Workers' Remittances and Economic Growth in MENA Countries: The Role of Financial Development

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Migrant remittances play an important role in stimulating economic development and contribute to raising financing as one of the sustainable development goals. Indeed, these funds enhance economic activity in general. International workers' remittances are considered as a prominent source of external financing for developing countries, constituting the second biggest source of foreign transfers to developing countries after foreign direct investment.[1]

Remittance flows rose in the Middle East and North Africa (MENA) by 9.1% to hit $59 billion in 2018. However, in 2020, due to the global economic slowdown caused by the novel coronavirus (COVID-19) epidemic, remittances to the MENA region are expected to fall by 19.6% to $47bn, following the 2.6% growth achieved in 2019.[2] This expected decline is a result of plummeting oil prices in the Gulf Cooperation Council (GCC) countries, considered the highest remitters in the world, leading to a sharp drop in money transfers received by the major remittance-receiving countries.

Indeed, since the World Health Organization announced it was a pandemic in March 2020, the swiftness and severity of the coronavirus shock to the global economy was unprecedented. The world is expected to witness a decline in growth rates. Goldman Sachs predicts world real Gross Domestic Product (GDP) will shrink by about 1% in 2020, more than the economic downturn caused by the 2008 global financial crisis.

The necessary containment measures are having detrimental effects on the global economy. The productive sectors of several countries came to a halt, and land borders and international airports were closed. Trade, aviation, tourism, supply chains as well as contractual businesses were afflicted by this global outbreak.

The GCC countries, which consistently rank among the top ten remitters in the world in terms of both amounts in dollars and share of GDP, are not exceptional.

The dual shock of the sharp decline in oil prices coupled with the coronavirus epidemic has had economic and social repercussions on these countries. Indeed, this region relies heavily on foreign workers for economic growth and contains some of the highest numbers of migrants of any country in the world, who remit large sums of money to their home countries every year.

Indeed, the economic stoppage brought about by the coronavirus (COVID-19) disease has rendered millions of workers unemployed, including migrants, who, in turn, have stopped remitting money to their families, leading to a substantial decline in remittances. COVID-19 is more than a health crisis; it is also a development crisis and a watershed in the global economy.

In this article, we examine the role of financial development as a channel through which migrants' remittances could affect economic growth in selected countries of the MENA region.

The top remittance-receiving MENA countries had a high rate of personal remittances, as % of GDP, during the period 1990-2018. Jordan, Lebanon and

[1] World Bank, "Migration and Remittances: Recent Developments and Outlook," *Migration and development Brief*,n. 31 April 2019.
[2] n, "COVID-19 Crisis Through a Migration Lens," *Migration and Development Brief* n.. 32 April 2020

Morocco represent the top three countries in this respect, where average personal remittances reach around 17%, 14%, and 7% of GDP, respectively (Chart1).

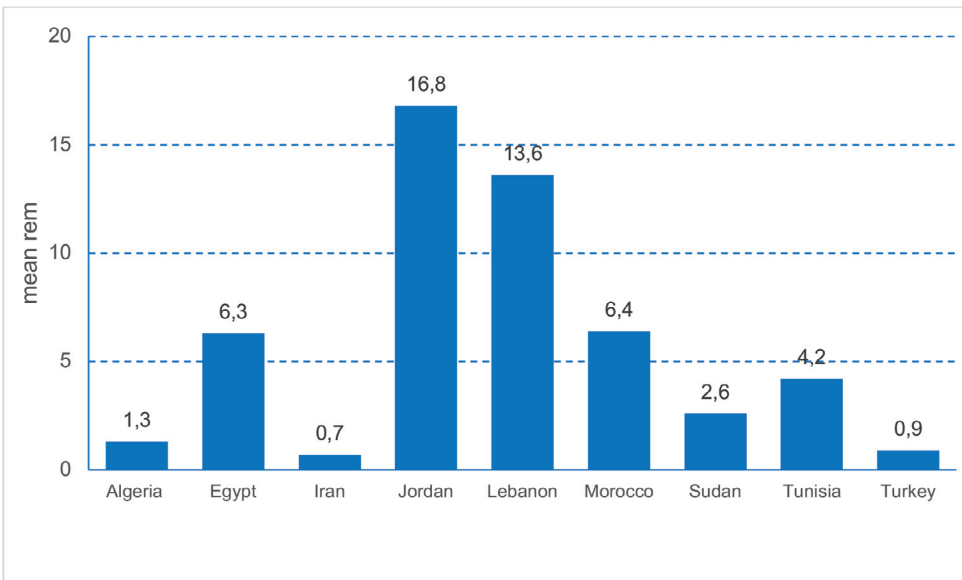
Our panel research for examining the financial development effect of remittances includes nine MENA countries, and our method is based on an estimation of a simultaneous equation system as an econometric model. In our study, we employ a generalized method of moments (GMM) estimation.

which remittances may affect economic growth are still considered a challenge to identify the direction of causality between workers' remittances and economic growth.

This article examines and empirically assesses the significance of the relationship between remittances and economic growth through the financial development channel.

Remittances sent by workers to developing nations enables the development of the financial systems in many developing states, including the MENA region (Aggarwal et al., 2006).

CHART 1 **Average Remittances as % of GDP, 1990-2018**



Source: World Bank Database

The remainder of this article is organized as follows: the section below reviews some major studies on the impact of migrants' remittances on economic growth and elucidates the nexus between remittances and financial development. The next section describes the data used and provides details on the model, and the following section presents a discussion of the main findings. Finally, the last section concludes and provides some policy recommendations.

A Brief Survey on Empirical Studies

A myriad of studies based on different data sets, sample periods, alternative specifications and estimation methods appeared useful to examine the relationship between migrants' remittances and economic growth. The diverse channels through

There is a wide body of literature that evidences the positive effects of remittances on financial sector development in the home country, and in the long run (e.g. Beck et al., 2009; Gupta et al.,2009; Aggarwal et al., 2011; Chowdhury, 2011; Williams, 2016; Ambrosius and Cuecuaha; 2016; Frometin, 2017). These studies advocate the importance of remittances in sustaining the smooth functioning of a financial system. Remittances that contribute to easing financing constraints are positively reshaping the financial arena. A high level of financial development is required to enable remittances to enhance growth.

There is only limited literature on remittances in the MENA region. Recent studies investigating the relationship between financial development and institutional quality and remittances in the MENA region

(Guetat and Sridi, 2017; ElHamma, 2018) contend that remittances are positively affected by investment opportunities, financial development, GDP growth and financial openness in home countries. Moreover, an increase of remittances is noticed when the political, economic and financial risks increase, indicating an altruistic motivation of the migrant's decision to remit. The results of these studies imply that a high level of financial development and a strong institutional environment are required to enable remittances to enhance growth.

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Other studies on remittances in MENA countries highlight a rather countercyclical effect of the inflow of remittances on the recipient countries' trade balance (Farzanegan and Hassan, 2019) and indicate that remittances have a negative impact on economic growth globally, while the findings reveal a positive impact of composite governance on economic growth (Saad and Ayoub, 2019).
Migrant remittances appear to have a positive and significant impact on economic growth, and an indirect effect of remittances on economic growth is revealed, especially via investment and households' final consumption expenditure channels (Ouni and Miniaoui, 2019). Remittances that traditionally contribute to easing financing constraints are positively reshaping the financial arena (Haouas et al., 2019).

Data Description and Methodology

Data for the variables used in our model and their proxies were obtained from the World Bank Development Indicators Database, 2019. Our sample includes nine MENA countries selected based on data availability: Algeria, Egypt, Iran, Jordan, Lebanon, Morocco, Sudan, Tunisia and Turkey. The period of the study is from 1990 to 2018.[3]

The objective of the study is to contribute to the existing economic literature and investigate the relationships between workers' remittances, financial market development and economic growth in selected MENA countries. Following the same model as Tiba and Frikha (2018), the augmented Cobb-Douglas production function, with constant returns and Hicks-neutral technical progress, can be presented as follows:
Where Y is real GDP per capita, K is the capital

$$Y = AK^{\alpha} L^{\beta} (FD)^{\gamma} R^{\delta} e^{\mu}$$

stock and L is labour. The variable A captures the efficiency of production. R is remittance inflows as a percentage of GDP, FD is financial market developmentis a white noise disturbance term.

Empirical Results and Discussion

In our study, we measure financial development (FD) using two ratios: the ratio of private domestic deposits to GDP and the ratio of money and quasi money (M2) to GDP.[4]
As a GMM estimator allows for the most flexible identification possible and can be identified by any set of moments, in Table 1, we report the output of the estimator.
The results in specification 1 indicate that the remittance inflows have a positive impact on economic growth but not a significant one. The results point out that an increase of 1% in remittances leads to a 0.15% increase in economic growth, which is consistent with the results of many studies, such as Lim and Simmons (2015) and Jouini (2015).
The development of the financial market has a positive and significant effect on economic growth in these countries. As can be seen in the table, an increase in money supply (M2) by 1%, increases economic growth by 0.17%. Therefore, a high level of financial development enables remittances to enhance economic growth.
Gross fixed capital formation (K) as the main determinant of economic growth is positive and significant at a level of 5%.

[3] The list of variables used in our model is available upon request
4 The summary statistics, showing the mean value, standard deviation, minimum and maximum of different variables for each country, as well as the panel, is available upon request.

TABLE 1	Results of the panel GMM estimator	
Independent variables	**Specification 1Rgdpg**	**Specification 2Rem**
Rgdp		0.038 (0.77)
Rgdpg(-1)	–-0.150 (1.51)	-0.057 (1.07)
Rem	0.150 (1.57)	
Rem (-1)	-0.113 (1.12)	–-0.817 (4.13***)
Rem (-2)	0.216 (1.57*)	
M2rgdp	0.173 (3.56***)	0.028 (1.11)
M2gdp (-1)	0.216 (3.46***)	
M2gdp (-2)	-0.078 (2.16**)	
Docredit		
Docredit (-1)		
Docredit (-2)		
K	0.087 (2.36**)	
FDI		0.070 (0.67)
Constant	1.049 (0.47)	0.968 (2.67**)
Hansen J-test	11.34 (0.210)	14.03 (0.023)
p-value		
Wald chi2	145.21	416
p-value	0.00	0.00

Where: *.** and *** indicate significance at 10%, 5% and 1% levels, respectively. Values in parenthesis are the estimated p-value. Hansen j-test refers to the overidentification test for the restriction in GMM estimator.

In specification 2, we find that the relationship between financial market development and remittance inflows is positive but not significant when we use money supply (M2). This suggests that highly developed financial markets will encourage migrants to send money through formal financial channels to their home countries.

Conclusion

Our article illustrates the effect of workers' remittances on economic growth through financial market development, employing the most recent panel data spanning the period 1990-2018 for some of the largest remittance-receiving countries in the MENA region, Our results imply remittance inflows can play a more decisive role in financial market development as well as in spurring economic growth. However, their singular significance is not extravagant. The other interesting result reveals the differential effect that a remittance shock has on the economy when the financial market is less developed.

The global findings support the argument that remittances are increasingly playing an important role in the economic growth of these countries.

For policymakers of the MENA countries, who seek to attract remittances, the remittance shock caused by COVID-19 should be cause for them to rethink. Indeed, the eruption of the novel coronavirus (COVID-19) has radically disrupted the global economy, changing the situation of migrant workers and exposing them to extreme vulnerability, and thereby affecting remittance flows. On the fallout of this outbreak, on Friday 6 April in the Wall Street Journal, Henry Kissinger stated that "*the world will never be the same after the coronavirus*," and he continued, "*While the assault on human health will–hopefully–be temporary, the political and economic upheaval it has unleashed could last for generations*."

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