Community of West African States (ECOWAS), Customs and Economic Union of Central Africa (CEUCA), East African Community (EAC), The Maghreb (Maghreb). For each regional bloc variable, a dummy variable is generated that shows whether a country is a member of that bloc or not.

To test the effects of remittances on welfare within regional integration blocs, we introduce an interaction term between remittances and regional blocks dummy variables as shown in model (2) below.

$$GPD\ per\ capita\ growth_{it} = \alpha_1 + \alpha_2 Remittance_{it} + \alpha_3 X_{it} + RI + \alpha_4 (Remittance_{it} * RI) + \varepsilon_{it} \quad (2)$$

The relevance of the GMM estimator is based on the validity of two tests: The Sargan test of instrument identification validity and the test of autocorrelation errors orders 1 and 2, AR (1) and AR (2). The test for autocorrelation does not reject any specifications because the non-rejection of the null hypothesis implies that instrumental variables are not correlated with the residual and are satisfying the orthogonally required conditions. The overall Sargan identification test confirms the validity of all instruments used in each estimation. The results of the Sargan test, AR (1), AR (2) and Wald tests show that all specifications are robust.

RESULTS AND DISCUSSION

The results in Table **1** (column 1) show that remittances have a significant negative impact on economic welfare as measured by GDP per capita in Africa. The values in parentheses in the tables are the robust standard errors. These results are different from those of obtained by Catrinescu et al., (2009) and Chami et al., (2003, 2008) who find that remittances may have no significant direct effect on growth and welfare. Adding regional dummy variables (Table **1**, from column 2 to 4) the results show that membership in a regional block generally reduces the welfare of member states. Remittances still have significant impact on GDP per capita in Africa, and deteriorate economic welfare in COMESA, Maghreb, ECOWAS and CEUCA regional blocs. A possible explanation is that intra-regional formal remittance flows are an unnecessary channel for growth spillovers in African countries. To control for the role of informal remittances, we use the physical size of a regional bloc as an alternative measure of a regional bloc and hypothesize that the impacts of formal remittances may be stronger in smaller blocs than in larger blocs.

Table 1. Dependent Variable - GDP Per Capita Growth.

	(1)	(2)	(3)	(4)	(5)
Constant	0,0356	0,0745*	0,0764	0,0987*	0,1086*
	(0,0433)	(0,0441)	(0,0489)	0,0513	(0,0559)
GDP per capita growth (t-1)	0,9710***	0,9660***	0,9697***	0,9620***	0,9654**
	(0,0086)	(0,0129)	(0,0126)	0,0143	(0,0125)
Population	-0,0186**	-0,0172**	-0,0179**	-0,0191**	-0,0183**
	(0,0079)	(0,0075)	(0,0085)	0,0086	(0,0093)
Openness	-0,0088	-0,0069	-0,0092	0,0003	-0,0087
	(0,0078)	(0,0085)	(0,0085)	0,0104	(0,0110)
Education	0,0205*	0,0233*	0,0231*	0,0140	0,0208*
	(0,0123)	(0,0127)	(0,0133)	0,0106	(0,0123)
Investment	0,0258**	0,0257**	0,0233**	0,0176*	0,0162*
	(0,0101)	(0,0108)	(0,0105)	0,0095	(0,0093)
Remittances	-0,0003***	-0,0005***	-0,0004***	-0,0001	-0,0002
	(0,0001)	(0,0002)	(0,0001)	0,0003	(0,0003)
Inflation	0,0063	0,0062	0,0048	-0,0009	-0,0044
	(0,0198)	(0,0199)	(0,0198)	0,0188	(0,0196)
Financial development	0,0111*	0,0012	-0,0017	0,0077	0,0033
	(0,0060)	(0,0073)	(0,0051)	0,0090	(0,0061)
Consumption	0,0004*	0,0003*	0,0003*	0,0004**	0,0004*
	(0,0002)	(0,0002)	(0,0002)	0,0002	(0,0002)

SADC		-0,0092*	-0,0064	-0,0082	-0,0028
		(0,0053)	(0,0043)	0,0054	(0,0043)
SACU		0,0050		0,0060	
		(0,0050)		0,0075	
CMA			-0,0008		-0,0024
			(0,0034)		(0,0044)
COMESA		-0,0146***	-0,0140***	-0,0120***	-0,0127***
		(0,0043)	(0,0046)	0,0038	(0,0046)
ECOWAS		-0,0185***	-0,0178***	-0,0160***	-0,0158***
		(0,0052)	(0,0050)	0,0054	(0,0057)
CEUCA		-0,0168***	-0,0176***	-0,0210””*	-0,0226***
		(0,0057)	(0,0049)	0,0054	(0,0049)
EAC		-0,0067	-0,0064	-0,0103***	-0,0090**
		(0,0049)	(0,0044)	0,0038	(0,0035)
Maghreb		-0,0089*	-0,0092**	-0,0010	-0,0031
		(0,0046)	(0,0041)	0,0043	(0,0035)
SADC*REM				-0,0011	-0,0005
				0,0022	(0,0019)
SACU*REM				-0,0122*	
				0,0064	
CMA*REM					-0,0034
					(0,0075)
COMESA*REM				0,0076***	0,0067***
				0,0017	(0,0014)
ECOWAS*REM				-0,0034	-0,0011
				0,0056	(0,0059)
CEUCA*REM				-0,0207**	-0,0196**
				0,0093	(0,0095)
EAC*REM				-0,0010	-0,0007
				0,0025	(0,0026)
Maghreb*REM				-0,0070**	-0,0043*
				0,0030	(0,0024)
Test for AR(1) errors	-3,3314	-3,4276	-3,40005	-3,3897	-3,34618
	[0,0009]	[0,0006]	[0,0007]	[0,0007]	[0,0008]
Test for AR(2) errors	-0,6874	-0,7863	-0,79687	-0,64154	-0,779657
	[0,4918]	[0,4317]	[0,4255]	[0,5212]	[0,4356]
Sargan over-identification	65,0957	61,4309	64,2159	58,8324	59,8588
	[0,4383]	[0,5679]	[0,4689]	[0,6592]	[0,6236]

Wald (joint) test	214087	611765	737260	361542	961701
	[0,0000]	[0,0000]	[0,0000]	[0,0000]	[0,0000]
Time dummies	Yes	Yes	Yes	Yes	Yes
Wald (time dummies)	31,879	39,9545	39,3338	46,6126	44,8549
	[0,0004]	[0,0000]	[0,0000]	[0,0000]	[0,0000]
Number of instruments	84	91	91	98	98
Observations	223	223	223	223	223

Source: Calculated using data from World Development Indicators. World Bank (2019). Generalized method of moments. 1-step dynamic panel. The values in (.) are the Robust Std. Err. * p<0.1; ** p<0.05; *** p <0.01. The values in [.] are the p-value.

Table 2. Dependent Variable - GDP Per Capital.

	(1)	**(2)**	**(3)**	**(4)**
Constant	0,0735*	0,0712	0,0904	0,0929
	(0,0423)	(0,0469)	(0,0554)	(0,0578)
GDP per capita growth (t-1)	0,9686***	0,9735***	0,9646***	0,9707***
	(0,0141)	(0,0132)	(0,0155)	(0,0127)
Population	-0,0151**	-0,0150*	-0,0154*	-0,0142
	(0,0072)	(0,0079)	(0,0079)	(0,0081)
Openness	-0,0050	-0,0068	0,0015	-0,0062
	(0,0084)	(0,0085)	(0,0100)	(0,0106)
Education	0,0184	0,0172	0,0102	0,0144
	(0,0123)	(0,0133)	(0,0109)	(0,0127)
Investment	0,0219**	0,0197**	0,0167*	0,0148*
	(0,0096)	(0,0090)	(0,0089)	(0,0084)
Remittances	-0,0005***	-0,0004***	-0,0001	-0,0002
	(0,0002	(0,0001)	(0,0003)	(0,0003)
Inflation	0,0081	0,0069	0,0001	-0,0023
	(0,0189)	(0,0188)	(0,0180)	(0,0185)
Financial development	0,0005	-0,0027	0,0075	0,0026
	(0,0077)	(0,0050)	(0,0086)	(0,0055)
Consumption	0,0003*	0,0003*	0,0004**	0,0004**
	(0,0002)	(0,0002)	(0,0002)	(0,0002)
SADC Area	-0,0016**	-0,0012**	-0,0009	-0,0003
	(0,0007)	(0,0005)	(0,0009)	(0,0007)
SACU Area	0,0009		0,0009	
	(0,0009)		(0,0012)	
CMA Area		0,0000		-0,0004
		(0,0005)		(0,0007)
COMESA Area	-0,0021***	-0,0020***	-0,0016***	-0,0016***
	(0,0005)	(0,0005)	(0,0005)	(0,0006)

ECOWAS Area	-0,0040***	-0,0038***	-0,0026*”	-0,0027**
	(0,0008)	(0,0007)	(0,0011)	(0,0011)
CEUCA Area	-0,0032***	-0,0034***	-0,0032***	-0,0036***
	(0,0008)	(0,0007)	(0,0011)	(0,0009)
EAC Area	-0,0015*	-0,0015**	-0,0013*	-0,0012*
	(0,0008)	(0,0007)	(0,0007)	(0,0006)
Maghreb Area	-0,0014***	-0,0015***	0,0002	-0,0002
	(0,0005)	(0,0004)	(0,0008)	(0,0005)
SADC Area *REM			-0,0002	-0,0001
			(0,0003)	(0,0003)
SACU Area *REM			-0,0018*	
			(0,0010)	
CMA Area *REM				-0,0006
				(0,0012)
COMESA Area *REM			0,0016**	0,0013**
			(0,0007)	(0,0006)
ECOWAS Area *REM			-0,0010	-0,0005
			(0,0011)	(0,0011)
CEUCA Area *REM			-0,0033**	-0,0030*
			(0,0016)	(0,0017)
EAC Area *REM			-0,0012	-0,0009
			(0,0008)	(0,0008)
Maghreb Area *REM			-0,0010**	-0,0006*
			(0,0004)	(0,0003)
Test for AR(1) errors	-3,45515	-3,42575	-3,42747	-3,38204
	[0,0005]	[0,0006]	[0,0006]	[0,0007]
Test for AR(2) errors	-0,750668	-0,755947	-0,608583	-0,739394
	[0,4529]	[0,4497]	[0,5428]	[0,4597]
Sargan over-identification	59,0939	62,533	59,144	61,7843
	[0,6502]	[0,5285]	[0,6485]	[0,5553]
Wald (joint) test	653891	101149	330053	153769
	[0,0000]	[0,0000]	[0,0000]	[0,0000]
Time dummies	yes	Yes	Yes	yes
Wald (time dummies)	40,4804	40,0408	50,2896	50,1625
	[0,0000]	[0,0000]	[0,0000]	[0,0000]
Number of instruments	91	91	98	98
Observations	223	223	223	223

Source: Calculated using data from World Development Indicators. World Bank (2019). Generalized method of moments. 1-step dynamic panel. The values in (.) are the Robust Std. Err. * p<0.1; ** p<0.05; *** p <0.01. The values in [.] are the p-value.

Table **2** reports the results from the estimation with this alternative measure. The point-to-point comparison effects of regional dummies (Table **1**) and physical areas (Table **2**) variables on welfare show a significant decrease in coefficient values of regional variables in Table **2** compared to the results in Table **1** when we use the regional dummies. The results show that the impact of formal remittances on welfare reduces once a bloc is defined by the physical area, implying that the effects of formal remittances is less than the bloc size increases physically. It is therefore consistent to argue that the role of formal remittances on economic welfare are more pronounced in bigger-sized blocs than small ones, since the cost of travel across smaller blocs is small and therefore informal remittances are more frequent in such blocs.

CONCLUSION, IMPLICATIONS AND FUTURE RESEARCH DIRECTIONS

Several studies have examined the role of remittances in economic welfare in general. Some studies find that remittances may have positive effects on economic growth, poverty reduction, and consumption smoothing. Other studies find that remittances may have negative or no impacts. Yet others find that remittances may only have positive impacts under certain circumstances, including in more developed financing markets, and may have negative effects if these conditions are not conducive. In such cases, the effects of remittances on economic welfare may be more adverse (more negative) for countries that are members of regional integration arrangements compared to non-member countries. Members of regional integration countries give up revenue streams imposed on cross-border mobility of goods and services, with the hope that the welfare gains from integration outweigh the foregone revenue streams.

With regard to the relationship between economic welfare and remittances in a panel of African nations, this study identifies the role of remittances induced through regional integration in economic welfare in Africa. The results show that remittances have a direct impact on economic welfare as measured by GDP per capita and reduce welfare. As a possible explanation, we cite the deep financial development market and the high cost of sending money. This is mainly attributed to the ease and reduced cost of transferring remittances in countries with more developed financial markets. In addition, we find that the impact of formal remittances on welfare reduces once a bloc is defined by the physical area, implying that the effects of formal remittances are less than the bloc size increases physically.

For policymakers, the results here underscore the importance of cumulative education and investment opportunities in the origin countries to be able to take advantage of the flows for welfare gains. Doing business will be simpler and administrative burdens will decrease with the reduction of tariffs and non-tariff obstacles. The large-scale ratification and implementation of the African Continental Free Trade Agreement will be part of this strategy. Giving infrastructure development a high priority in African countries with available funding, and allowing trade within and between sub-regions. The fact that formal remittances are less important in smaller blocs may be a pointer to the high cost of transferring the remittances and therefore a call for action to reduce the costs of transfer in order to increase the welfare gains. For future studies focusing on specific blocs and countries, appropriate estimation techniques can be used to assess whether the established findings can be tested empirically.

REFERENCES

Acosta, P. 2007. Entrepreneurship, Labour Markets and International Remittances: Evidence from El Salvador. International Migration, Economic Development & Policy. Copublication World Bank and Palgrave Macmillan.

Anzoategui, Diego; Asli Demirgu c-Kunt & Maria Soledad Marti"nez Peri'a. 2014. "Remittances and Financial Inclusion: Evidence from El Salvador." World Development, Vol. 54, pp338-349

Bayangos, V.B. and Jansen. K. 2009. "The Macroeconomics of Remittances in the Philippines." ISS Working Paper Series/General Series, 470(470), 1-35.

Beine, M., Lodigiani, E., & Vermeulen, R. 2012. Remittances and financial openness. Regional Science and Urban Economics, 42(5), 844-857.

Bryant, J.; D. Law et M. Genc. 2004. "Trade and Migration to New Zealand." New Zealand Treasury Wellington, (18), 1-36.

Butorina, O. V., & Borko, Y. A. (2022). Benefits of Regional Integration: Redefining the Concept. Herald of the Russian Academy of Sciences, 92(2), S105-S112.

Catrinescu, Natalia; Miguel Leon-Ledesma; Matloob Piracha and Bryce Quillin. 2009. "Remittances, Institutions, and Economic Growth." World Development, 37(1), 81-92.

Chami, R.; A. Barajas; T. Cosimano; C. Fullenkamp; M. Gapen et P. Montiel. 2008. Macroeconomic Consequences of Remittances. Washington, DC: International Monetary Fund, 94.

Chami, R.; C. Fullenkamp and S. Jajah. 2003. "Are Immigrant Remittance Flows a Source of Capital for Development?" International Monetary Fund Working Paper, (2189), 1-47.

Combes, J. L., and Ebeke, C. 2011. Remittances and household consumption instability in developing countries. World Development, 39(7), 1076-1089.

Coniglio, Nicola A. 2002. "Regional Intergration and Migration: An Economic Geography Model with Hetergenous Labour Force." unpublished work.

De la Fuente, Alejandro. 2010. "Remittances and Vulnerability to Poverty in Rural Mexico." World Development, 38(6), 828-39.

De Melo, J., & Panagariya, A. (Eds.). 1995. New dimensions in regional integration. Cambridge University Press.

Demirgüç-Kunt, A., Córdova, E. L., Pería, M. S. M., & Woodruff, C. (2011). Remittances and banking sector breadth and depth: Evidence from Mexico. *Journal of Development Economics*, 95(2), 229-241.

Feld, S. (2021). Remittances and Household Welfare. In International Migration, Remittances and Brain Drain (pp. 103-122). Springer, Cham.

Giuliano, P., and Ruiz-Arranz, M. 2009. Remittances, financial development, and growth. *Journal of Development Economics*, 90(1), 144-152.

Habib, H. (2022). Remittances and Labor Supply: Evidence from Tunisia. *Journal of the Knowledge Economy*, 1-30.

Ikpesu, F., Akinola, A., & A. Ikpesu, O. (2022). Remittance flows and banking sector development in emerging markets: Do institutions matter?. *Journal of Transnational Management*, *27*(2), 85-96.

Iskakov, I. Z. (2019). Regional Integration Process and Strategy of Human Capital Formation. In International Science and Technology Conference "FarEastCon" (ISCFEC 2019) (pp. 204-207). Atlantis Press.

Justino, P., and Shemyakina, O. N. 2012. Remittances and Labour Supply in Post-Conflict Tajikistan. IDS Working Papers, 2012(388), 1-37.

Kleinschmidt, H. (2017). Migration, regional integration and human security: an overview of research developments. Migration, Regional Integration and Human Security, 71-112.

Krugman, P. 1991. The move toward free trade zones. Economic Review, 76(6), 5.

Kugler, M. and H. Rapoport. 2007. "International Labor and Capital Flows: Complements or Substitutes?" Economics Letters, 94(2), 155-62.

Lavenex, S., & Piper, N. (2022). Regions and global migration governance: perspectives 'from above','from below'and 'from beyond'. *Journal of Ethnic and Migration Studies*, 48(12), 2837-2854.

León-Ledesma, M., & Piracha M. (2004). "International Migration and the Role of Remittances in Eastern Europe." International Migration, 42(4), 65-83.

Lopez, J Humberto; Luis Molina and Maurizio Bussolo. 2007. "Remittances and the Real Exchange Rate. World Bank, Latin America and the Caribbean Region". World Bank Policy Research Working Paper, N°4213.

Mohapatra, S., Joseph, G., and Ratha, D. 2012. Remittances and natural disasters: ex-post response and contribution to ex-ante preparedness. Environment, Development and Sustainability, 14(3), 365-387.

Mundra, K. 2005. "Immigration and International Trade: A Semiparametric Empirical Investigation." *The Journal of International Trade & Economic Development*, 14(1), 65-91.

Ncube, M. and Brixiova, Z. 2013. Remittances and Their Macroeconomic Impact: Evidence from Africa, Working Paper Series N° 188 African Development Bank, Tunis, Tunisia.

Ncube, M.; Brixiova, Z.; and Meng, Q. 2014. Can Intra-Regional Trade Act as a Global Shock Absorber in Africa?, Working Paper Series N° 198 African Development Bank, Tunis, Tunisia.

Nyamongo, E. M., Misati, R. N., Kipyegon, L., & Ndirangu, L. (2012). "Remittances, Financial Development and Economic Growth in Africa." *Journal of Economics and Business*, 64(3), 240-60.

Obiakor, R. T., Akpa, E., & Okwu, A. T. (2021). The Effect of Inward and Outward Remittances on Welfare in Africa. Acta Universitatis Danubius. OEconomica, 17(2).

Ojeyinka, T., & Ajide, F. (2022). Remittance and financial development in Africa: A multidimensional analysis. Remittances Review, 7(1), 71-89.

Osili, U. 0. 2007. "Remittances and Savings from International Migration: Theory and Evidence Using a Matched Sample." *Journal of Development Economics*, 83(2), 446-65.

Osili, U.O. 2004. "Migrants and Housing Investments: Theory and Evidence from Nigeria." Economic Development and Cultural Change, 52(4), 821-49.

Ramirez, M. D. 2012. Do Financial and Institutional Variables Enhance the Impact of Remittances on Economic Growth in Latin America and the Caribbean? A Panel Cointegration Analysis. International Advances in Economic Research, 1-16.

Salomone, S. 2006. Remittances. Overview of the existing literature. European University Institute, available online, accessed at, 8.

Srinivasan, T. N. 1998. 12 Regionalism and the WTO: Is Nondiscrimination Passe?. The WTO as an international organization, 329.

White, R. 2009. "Immigration, Trade and Home Country Development: State-Level Variation in the Us Immigrant—Export Link." Journal of International Migration and Integration, 10(2), 121-43.

Winters, L. A. 1999. Regionalism vs. multilateralism. Market integration, regionalism and the global economy, 5-49.

Yamada, E., Shimizutani, S., & Murakami, E. (2022). Remittances, Household Welfare, and the COVID-19 Pandemic in Tajikistan. Asian Development Review, 39(02), 147-174.

Yang, D. 2005. International migration, human capital, and entrepreneurship: evidence from Philippine migrants' exchange rate shocks (Vol. 3578). World Bank Publications.

Yang, D. 2008. "International Migration, Remittances and Household Investment: Evidence from Philippine Migrants' Exchange Rate Shocks". The Economic Journal, 118, pp. 591-630.

Zachariah, K.C.; E.T. Mathew et S.I. Rajan. 2001. "Social, Economic and Demographic Consequences of Migration on Kerala." International Migration, 39(2), 43-71.

Zheng, S., & Du, R. (2020). How does urban agglomeration integration promote entrepreneurship in China? Evidence from regional human capital spillovers and market integration. Cities, 97, 102529.

Received: Sep 27, 2022 Revised: Oct 05, 2022 Accepted: Nov 28, 2022