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The ambiguous effects of remittances on health expenditure: a panel data analysis

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Abstract

This article analyzes how remittances impact public health expenditure in developing countries. By using various estimation techniques on panel data covering 46 developing countries, we show that remittances increase private health expenditure and reduce public health spending. Remittances create a crowding-out effect at the expense of the public sector because (1) they increase the use of private services instead of public healthcare, and (2) they decrease public incentives for investments in health. Our conclusions are ambiguous because on the one hand remittances represent a powerful way to finance private health expenditure, while on the other hand they reduce the healthcare provision from the public sector.

1. Introduction and literature review

For many developing countries, remittances represent an important source of external flows. According to the World Bank, migrants' remittances were expected to amount to 429 billion dollars in 2016 in the developing world, after reached 440 billion dollars in 2015. Since the 1990s, these private flows have greatly increased and are generally considered as more stable than foreign direct investments or international aid. It is well known that remittances contribute to stabilizing recipients' income, especially in poor countries where households' revenue is sometimes very sensitive to exogenous factors, e.g. weather, world prices, political environment and so forth.

Beyond this positive effect on income, many researchers have also shown that remittances are used to finance social expenditure, in particular on health and education (Ambrosius and Cuecuecha, 2013; Frank *et al.*, 2009; Medina and Cardona, 2010; Salas, 2014). A growing literature has estimated the impacts of remittances on health outcomes and private expenditure at the individual or household level. To cite just a few, Ambrosius and Cuecuecha (2013), Frank *et al.* (2009) and Ponce *et al.* (2011) show that remittances are positively correlated to households' private spending in health, leading to a better health status. Ambrosius and Cuecuecha (2013) explain that remittances allow Mexican households to finance unexpected health expenditure instead of increasing their indebtedness[1]. In that case, remittances are very useful since households can cope with temporary health shocks without increasing their debt burden.

By contrast, we still know little about the effects of remittances on public expenditure. As shown by Figures 1 and 2, this issue is particularly relevant because health expenditure is still low in developing countries compared with OECD countries. For the most part, health expenditure is public in developed countries while a greater part is supported by the private sector in the developing world[2]. Surprisingly, the effect of remittances on public health spending has rarely been investigated, perhaps because it requires work at a macro-level of analysis. Two papers have focused on the political economic channel, showing that remittances create a 'moral hazard' issue in developing countries. Ebeke (2012) finds that remittances have a negative impact on public health provision in a context of 'bad' governance (captured by institutional indexes such as corruption). He concludes that remittances create a 'moral hazard problem' when they are sent in poorly governed countries because the government takes the opportunity to divert resources and households have less incentive to monitor government officials (Ebeke, 2012, p. 1023). The government's behavior has been considered by Ahmed (2012), both theoretically and empirically, in the case of MENA countries. Ahmed (2012) suggests that remittances strengthen corruption by increasing households' income, allowing the government to divert resources for its own purposes at the expense of social spending. The relationship is even more important in autocratic regimes because the government has less democratic pressure and can stay in office even if it cuts social spending at the expense of the population. In other words, Ahmed (2012) and Ebeke (2012) conclude that governance represents the main channel driving the effect of remittances on public health expenditure.

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[1] It is well-established that health expenditure is often financed through credit in developing countries.

[2] Moreover, private health expenditure is essentially out-of-pocket in developing countries (75% in our sample).

Figure 1: Public and private health expenditure, low and middle income countries (data from WHO, 2013)
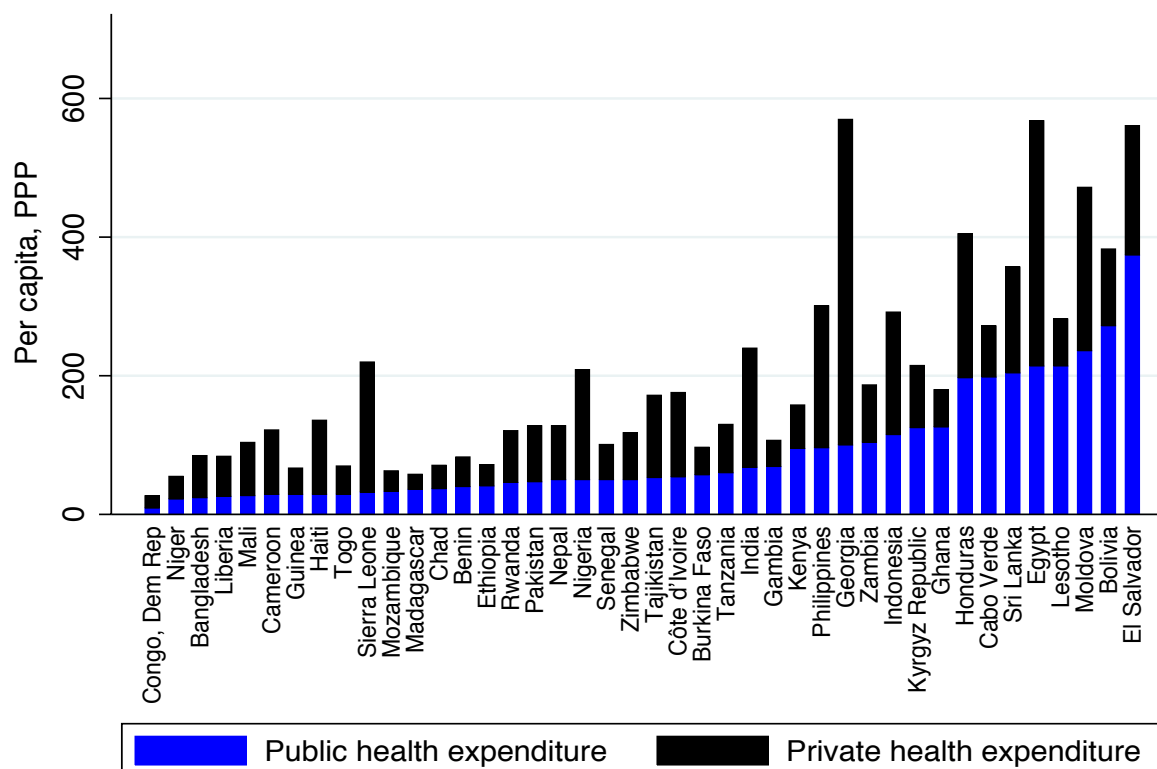
In this article, we argue that governance is neither the only nor the main channel driving the effects of remittances on public health expenditure. As pointed out by Zhunio *et al.* (2012), the government may also choose to reduce its spending since households finance healthcare with remittances, i.e. through the private sector. Indeed, the level of public expenditure - especially on health - depends on households' demand and preferences in terms of public or private services. Households may prefer private services because public healthcare is sometimes viewed as less efficient or less trusted (Gilson, 2003; Ozawa and Walker, 2011). Additionally, a poorly provisioned public healthcare system may encourage households to use remittances in private health services, resulting in the demand for public services being kept relatively low. The effect has been evidenced by Salas (2014) regarding education expenditure and remittances in Peru. As the Peruvian educational system is poorly provisioned, households enjoying remittances increase their expenditure on private education. It is therefore obvious that remittances represent a powerful substitute for public services but one could argue that only recipient households are able to offset the lack of public investments in education. Zhunio *et al.* (2012) show that in addition to increasing life expectancy and reducing infant mortality, remittances also represent a new way to finance hospitals or schools as a private initiative (Zhunio *et al.*, 2012, p. 4606). They suggest that migrants' transfers may reduce the 'burden of the government' to provide welfare, serving to relocate public spending towards 'productive investments'[3]. In that case, remittances clearly represent a substitute for public health spending since they increase demand for private services, while the government reduces its expenditure

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[3]However, the authors have not tested this hypothesis.

Figure 2: Public and private health expenditure, OECD countries (data from WHO, 2013)
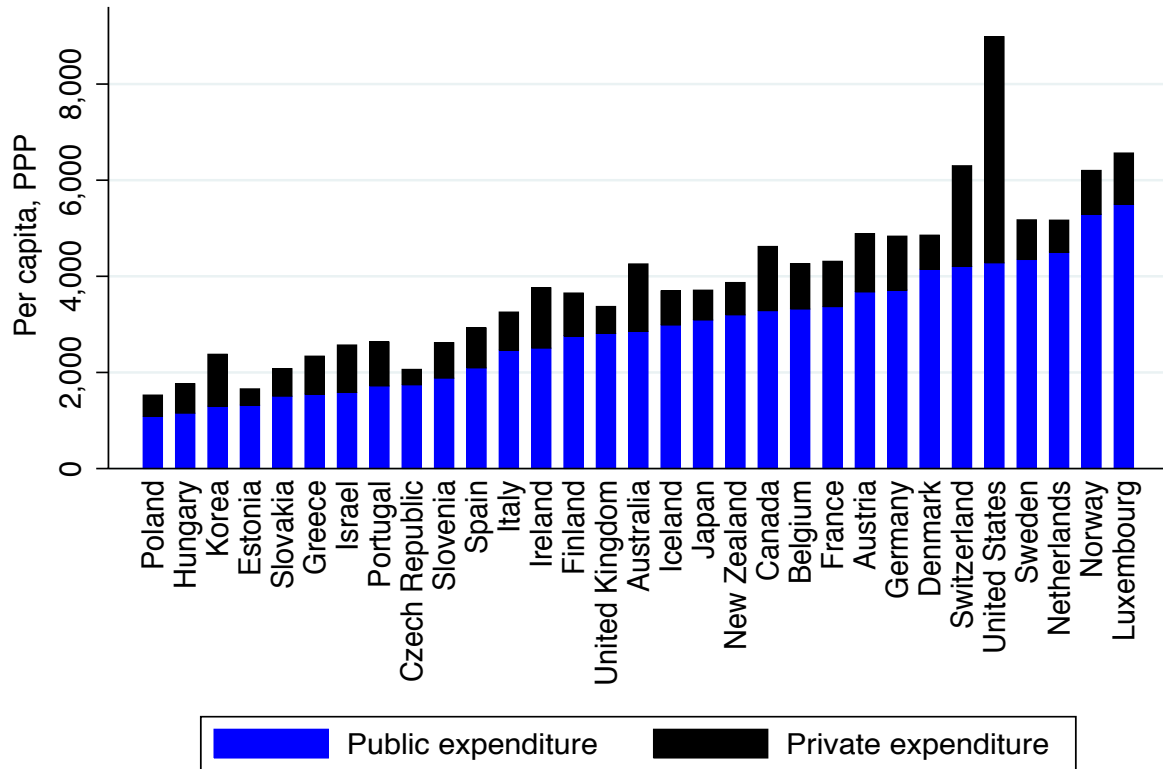
on public health care provision. Hence, we can expect that more remittances lead to less expenditure on public healthcare, since households spend more on private health services.

The present paper tests the hypothesis that remittances may crowd out public health spending by increasing private expenditure, using the generalized method of moments (GMM) and three-stage least squares (3SLS). We contribute to extending the literature by (1) estimating the direct effects of remittances on public health expenditure, and (2) estimating crowding-out effects between private and public expenditure. More precisely, we test whether remittances are a substitute for public healthcare and we discuss the implications for recipient countries in the short run and in the long run. To the author's knowledge, this is the first study that proposes an estimation of the crowding-out effects of remittances between private and public health expenditure. In contrast with Ebeke (2012), we provide evidence that the negative correlation between remittances and public health spending is not related to governance but to a crowding-out effect between private and public health expenditure. This effect occurs because (1) remittances shift demand for health services towards the private sector, and (2) the government reduce its expenditure (or spends less) since the demand for public services is lower with remittances. In contrast with Zhunio *et al.* (2012), we argue that this effect is not positive in the long run because only a small portion of households enjoy remittances, while the decrease in public health services impacts the whole population. We conclude that while remittances are an interesting substitute for public healthcare in the short run (for instance, to finance unexpected health expenditure), they do not represent a sustainable substitute in

the long run because they are strongly related to the economic cycle of foreign countries. The article is organized as follows: this first part has summarized the existing literature, the second part describes the empirical strategy and the third part presents the results.

2. Empirical strategy and data

Our sample includes 46 developing countries in the period 2005-2013 (see appendix for more details) and data are provided by the World Bank, the IMF and the World Health Organization. It is well-known that remittances are quite difficult to track because they are often sent through informal channels and are sometimes aggregated with compensation of employees[4]. Fortunately, the World Bank has proposed a more restrictive definition of remittances since 2005, which excludes compensation of employees. This narrow definition is more appropriate because as Figure 3 shows, in some cases compensation of employees represents the main part of 'remittances' when the two items are aggregated.

Figure 3: Remittances and remittances with compensation of employees (2012, data from WDI)
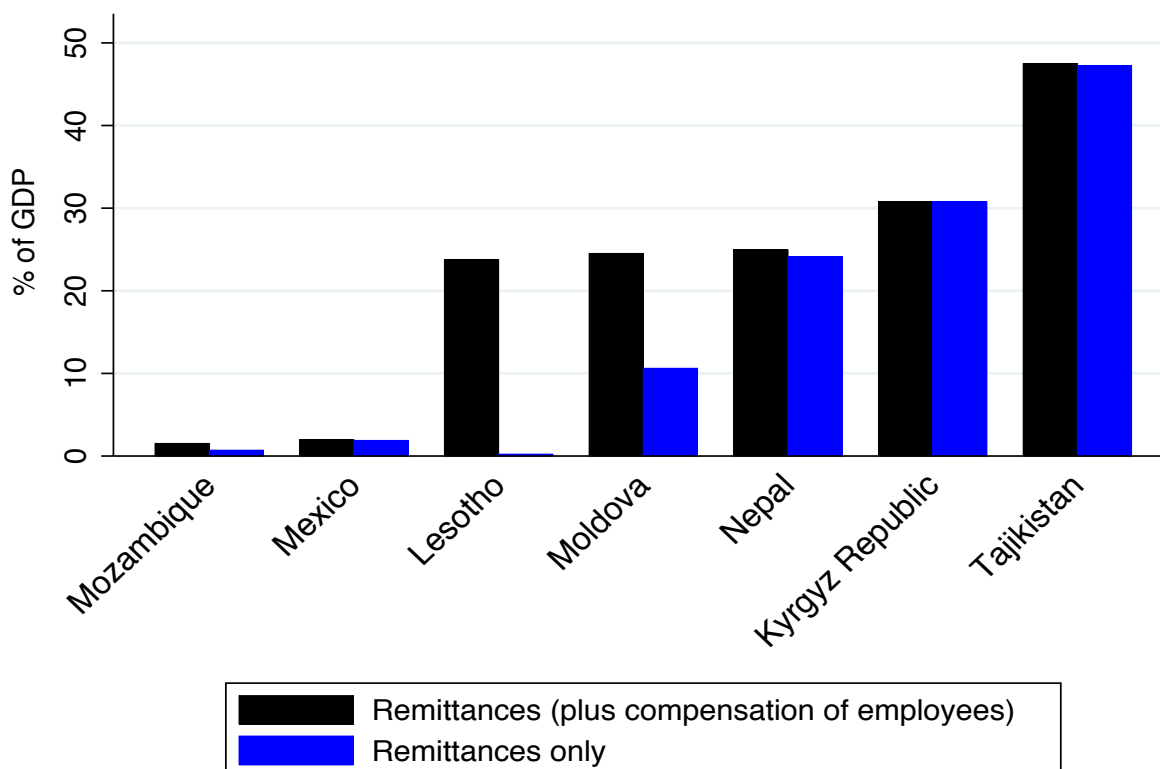
2.1 Identifying crowding-out effects: methodological issues

The aim of this study is to estimate the impacts of remittances on private and public health expenditure. More precisely, we investigate crowding-out effects, i.e. the case where remittances decrease public expenditure because they increase private health

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[4]Compensation of employees represents 'income of border, seasonal, and other short-term workers who are employed in an economy where they are not resident and of residents employed by nonresident entities'. In contrast with remittances, they are not an 'unearned income'.

spending. Figure 4 illustrates this relationship: remittances increase private health expenditure (2) which in turn decreases public expenditure (3). As suggested by the dashed line, the relationship is potentially self perpetuating because a lower provision of public health services implies more remittances in order to finance healthcare. Our estimation strategy is twofold: we first use a general method of moments approach (GMM) in order to estimate the direct effects of remittances on public and private health expenditure. This first step is useful to investigate the direct effects of remittances before investigating crowding-out effects more specifically. Moreover, the GMM estimator generates consistent results in a context of dynamic panels and endogeneity bias. In a second step, we will use a simultaneous equations estimation using three-stage least squares (3SLS) to capture crowding-out effects, i.e. the case where remittances have an impact on public health expenditure through the private spending channel. The simultaneous equations model serves to highlight these indirect effects by estimating several equations in one system.

Figure 4: Remittances and health expenditure: direct and crowding-out effects
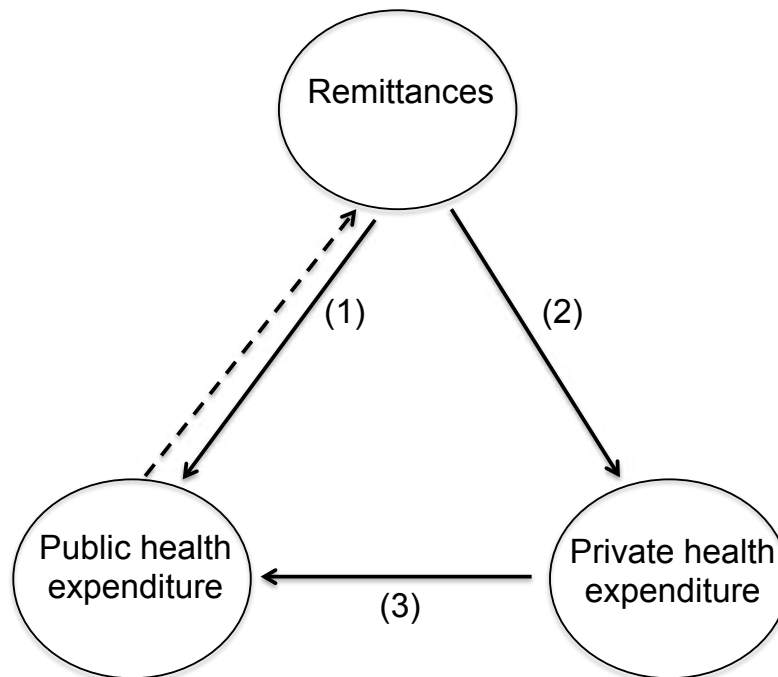
Arrows (1) and (2) refer to direct effects of remittances (equations (1) and (2)).
Arrows (2) and (3) refer to crowding-out effects (equations (2) and (3)).

2.1.1 Estimating direct effects of remittances using general method of moments

Using GMM, we estimate the two following equations independently:

$$HPUB_{it} = \alpha_1 + \alpha_2 HPUB_{it-1} + \alpha_3 REM_{it} + \alpha_4 \zeta_{it} + \eta_i + \mu_t + \epsilon_{it} \tag{1}$$

$$HPRIV_{it} = \beta_1 + \beta_2 REM_{it} + \beta_3 X_{it} + \eta_i + \mu_t + \varepsilon_{it} \tag{2}$$

$HPUB$ represents public health expenditure (as a share of GDP), $HPRIV$ represents private health expenditure (as a share of GDP), REM is remittances (% of GDP), ζ and X are two sets of different controls. Public health expenditure includes all kinds

of expenditure such as investments, consumption and healthcare[5]. Because remittances essentially finance out-of-pocket spending (Frank *et al.*, 2009), we have defined private spending on health as out-of-pocket expenditure (% GDP)[6].

It should be noted that remittances are likely to be endogenous to health expenditure - especially public health - because migrants will remit more if access to health services is restricted, as pointed out by Ebeke (2012). The generalized method of moments (GMM), more precisely the Blundell and Bond estimator (Blundell and Bond, 1998), serves to control for reverse causality bias in panel data models and has been widely used in the context of remittances since the 2000s. Moreover, we use a dynamic specification because health budgets are set or voted each year based on previous spending, i.e. there is strong inertia, as Ebeke (2012) argues. Following Roodman (2009), we limit the number of instruments in our estimation and apply Windmeijer's correction (see Windmeijer (2005)) in order to obtain consistent standard errors. We also report Arellano-Bond and Hansen statistics to test for the validity of the instruments and the presence of potential autocorrelation issues.

The set of controls of the first equation (1) includes several variables affecting public health expenditure. We first take into account the economic cycle, with a dummy variable for bad times[7]. Indeed, it is well known that social expenditure is strongly affected by the economic cycle in developing countries and is even procyclical (Arze del Granado *et al.*, 2013). This variable has been lagged since economic conditions in t_{-1} are supposed to have consequences on expenditure in t because budgets are generally set in t_{-1}. We also include two variables of openness[8] (openness to trade and openness of the capital account) because more open economies have higher public spending (Rodrik, 1998). Moreover, capital mobility can impact public health expenditure insofar as a strong mobility increases the government budget constraint in bad times, especially in poor countries because the perceived default risk is higher than in developed countries. Natural resources rents may also determine public health spending as a dependency upon one commodity makes the government's revenue highly volatile. Some articles have already shown that natural resources rents are negatively correlated with public health expenditure (Cockx and Francken, 2014). We therefore add natural resources rents (% of GDP) as a control. Following Ebeke (2012), we include GDP per capita and a corruption index (computed by the Heritage Foundation) since a more corrupt environment can reduce public spending on social expenditure. Regarding private health expenditure (equation (2)), we use the GMM estimator again because it is likely that remittances are sent in countries where private expenditure is low. However, our estimation is no longer dynamic because while public expenditure on health is characterized by inertia, this is not the case for out-of-pocket expenditure. As in the previous equation, we control the GDP per capita, perceptions of corruption and we add the share of the population aged 65 or more because elderly people spend more on health.

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[5]One could argue that a monetary approach does not take access to health services into account. However, as we want to estimate how remittances impact public health expenditure (and not its distribution), it seems relevant to use a monetary approach. Ebeke (2012) also uses health expenditure as a share of GDP.

[6]The results are not affected when we use total private health expenditure.

[7]The dummy has been computed using the output gap: it takes 1 if output gap < 0, 0 otherwise.

[8]Openness to trade is the sum of exports and imports as a share of GDP and the openness of the capital account is measured with the Kaopen index (see Chinn and Ito (2006)).

2.1.2 Investigating indirect effects of remittances with a simultaneous equations approach

Although the GMM approach is useful to determine the direct effects of remittances, it cannot be used to investigate crowding-out effects. Indeed, we have argued that while remittances reduce public health expenditure, the effect is perhaps not direct and may be explained by the fact that remittances increase households' private health expenditure. In other words, remittances increase private health expenditure which in turn reduces households' demand for public services, leading to lower public health spending. This complex relationship can be modeled with a simultaneous equations specification:

$$(1) \begin{cases} HPRIV_{it} = \beta_1 + \beta_2 REM_{it} + \beta_3 X_{it} + \mu_t + \varepsilon_{it} & (2) \\ HPUB_{it} = \theta_1 + \theta_2 HPUB_{it-1} + \theta_3 HPRIV_{it} + \theta_4 \zeta_{it} + \mu_t + \omega_{it} & (3) \end{cases}$$

Equation (2) estimates private health expenditure and has already been defined in the previous section. Equation (3) describes public health spending, which is determined by private health expenditure (i.e., the channel of the crowding-out effect)[9]. In the previous section, $HPUB$ was determined by remittances (REM) directly. A simultaneous equations analysis serves to determine an indirect relationship between remittances and public health spending: in a first step, remittances increase private health expenditure, which in turn impacts public spending (see figure 4). However, the system cannot be estimated with GMM since errors are likely to be cross-correlated. A more appropriated estimator is three-stage least squares (3SLS) which provides consistent estimates when a dependent variable becomes independent in a whole system, implying cross-correlated errors[10].

3. Results and discussion

3.1 Direct effects of remittances

This section presents the results of GMM estimates. First, we focus on the impacts of remittances on public health expenditure (Table I). The first estimation (column (1)) shows that remittances are negatively correlated with public health expenditure. In contrast with Ebeke (2012), we find that remittances have a negative impact on public health spending regardless of the level of governance. In his study, Ebeke (2012) uses an interaction term between remittances and a corruption index and finds that migrants' transfers decrease public health spending only when they are associated with poor control over corruption. He concludes that remittances allow a corrupt government to divert resources because households have access to an exogenous resource (remittances) to finance social spending. In order to check this effect, we also interact remittances with corruption (column (2)). The estimated coefficient is not significant, we therefore find no evidence that corruption drives the effects of remittances on public expenditure. In other words, this suggests that remittances do impact public expenditure whatever the level of corruption. Another explanation is that remittances reduce public heath spending because they allow households to finance private health services: as a result, their demand for public services is lower and thus expenditure is lower. It may reflect the fact that the quality of private services is superior - or perceived as superior - especially in developing countries.

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[9]Arrows (2) and (3) of Figure 4 refer to equations (2) and (3), respectively.

[10]See Zellner and Theil (1962) for more details.

Table I: Impacts of remittances on public health expenditure

VARIABLES	(1) Public health exp. (%GDP)	(2) Public health exp. (%GDP)	(3) Public health exp. (%GDP)
Lag dependent variable	0.805***	0.813***	0.814***
	(0.0968)	(0.110)	(0.100)
Output gap < 0 (t_{-1})	-0.223	-0.233	-0.0935
	(0.178)	(0.180)	(0.182)
Remittances	**-0.0123****	-0.00704	-0.00948**
	(0.00597)	(0.0200)	(0.00481)
Remittances $\times$ Corruption		**-1.36e-05**	
		(0.000754)	
Remittances $\times$ Output gap			**-0.00249**
			(0.0119)
Natural resources rents	-0.00509	-0.00387	-0.00645*
	(0.00464)	(0.00502)	(0.00340)
Openness	0.564***	0.518***	0.554**
	(0.176)	(0.197)	(0.238)
GDP/Capita (log)	-0.110*	-0.0993*	-0.110**
	(0.0586)	(0.0580)	(0.0554)
Control of corruption	-0.00272	-0.00123	-0.00328
	(0.00600)	(0.00869)	(0.00489)
Debt service	-0.00254	-0.00364	-0.00779
	(0.0124)	(0.0109)	(0.00931)
Kaopen	0.0415*	0.0407**	0.0347*
	(0.0233)	(0.0193)	(0.0202)
Constant	1.333***	1.192**	1.270***
	(0.433)	(0.467)	(0.421)
Observations	396	396	396
Arellano-Bond AR (2) (p-value)	0.336	0.330	0.285
Hansen test of overid. restrictions (p-value)	0.623	0.627	0.435
Time dummies	Yes	Yes	Yes

System-GMM estimation with Windmeijer (2005) robust correction.
Corrected standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

In that case, governance is not the channel driving the effects of remittances. Instead, remittances shift household demand towards private services, decreasing the demand for public services, and ultimately expenditure[11]. It should be noticed that the coefficient of remittances is not significant anymore when the interaction term with corruption is included. It could mean that the effects of corruption are threshold-specific. Since we find no effect of remittances when the control of corruption is equal to 0, the relationship may be non-linear. Further investigation using more appropriate data on corruption is necessary to address this question[12]. In order to check business cycles effects, we have also included an interaction term between remittances and output gap. Indeed, it is well-known that remittances are countercyclical, i.e. they increase during bad times in recipient countries. In that case, remittances could finance private health services, especially during economic downturns, and strengthen the decrease in public expenditure.

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[11]We will examine this point in the next section.

[12]This result must be interpreted carefully for several reasons. When the interaction term is included, α_3 is the effect of remittances when the control of corruption = 0. However, the minimum value for the index of corruption is 10 in our data. In this particular case, the component coefficient of the product should not be interpreted (Wooldridge, 2002, pp 194).

Table II: Impacts of remittances on out-of-pocket health expenditure

VARIABLES	(1) Out-of-pocket exp. (%GDP)	(2) Out-of-pocket exp. (%GDP)	(3) Out-of-pocket exp. (%GDP)
Output gap < 0 (t_{-1})	-0.00357	0.00848	0.0343
	(0.0716)	(0.0833)	(0.104)
Remittances	**0.0408*****	-0.00724	0.0454***
	(0.0141)	(0.0748)	(0.0170)
Remittances × Corruption		**0.00213**	
		(0.00362)	
Remittances × Output gap			**-0.00674**
			(0.00738)
Population 65+	0.123	0.119	0.148
	(0.103)	(0.125)	(0.0983)
Control of corruption	-0.0361**	-0.0411**	-0.0327*
	(0.0163)	(0.0204)	(0.0179)
GDP/Capita (log)	-0.0334	0.0155	-0.0682
	(0.195)	(0.240)	(0.209)
Domestic credit	-0.0107	-0.0111	-0.0118*
	(0.00746)	(0.00815)	(0.00704)
Constant	3.041**	2.817*	3.075**
	(1.278)	(1.514)	(1.427)
Observations	396	396	396
Arellano-Bond AR(2) (p-value)	0.583	0.779	0.517
Hansen test of overid. restrictions (p-value)	0.676	0.443	0.564
Time dummies	Yes	Yes	Yes

System-GMM estimation with Windmeijer (2005) robust correction.
Corrected standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

The coefficient is insignificant (column (3)), so the effects of remittances are not much stronger during economic recessions. Moreover, the coefficient of remittances taken alone remains significant and similar, meaning that the effect is the same whether the output gap is zero or positive. This is additional evidence that the effect of remittances is not affected by business cycles. GDP/capita has a negative and significant coefficient, meaning that the relationship between health expenditure and the GDP is perhaps non-linear[13]. Regarding private health expenditure (Table II), the results confirm those in the micro-economic literature insofar as remittances are positively correlated to out-of-pocket health expenditure. This result was expected but this is the first study which clearly establishes the correlation between remittances and private health spending at a macroeconomic level. As we also found a negative relationship between remittances and public health expenditure, we can suppose that remittances crowd out public expenditure since they support demand for private services. Interestingly, the coefficient of corruption is negative[14], meaning that out-of-pocket expenditure is greater when perceptions of corruption are high. We can suppose that people are more strongly incited to use private services when the perceived corruption is high, at the expense of public healthcare. These results actually bring another interpretation of Ebeke's negative interaction between remittances and corruption on public health expenditure. As we found that corruption

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[13]We tried to include a quadratic term. The sign is positive and significant, as in Cockx and Francken (2014). The other coefficients are not affected.

[14]A higher score means better control over corruption.

increases private health expenditure, it is likely that Ebeke's interaction term captures the impact of the use of private services through remittances rather than the impact of corruption itself. Therefore, this means that remittances decrease public health spending not because of corruption but because the use of private services is higher in a context of corruption. As before, the interaction between remittances and corruption is insignificant, as is the interaction with the output gap (column (3)). Remittances do not seem to increase private expenditure during bad times even though they are often considered as countercyclical. We report Arellano-Bond and Hansen statistics in both tables to test for the validity of the instruments and the presence of auto-correlation issues. The model is correctly specified and the instruments are valid in all specifications.

3.2 Crowding-out effects of remittances

We now turn to the crowding-out effects of remittances using three-stage least squares (3SLS). Table III shows that remittances are still positively correlated with out-of-pocket expenditure, with a similar coefficient to the GMM estimates (see Table II)[15]. Next, we can see that the coefficient of out-of-pocket expenditure is negative and significant in the second equation, suggesting that this variable represents an indirect channel between remittances and public health spending. Hence, the crowding-out effect hypothesis suggested above seems to be confirmed in our data: remittances increase out-of-pocket expenditure which in turn decreases public healthcare provision, which is not particularly surprising as crowding-out effects between private and public healthcare have already been observed in some developed countries[16]. We may actually interpret this result in two different ways. On the one hand, the decrease in public spending can result from lower demand from households because the quality of private services, financed with remittances, is perceived as higher. On the other hand, the crowding-out effect may result from less incentive from the government to invest in healthcare since remittances 'do the job'. This last explanation is close to the arguments put forward by Ahmed (2012) and Ebeke (2012). Finally, the consequences in terms of economic development are quite ambiguous because remittances seem useful to finance healthcare through the private sector, while they appear to have adverse impacts on public health provision. Financing healthcare through remittances can be viewed as an 'informal social protection' (see for instance Mendola (2010)) insofar as people left behind finance social spending with transfers received from abroad. However, the sustainability of such a model is questionable in the long run because remittances are determined by the economic conditions in migrants' host countries (Swamy, 1981). For instance, inflows of remittances to developing countries have declined since the great recession of 2008, leading to procyclical effects in remittance-dependent countries. Furthermore, migrants are also vulnerable to political changes in host countries which sometimes lead to visa restrictions, in particular in times of political or economic uncertainty[17]. In the short run, remittances represent a powerful leverage against the lack of public services in health and allow households to increase their health status. They offset the deficiencies of public healthcare provision and give households access to better quality services. However, the long run consequences may be

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[15]This similar coefficient shows that its value is not affected by endogeneity.

[16]See for instance Gruber and Simon (2008).

[17]After the fall in oil prices in the middle of the 1980s, MENA's oil producers strongly restricted migration, inducing a sharp decrease in remittances (Ratha, 2005). More recently, European countries and the US seem to be increasingly skeptical about economic migration, leading to important political changes that are often detrimental to migrants.

more problematic especially if remittances create a crowding-out effect at the expense of public healthcare.

Table III: Impacts of remittances on public and private health expenditure: 3SLS estimates

VARIABLES	(2) Out-of-pocket health exp. (% GDP)	(3) Public health exp. (% GDP)
Lag dependent variable		0.908***
		(0.0329)
Remittances	**0.0519*****	
	(0.0100)	
Out-of-pocket health exp.		**-0.164****
		(0.0773)
Domestic credit	-0.00881	
	(0.00941)	
Population 65+	0.0707	
	(0.0446)	
GDP/Capita (log)	0.367	-0.0396
	(0.260)	(0.0798)
Control of corruption	-0.0654***	-0.0143*
	(0.0199)	(0.00762)
Output gap < 0 (t_{-1})	0.0565	-0.0459
	(0.163)	(0.0599)
Natural resources rents		-0.00460*
		(0.00245)
Openness		0.455***
		(0.120)
Debt service		0.00696
		(0.0146)
Kaopen		0.0281
		(0.0194)
Constant	1.258	1.097**
	(1.383)	(0.556)
Observations	338	338
R-squared	0.236	0.877

3SLS Estimation. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Conclusion

This study offers new evidence about the relationship between remittances and health expenditure. On the one hand, remittances increase private health spending, but on the other hand, they reduce public health expenditure. Using GMM and 3SLS, we have found that remittances create a crowding-out effect at the expense of public healthcare through the private expenditure channel. This effect occurs because (1) remittances finance private services which in turn decrease the demand in terms of public goods, and (2) the government reduces its spending and possibly diverts resources for its own purpose, as Ahmed (2012) argues. However, we have shown that governance is not the main channel driving the effect of remittances, in contrast with Ebeke (2012). The conclusions in terms of welfare are ambiguous. Indeed, remittances help households offset the poor development of public health provision - or its bad quality - by financing private health services, especially in the short run (e.g. in case of unexpected health shocks). Beyond this positive impact, we argue that the unstable nature of remittances does not allow them to be con-

sidered as a long-run substitute for social spending. In particular, remittance-dependent countries experienced a sudden drop in migrants' transfers after the great recession of 2008, implying procyclical effects for developing countries and households' income. Furthermore, migration policies are increasingly restrictive in developed countries, especially in the US and in Europe, creating uncertainty about future flows of remittances. Hence, remittances should be seen as a temporary way to offset the lack of public commitment to social services such as healthcare or education.

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