

# **THE IMPACT OF REMITTANCES ON OPPORTUNITY-BASED AND NECESSITY-BASED ENTREPRENEURIAL ACTIVITIES**

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## **ABSTRACT**

*Hypotheses have been developed grounded in the entrepreneurship and economic development literature to explain how remittance is related to necessity or opportunity based entrepreneurial activities. Using data covering thirty countries from 2001 to 2009, found that remittance is positively related to necessity-based entrepreneurial activities, and negatively related to opportunity-based entrepreneurship. The findings, which should be of interest to both academic and policy makers, suggest that remittance is a valuable source of funding for entrepreneurs lacking employment opportunities, but the opposite is true for those pursuing entrepreneurship as one among other employment options.*

## **INTRODUCTION**

Remittances have been defined as direct people-to-people money transfers between migrants and their relatives and/or friends in their home countries. Research has found that remittances play an important role in entrepreneurial activities across various country contexts (Kim and Li, 2014; Lin and Yang, 2017; Vaaler 2011). In this paper, we develop arguments which predict that remittances will have a positive impact on entrepreneurship of individuals who choose to pursue entrepreneurial careers given lack of other employment opportunities—i.e. necessity-based entrepreneurship (hereafter referred to as necessity entrepreneurship). In contrast, we argue that opportunity-based entrepreneurship (hereafter referred to as opportunity entrepreneurship and defined as entrepreneurial activities involving a pursuit of a perceived business opportunity even when other employment options are present) will have a negative association with remittances. This is because the two types of entrepreneurial activities differ in some important respects. For example, necessity entrepreneurship entails relatively lower levels of risk and involves activities which do not demand high levels of human and financial capital. In contrast, opportunity entrepreneurship which is often based on novel business models, demands longer payoff horizons and a strong local support system, together with knowledge of the local business environment.

Global Entrepreneurship Monitor (GEM) data were drawn to test our hypotheses in the context of 30 countries over a period of 9 years (2001-2009). Controlling for various country-specific factors such as the health of the economy, the state of the infrastructure and cultural influences, we have found support for our hypotheses.

Our findings have implications for both academics as well as policy makers. Remittances have been increasing steadily over the past decades and our findings show that they have a positive impact on job creation and economic development. However, our study suggests that the

impact is limited and may be even stifling for entrepreneurial activities involving creation of fast growing, high potential businesses.

### **THE IMPACT OF REMITTANCES ON OPPORTUNITY-BASED AND NECESSITY-BASED ENTREPRENEURIAL ACTIVITIES**

Remittance is an economic activity that has long been studied in the sociology and economics literature (Durand et al., 1996; Woodruff and Zenteno, 2007). According to the World Bank, inward remittances flows have increased from \$101.3 billion in 1995 to an estimated \$440.1 billion in 2010, of which the inflow to the developing countries has increased six fold in the same time period from \$55.2 billion to \$325.5 billion. The concept of remittance has enjoyed resurgence in recent years in the international business and entrepreneurship literature as a possible facilitator for entrepreneurial development in developing countries. Researchers have noted that remittances, apart from the usually assumed function of attaining the sustenance and health care needs for family members and friends in a home country, could also be a contributor of new venture capital (Vaaler, 2011). Vaaler argues that remittances have a positive effect on venture investment environment in the home/recipient country, and discusses the possible effects linking remittances to new venture creation rate. However, his results are not conclusive. Remittances increase new business start-up rates, but only when the developing country's public sector is sufficiently small; that is, when higher state taxation rates or involvement by state agencies or enterprises in economic development do not "crowd out" private enterprises.

Given the importance of the topic, the overall effect of remittance on creating new ventures deserves a further look. In this paper, we investigate the effects of remittance on the prevalence of two distinct types of entrepreneurial activities: necessity vs. opportunity entrepreneurship. Previous research has defined necessity entrepreneurship as the creation of a new venture driven by a lack of other employment. In contrast, opportunity entrepreneurship relates to the pursuit of a perceived business opportunity as one of several career options (Wong et al., 2005; Vallier and Peterson, 2009).

Combining data from multiple databases, found that remittances do not contribute to venture founding activities uniformly; rather, they have different impacts on different types of entrepreneurial activities. While remittances lead to necessity-driven venture activities which require smaller amounts of capital to startup and sustain, their influence is opposite when it comes to opportunity-driven venture activities. These require much larger amounts of capital for inception, growth and sustenance. Even more importantly, opportunity entrepreneurship requires more creativity and risk taking on the part of the entrepreneurs, which is not consistent with the mindsets of both those sending and receiving remittances. We contribute to the literature by further understanding the effect of remittance on different types of entrepreneurial activities. This study has also important implications for policy makers which are discussed in the conclusions section.

### **LITERATURE REVIEW**

International migration the movement of people across international boundaries has enormous implications for growth and poverty alleviation in both origin and destination countries. According to the United Nations, more than 215 million people (3% of the world population) live outside their home country, and over 700 million migrate within their countries.

Demographic forces, globalization and climate change has and will continue to increase migration trends within and across borders for the coming decades (World Bank, 2013). Remittance-money transferred by migrants from a host country to the home country-is increasingly an important fixture of globalization and migration trends. One in every ten people around the globe is directly associated with remittances (World Bank KNOMAD website). According to World Bank, “*remittances sent home by migrants to developing countries are equivalent to more than three times the size of official development assistance and can have profound implications for development and human welfare.*” (World Bank KNOMAD website) They not only exceed foreign aid, grants and private portfolio capital, but are similar in size to total Foreign Direct Investment (FDI) (Brown, 2006). In countries such as Tajikistan, remittance inflow can represent up to 40% of the total GDP.

As direct people-to-people transfers, remittance also benefits a wide range of recipients who many not have access to short-term capital flows, credit, or FDI. Migrants who are earning funds in foreign locations remit on average 12.6 times a yr. The average amount they remit is in the range of \$150 to \$250 every time. In some instances, these remittances can contribute up to 10% of the total household income of family and friends in the home country. A quarter of remitters usually send their earned money home first, prior to paying their own bills. Remittance is also counter-cyclical and holds up well independent of larger economic downturns (Orozco 2004). For example, despite the fact that in the United States the unemployment rate among Latinos rose from 6.3% in 2001 to 8.3% in 2003, surveys have found that total amount remitted continued to grow. In addition, remittance rates have shown good growth in spite of the downfall of U.S. economy (Remittances Statistics and Facts, [www. remittance.in](http://www.remittance.in)).

Besides being a source of finances for low income families in developing countries, remittance has the additional advantage of being “*smart money*” that may come with ideas, networks and relations (Durand et al., 1996; Dustmann & Kirkchamp, 2002). Remittances are likely to come with strong relationships with the remitter, who may propose business ideas and initiatives to recipients in the home country, and suggest new ways of doing things which he/she may have observed in the country to which he/she migrated. The funds and ideas that come with migrants lead to new business founding. Indeed, previous research suggests a link between migrants and entrepreneurship. For example, Dustman and Kirkchamp (2002) provide evidence that savings of returning migrants may be an important source of startup capital for microenterprises. They find that 50% of their sample of Turkish emigrants returning from Germany started a microenterprise within 4 yrs of resettling in Turkey, using money saved while working abroad. Mesnard and Ravallion (2006) also find a connection between return migrations to Tunisia and entry into self-employment, and Ilahi and Jafarey (1999) find similar evidence in Pakistan. Thus, it is quite possible that migrants’ savings sent back in the form of remittances can also have an important influence on entrepreneurship in their home country.

Entrepreneurial activities involving creation of new business ventures have long been viewed as key to economic growth, innovation and improvement of standard of living (Sternberg and Wennekers, 2005; Van Stel et al., 2005), especially in developing countries such as Iran (Shabani, 2016). However, research has also acknowledged that entrepreneurial activities are not equal in their impact on economic development. Some entrepreneurs create new ventures based on breakthrough technologies and innovative business models which eventually result in “*creative destruction*” of entire industries (Radovic-Markovic & Salamzadeh, 2012; Schumpeter, 1942) and employ thousands of people (e.g. Uber or Apple). Others remain unsophisticated small firms generating just enough income to support the entrepreneurs. To capture the different

motivations and outcomes of entrepreneurial activities, research has used various categorizations and typologies of new ventures and their founders. These include high potential ventures, gazelles, or lifestyle entrepreneurs (Acs and Mueller, 2008; Carey et al., 2010). The categorization of entrepreneurial activities as either necessity-driven vs. opportunity-driven has been commonly used in studies focusing on entrepreneurship in different countries (with varying levels of income and infrastructure). These include especially those based on the work of Global Entrepreneurship Monitor (GEM), the world's largest ongoing study of entrepreneurial activities (GEM website, 2013).

The necessity vs. opportunity entrepreneurship distinction captures some important differences between the two types of ventures. The necessity entrepreneurs are said to start new ventures because of lack of other employment opportunities whereas opportunity entrepreneurs perceive a business opportunity which they decide to pursue even when they have other career options (Wong et al., 2005). While opportunity entrepreneurship has been often described as “*high value added*” given its impact on job creation, innovation and economic development (Valliere and Peterson, 2009; Wong et al., 2005), necessity entrepreneurship, which often entails the creation of microenterprises, has been viewed as playing an important role in less developed countries with less infrastructure and sizeable informal economies (Waibel, 2012). In addition to the differences in primary motivation, there are other differences between the necessity and opportunity entrepreneurship styles. First, since necessity entrepreneurship is often the “*last resort*” of individuals to make a living, it is associated with relatively less risk than opportunity entrepreneurship, which is one of several employment options. In the context of the opportunity-based venture creation, the entrepreneur usually incurs opportunity costs as he or she may need to leave his current employment to pursue the business idea (Fairlie and Fossen, 2017). Second, opportunity entrepreneurship, which by definition subsumes high potential entrepreneurship (Valliere and Peterson, 2009), typically involves a more sophisticated or novel business model, one that employs knowledge and technology (Wong et al., 2005). In contrast, necessity entrepreneurship has been linked to less human capital (Thurik et al., 2008), proves business models, and imitation of existing businesses.

## THEORY AND HYPOTHESES

There are several reasons as to why remittances should have an impact on entrepreneurial activities. Vaaler (2011) proposes that “*immigrant ideas developed abroad may contribute to “social” remittance, guiding the use of capital to fund, found and grow new firms internationally*”. First, remittances are often associated with ideas, behaviors, identities, and social capital that flow from the host to home country communities. Normative structure, systems of practices, and social capital are often exchanged with remittances (Levitt, 1998). These include ideas, values, and beliefs pertaining to entrepreneurship, notions of workplace behavior, wealth creation, and aspirations for social mobility. Such norms and ideas influence the perceived behavioral control of entrepreneurs, thereby influencing their entrepreneurial intentions (Awang, 2016). Through remittances, the system of practices and actions shaped by normative structures might transmit to the home country where people might consider quitting their jobs to start new ventures or creating employment for themselves. Social capital that immigrants accumulated overseas might also be leveraged domestically by their relatives, family members, and friends, such that they may become more comfortable with the uncertainty associated with starting a new venture, or can get business permits easier in their home countries (Ahlstrom and Bruton, 2006). That may enable individuals to engage in entrepreneurial activities.

However, the entrepreneurship spurred by remittances is not likely to be driven by perceived business opportunities. Rather, we argue, remittances will be most helpful to individuals engaged in self-employment and micro-enterprise development (i.e. necessity entrepreneurship). There are at least two reasons for this. For one, while remittance can be viewed as a relatively stable and reliable source of capital, it tends to be a low-value, person-to-person transfer best suited for smaller, lower-technology business start-ups (in contrast to high-potential ventures that are typical of opportunity entrepreneurship). In fact, an average one-time remittance amount is between \$150 and \$250 (Agunias, 2006). For individuals who turn to self-employment via entrepreneurial activities as a last resort, such a small amount may be sufficient to start a relatively basic business enterprise. This is particularly true when other sources of funding such as bank loans, venture capital or loans from local relatives are lacking (Waibel, 2012). Indeed, research has shown that remittance through the migration network are a reliable source of capital for micro-enterprises in countries such as Mexico (Woodruff and Zenteno, 2007). They used a survey of more than 6000 self-employed workers and small firm owners located in 44 urban areas of Mexico to examine the impact of attachment to migration networks on the level of capital investment, capital-output ratio, sales, and profits of microenterprises. They found that migration is associated with higher investment levels and higher profits for family-based and micro-enterprises.

Secondly, the remittance senders (migrants in other countries) are more likely to support necessity entrepreneurship (as opposed to opportunity-driven activities) initiated by the remittance receivers. A simple microenterprise such as a corner market or a bicycle taxi-service represents a relatively low risk activity as it is easily understood and relatively simple to operate. Using the remitted funds to start a venture based on a well-tried business model can create a sustainable income stream, which is likely to be welcome by the remittance senders who clearly care about the well-being of those who receive their money. The remittance senders are also more likely to understand such ventures, even from a distance, and encourage the use of the funds for the purpose of starting them. Remittance senders would also likely encourage the necessity-driven entrepreneurs, as they would tend to have a high level of motivation for the business to succeed. Those entrepreneurs lack economic opportunities, have few alternatives of work, and therefore are more likely to see starting a sustenance business as their only way out. They are likely to put in longer hours and engage more effort to make the business successful. Thus, the risk to the remittance senders is reduced.

Taken together, the arguments above suggest that remittance will more likely have a positive impact on necessity entrepreneurial activities. This is because of the relatively small size of the remittance amounts, the level of risk associated with necessity entrepreneurship as well the nature of the enterprises typically started by necessity entrepreneurs. Thus, we propose:

*H1: Remittance is positively related to necessity entrepreneurial activities.*

However, remittances are not likely to have the same impact on opportunity entrepreneurship. Opportunity-driven entrepreneurs are those who are *pulled* to entrepreneurship by opportunities because they desire independence or see a timely business potential, not pushed to entrepreneurship out of necessity. In line with Kirzner (1973), opportunity-driven entrepreneurs are viewed as entrepreneurs who start a business in order to pursue an opportunity, whilst necessity entrepreneurship is more survival or need-driven (Reynolds et al., 2005). The opportunity entrepreneurship is driven by the entrepreneurs' vision of pursuing a high pay-off venture which has often the potential to fill a substantial market need through employing an

innovative business model. As such, pursuing such an endeavor carries considerable risks. For one, this type of entrepreneurial activity represents an opportunity cost for the entrepreneur since it is a conscious choice among other employment alternatives. Leaving one's source of livelihood in order to pursue a new business opportunity may put an entire family in risk of financial difficulties.

Secondly, given that opportunity entrepreneurship is typically based on innovative business models (rather than existing, proven models as is the case with necessity entrepreneurship), it has a greater potential for wealth creation but also involves greater business risks. New, unproven business ideas may require a longer payoff time and a greater initial burn rate. Higher growth (which is often associated with opportunity entrepreneurship) requires hiring more employees and carrying greater overhead which can lead to a quick demise if cash flow is not managed properly. This may mean that opportunity entrepreneurship may be less attractive from the point of view of immigrants whose remittances are funding such a venture. Indeed, the individuals who send remittances from abroad may find it difficult to comprehend how a new business opportunity fits in the local environment and are not likely to be comfortable with the idea of their hard-earned money going toward an unproved business model. Thus, they may discourage opportunity entrepreneurship.

Using remittances to pursue a new business opportunity may also be more complex from the point of view of both entrepreneurs and their relationship to remittance senders. Should the pursuit of the new business opportunity prove unsuccessful, the entrepreneur risks deterioration of the personal relationship with the remittance sender. Psychologically, taking the risk of losing the remittance funds invested in the venture as well as the social capital embedded in such a relationship may be just too difficult to bear, particularly if the activity was a pursuit based on a conscious choice, not a necessity. Opportunity-driven entrepreneurial activities may also require a larger amount of capital to start, which could be hard to marshal through the remittance network that provides relatively small amount of capital. As a result, the remittance alone might not be a sufficient source of capital for opportunity-driven entrepreneurs.

Next, remittance is also less likely to be associated with deep, innovative ideas required for opportunity entrepreneurship. This is related to the remittance senders' characteristics. As the immigrants gain greater connections and become more established overseas, they are also less likely to send remittances back home. For instance, Suro noted that Mexican families with members abroad for five years or less are twice as likely to receive remittances on a regular basis as families with relatives who have been abroad for longer periods (Suro, 2005). Surveys conducted by Bendixen and Onge of Latin American immigrants in US and Japan also confirm the finding and found that amount and frequency of each remittances decrease once immigrants has been away for more than 10 yrs (Bendixen and Onge, 2005). In a way, at the same time that immigrants are gaining deeper, more nuanced understanding of business, social, and cultural environments in their host country, their connection with the home country may also become gradually diluted, leading to a lower level and frequency of remittances and exchange of ideas. The novel ideas and deep knowledge required for opportunity-driven entrepreneurial activities are less likely to be transferred along the remittance networks.

Lastly, necessity and opportunity entrepreneurs differ in their growth aspirations in that opportunity entrepreneurs desire to grow faster. In Global Entrepreneurship Monitor 2001 Report, 14% of opportunity entrepreneurs expected to create more than 20 jobs, whereas only 2% of necessity entrepreneurs had these expectations (Reynolds et al., 2002). Countries with high remittances may not have the corresponding supporting network to support the fast growth

required by opportunity-driven entrepreneurial activities. Durand et al. (1996) study of 30 Mexican communities show that remittances are more likely to be spent on productive activities and investments if there is an *ejido* (production cooperative) in the village, or if the recipients have access to land and housing ownership (Durand et al., 1996). In terms of the overall knowledge environment, Sanders (2007) also specifies that “*the opportunity for a new product can be broken down into constituting bits of knowledge and by definition only emerges when all of its knowledge-components exist. Only when an entrepreneur (firm or person) has the vision to bring together all pieces of the required and helpful knowledge, and combine them with financial, material and human resources needed to develop the idea into a product (improvement), is an opportunity being developed into a product*” (Sanders, 2007). If a country lacks infrastructure such as banking systems and existing favorable entrepreneurship knowledge environment, remittance might not be sufficient to develop opportunity-driven entrepreneurial activities. It may seem that remittance may act as an alternative way to finance investments, and thus act as a substitute for the limited domestic financial system (Ruiz-Arranz, 2006). However, such substitution may not be sufficient for opportunity-driven entrepreneurial activities.

Taken together, the remittances are likely to be negatively associated with opportunity entrepreneurship. Therefore the following was hypothesized:

*H2: Remittance is negatively related to opportunity-driven entrepreneurial activities.*

## METHODS

Data was collected for the period 2001-2009 from various databases. Data was obtained on necessity and opportunity entrepreneurship activities from the Global Entrepreneurship Monitor study, which is one of the foremost cross-country studies on entrepreneurial activities, and also one of the first studies to draw distinctions between Necessity-driven Entrepreneurial Activities (NEA) and Opportunity-driven Entrepreneurial Activities (OEA). GEM consortium has grown from a group of 7 countries in 1997 to 31 countries in 2003, and to more than 100 countries in 2018. 30 countries were included that have consistent data throughout the study yrs (Table 1). The data on remittances were obtained in the World Bank’s migration and remittance database. Remittances were measured as a percentage of the GDP.

**Table 1**  
**DESCRIPTIVE STATISTICS AND PAIRWISE CORRELATIONS OF VARIABLES**

	Mean	SD	OEA	NEA	Remittances	GDP Growth	Exports	CPI	Spending on Education	Investment environment	Railroads	FDI Inflows	Power distance	Uncertainty Avoidance	Individualism
OEA	51.180	13.378	1.000												
NEA	20.950	11.773	-0.610*	1.000											
Remittances	0.032	0.057	-0.356*	0.212*	1.000										
GDP Growth	3.664	3.984	-0.035	0.008	0.129	1.000									
Exports	44.454	34.142	0.131	-0.416*	0.193*	0.101	1.000								
CPI	5.199	2.419	0.553*	-0.567*	-0.399*	-0.223*	0.297*	1.000							
Spending on Education	4.710	1.468	0.316*	-0.410*	0.043	-0.309*	0.395*	0.600*	1.000						
Investment Environment	9.810	2.039	0.462	-0.412*	-0.412*	-0.144	0.103	0.766*	0.117	1.000					
Railroads	0.000	0.000	0.332	-0.270*	-0.129	-0.038	0.285*	0.423*	0.444*	0.412*	1.000				
FDI Inflows	0.044	0.057	-0.205*	-0.187	0.339*	0.243*	0.307*	0.048	0.204*	0.009	0.107	1.000			
Power distance	60.629	22.340	-0.375*	0.294*	0.425*	0.191*	-0.218*	-0.705*	-0.338*	-0.584*	-0.319*	0.031	1.000		
Uncertainty Avoidance	66.203	24.029	-0.094	0.132	0.408*	0.011	-0.074	-0.338*	0.030	-0.306*	-0.152	0.142	0.556*	1.000	
Individualism	44.889	24.633	0.242*	-0.294*	-0.242*	-0.429*	0.103	0.496*	-0.065	0.572*	0.282*	0.039	-0.528*	-0.425*	1.000

\*p<0.05 or smaller

GEM has been designed to be a comprehensive assessment of the role of entrepreneurship in different economies. It uses national market research organizations to collect individual-level data from a representatively sampled individual questionnaire and country-level framework conditions from an expert questionnaire. Operationally, it identifies a nascent entrepreneur as an individual who has been active in the past 12 months in trying to start a new business and expects to own part of the business (Hechavarria and Reynolds, 2009). From there, the individual is asked the following question: “*Are you involved in this new business to take advantage of a business opportunity or because you had no better choices for work?*” The respondent is categorized as an opportunity entrepreneur if they choose the former and as a necessity entrepreneur if they choose the latter (Hechavarria and Reynolds, 2009). The index for the opportunity entrepreneurship is calculated as a percentage of opportunity entrepreneurs per 100 nascent entrepreneurs and the index for necessity entrepreneurship is the percentage of necessity entrepreneur per 100 nascent entrepreneurs.

### **Control Variables**

To avoid confounding effects, we control for several variables that may impact entrepreneurial activities in each country. These include GDP growth, Corruption Perception Index (CPI), and government spending on education (measured as a percentage of GDP) to account for the level of human capital in the country. The spending includes government spending on educational institutions (both public and private), education administration, and transfers/subsidies for private entities (students/households and other private entities).

We also controlled for the state of general infrastructure in each country (proxied by the length of railroads). To account for other flows of funds into the country and the overall health of the economy, we included a measure of FDI inflows (i.e. the net inflows of investment to acquire a lasting management interest-10 percent or more of voting stock-in an enterprise operating in an economy other than that of the investor) and the level of exports. Both of these measures are expressed as a percentage of GDP. The overall attractiveness of the business climate was assessed by a measure investment environment. The measure is designed to gauge the risks associated with contract viability, repatriation of profits and payment delays in a particular country. A higher score on this variable represents a less risky business environment.

Finally, since studies (Shane, 1992: 1993) showed that cultural environment can affect the level of entrepreneurial activity, we included three control variables to capture the power distance, uncertainty avoidance, and individualism dimensions of local culture. All three were obtained from Hofstede’s studies (Hofstede, 1980).

GDP growth measure and export growth were obtained from the World Bank, as were spending on education, and FDI inflows and exports. The data on investment environments were obtained from the PRS database. The CPI measure was obtained from Transparency International.

## **DATA ANALYSIS AND RESULTS**

Table 2 reports descriptive statistics and pairwise correlations for all variables used in our analysis. To test the hypotheses related to the effect of remittances on necessity and opportunity entrepreneurship, we used time series regression. Generalized Least Square (GLS) procedure was used which provides the most robust and reliable estimates given the nature of the panel data.



Specifically, it allows us to control for the autocorrelation within panels and serial correlation and heteroskedasticity across panels.

Algeria	Australia	Belgium	Chile	Colombia
Finland	France	Germany	Greece	Hungary
India	Iran	Ireland	Israel	Italy
Japan	Malaysia	Mexico	Netherland	Norway
Peru	Poland	Russia	Slovenia	South Africa
Spain	Switzerland	Thailand	UK	USA

The Table 3 provides results of analyses conducted in order to test our first hypothesis. The first, base, model includes the control variables only. The other provides results of the full model including the Remittances variable. As hypothesized, the coefficient is positive and statistically significant ( $p < 0.05$ ) and therefore giving support to *Hypothesis 1*. In other words, remittances are positively associated with the level of necessity entrepreneurship.

NEA	Coef.	Standard Error	Coef.	Standard Error
GDP Growth	-0.158	(0.116)	-0.248*	(0.125)
Export Growth	-0.038	(0.448)	-0.045*	(0.020)
CPI	-3.014**	(0.448)	-3.283**	(0.446)
Spending on Education	0.143	(0.530)	0.288	(0.555)
Investment Environment	-1.227*	(0.520)	-0.256	(0.645)
Infrastructure	3.692**	(1.227)	1.746	(1.467)
FDI Inflow	-2.164	(4.065)	-3.248	(4.136)
Power distance	-0.058**	(0.021)	-0.103**	(0.028)
Uncertainty Avoidance	0.094**	(0.024)	0.046	(0.033)
Individualism	0.055 <sup>+</sup>	(0.032)	0.005	(0.040)
Remittance			128.635**	(29.813)
Wald Chi-squared	4041.85**		999.33**	
N	171		168	
Number of groups	31		30	

\*\* $p < 0.01$ ; \* $p < 0.05$ ; <sup>+</sup> $p < 0.10$

OEA	Coef.	Standard Error	Coef.	Standard Error
GDP Growth	0.407**	(0.100)	0.297**	(.111)
Export Growth	0.005	(0.035)	0.009	(0.032)
CPI	3.67**	(0.668)	4.079**	(0.499)
Spending on Education	-0.967	(0.891)	-0.811	(0.745)
Investment Environment	-0.420	(0.586)	-1.444**	(0.231)
Infrastructure	5.538**	(2.356)	8.434**	(2.478)
FDI Inflow	-24.355**	(8.919)	-25.871**	(8.853)
Power distance	0.017	(0.041)	0.071 <sup>+</sup>	(0.038)
Uncertainty Avoidance	0.029	(0.043)	0.093**	(0.036)
Individualism	0.042*	(0.039)	0.050	(0.042)
Remittance			-89.264**	(14.488)
Wald Chi-squared	281.80**		895.23	
N	103		103	
Number of groups	28		28	

\*\*p<0.01; \*p<0.05; †p<0.10

The Table 4 provides results of analyses testing the *Hypothesis 2* which predicted that Remittances will be negatively associated with opportunity entrepreneurship. It is indeed the case since the coefficient is negative and significant at the p<0.01 level. Thus, the *Hypothesis 2* received support.

## CONCLUSION AND IMPLICATIONS

The goal of our study was to examine how remittances-funds sent home by migrants-impact entrepreneurship. We argued that remittances have an important role in two types of entrepreneurial activity. Specifically, remittances lead to venturing that is driven by necessity, i.e. when individuals turn to entrepreneurship as a last resort due to lack of other employment opportunities. On the other hand, we proposed that remittances may actually be associated with decreased levels of opportunity entrepreneurship. The reason for the argument lies in the fundamental differences between the two types of entrepreneurial activities; specifically, in the level of risk they involve, the motivations and growth aspirations of the entrepreneurs, and the novelty of business ideas for the ventures. For example, the necessity entrepreneurship generally requires relatively low levels of financial and human capital and little opportunity costs from the viewpoint of the entrepreneur (Thurik et al., 2008). In contrast, opportunity entrepreneurship involves higher risk given its longer payoff horizon and novel business model.

Using a sample of 30 countries and the GEM data spanning nine years, we found empirical support for our hypotheses. Our data shows that remittances indeed help necessity entrepreneurs. However, they can have a negative impact on opportunity-driven entrepreneurial activities which are typically more sophisticated and driven by the vision of entrepreneurs to fill a substantial market need. While the former finding is not completely unexpected, the latter is interesting. It appears that for entrepreneurs who perceive a business opportunity and decide to pursue it even when they have other employment opportunities, remittances are not particularly helpful but can even dissuade them venturing all together. We posit that there are several reasons for this. For one, the opportunity entrepreneurship may require more capital than remittances typically represent. Second, the migrants sending money back home may not be comfortable with it being used to pursue a novel and therefore riskier business ventures. The entrepreneurs themselves may also be reluctant to strain the relationship by risking their relatives' funds in uncertain ventures while also leaving their current employment.

Our findings provide some interesting insights into the factors affecting entrepreneurship in various country contexts. Remittances have been increasingly important sources of financial inflows particularly into developing and emerging economies over the past decade, but our study shows that their impact is not uniform as only necessity entrepreneurs seem to use them in their venturing activities. Opportunity entrepreneurs apparently benefit more from other sources of funds such as bank loans or money from their local family and friends who have more confidence in (and knowledge about) their entrepreneurial efforts. Remittances may also be just too small to fund the opportunity-inspired ventures.

Our study makes some important contributions to the entrepreneurship field. Besides investigating the impact of an often overlooked but important source of venture capital in developed countries remittances we add to the entrepreneurship literature by expanding the current theory on the more nuanced differences between necessity and opportunity entrepreneurship. Further, we add to our understanding of the factors stimulating and hindering

entrepreneurship in different international settings. The results add to findings available in the literature. Vaaler (2011) found that in general, remittance is positively associated with new venture creation rates, but only in countries where state agencies or enterprises do not “crowd out” private players. This is because that state policy may encourage accumulation of venture funds to create fewer but larger enterprises and focus on opportunity-driven entrepreneurship. In a separate study, Martinez, Cummings and Vaaler (2015) find that remittance is most effective as a venture funding source in countries with substantial informal sectors. Meanwhile, Kim and Li (2014) found that foreign direct investment positively relates to new business registration and this positive effect is strongest in countries with poor institutional support, weak political stability and low general human capital. Taken together, these findings suggest that the relationship between external capital (such as remittance and foreign direct investment) and entrepreneurship rate is complex and nuanced. External capital seems to be most suited for promoting entrepreneurship in weak institutional environments and for necessity entrepreneurship. Countries need strong institutional environment and rely on internal capital (such as banks, venture financing) to support innovation and opportunity-driven entrepreneurship.

Our findings should be of interest to policy makers. Firstly, some developing countries have considered taxing inward remittance flows to increase revenue; our results indicate that taxation might not be a good idea. Since remittance promotes necessity entrepreneurship, the population that will be most affected by such taxation are the ones without any option for work or economic advancement. Taxation potentially promotes social instability (Mohapatra, et al., 2012). Secondly, while necessity entrepreneurs create value for the economy, opportunity-driven venturing has been viewed as more desirable from the perspective of economic development given the job creation that it is associated with. Our study suggests that in order to stimulate opportunity entrepreneurship, policy makers should strive to provide alternative sources of funding to entrepreneurs besides remittances. Identifying individuals with entrepreneurial ambitions and educating them about funding opportunities may be another way to induce more opportunity entrepreneurship.

While providing some interesting insights, our study should be viewed in light of its limitations. First, we relied on cross-sectional data which sometimes poses a problem of causality although in our case, the reverse causality is not theoretically very plausible (i.e., entrepreneurship is not likely to cause remittances to flow into the country). Second, we relied on GEM measures of the necessity and opportunity based entrepreneurship. These are based on the entrepreneurs’ subjective judgements and have been subject to some debate. Farlie and Fossen (2017) have suggested strengthening the necessity and opportunity entrepreneurship measures with prior unemployment status. Individuals who are initially unemployed prior to starting businesses are defined as “*necessity*” entrepreneurs, and individuals who are wage/salary workers, enrolled in school or college, or are not actively seeking a job are defined as “*opportunity*” entrepreneurs. This additional measure will ensure that the interviewee’s subjective judgment is supported with an objective, ex ante data. Third, even though we have utilized comprehensive databases such as Global Entrepreneurship Monitor, World Bank and Transparency International, our study may have benefited from additional data such as the availability of opportunities and perceived capabilities since both factors will influence necessity and opportunity entrepreneurs. Necessity and opportunity entrepreneurs might see different businesses as opportunities and based on perception of their own capability, decides to engage in them. Understanding those perceptions might offer clues of how to promote opportunity driven entrepreneurship.

Future research can overcome these shortcomings by investigating the nature of entrepreneurial activities most affected by remittances. In addition, future studies may consider examining whether it is the funds that remittances represent or the social connections and knowledge that is most important in stimulating entrepreneurial activity. We hope that our study provides a starting point for further investigations on this interesting and important topic.

## REFERENCES

- Acs, Z.J., & Mueller, P. (2008). Employment effects of business dynamics: Mice, Gazelles and Elephants. *Small Business Economics*, 30(1), 85-100.
- Agunias, D.R. (2006). *Remittances and development, trends, impacts and policy options: A review of the literature*. Migration Policy Institute.
- Ahlstrom, D., & Bruton, G.D. (2006). Venture capital in emerging economies: Networks and institutional change. *Entrepreneurship Theory and Practice*, 30(2), 299-320.
- Awang, A., Amran, S., Nor, M.N.M., Ibrahim, I.I., & Razali, M.F.M. (2016). Individual entrepreneurial orientation impact on entrepreneurial intention: Intervening effect of PBC and subjective norm. *Journal of Entrepreneurship, Business and Economics*, 4(2), 94-129.
- Bendixen, S., & Onge, E.E. (2005). *Remittances from the United States and Japan to Latin America: an in-depth look using public opinion research*. Beyond Small Change: Making Migrant Remittances Work for Development. Washington, DC, Inter-American Development Bank.
- Brown, S.S. (2006). Can remittances spur development? A critical survey. *International Studies Review*, 8(1), 55-76.
- Carey, T.A., Flanagan, D.J., & Palmer, T.B. (2010). An examination of university student entrepreneurial intentions by type of venture. *Journal of Developmental Entrepreneurship*, 15(4), 503-517.
- Durand, J., Kandel, W., Parrado, E.A., & Massey, D.S. (1996). International migration and development in Mexican communities. *Demography*, 33(2), 249-264.
- Dustmann, C., & Kirkcham, O. (2002). The optimal migration duration and activity choice after re-migration. *Journal of Development Economics*, 67(2), 351-372.
- Fairlie, R.W., & Fossen, F.M. (2017). *Opportunity versus necessity entrepreneurship: Two components of business creation*. SIEPR Discussion Paper, Stanford Institute for Economic Policy Research.
- Hechavarria, D.M., & Reynolds, P.D. (2009). Cultural norms & business start-ups: the impact of national values on opportunity and necessity entrepreneurs. *International Entrepreneurship and Management Journal*, 5(4), 417-437.
- Hofstede, G. (1980). *Culture's consequences, international differences in work-related values*. Beverly Hills, CA: Sage.
- Ilahi, N., & Jafarey, S. (1999). Guest worker migration, remittances and the extended family: Evidence from Pakistan. *Journal of Development Economics*, 58(2), 470-485.
- Kim, P.H., & Li, M. (2014). Injecting demand through spillovers: Foreign direct investment, domestic socio-political conditions, and host-country entrepreneurial activity. *Journal of Business Venturing*, 29(2), 210-231.
- Kirzner, I. (1973). *Competition and entrepreneurship*. Chicago, IL: University of Chicago Press.
- Levitt, P. (1998). Social remittances: Migration driven local-level forms of cultural diffusion. *The International Migration Review*, 32(4), 926-948.
- Lin, X., & Yang, X. (2017). From human capital externality to entrepreneurial aspiration: Revisiting the migration-trade linkage. *Journal of World Business*, 52(3), 360-371.
- Martinez, C., Cummings, M.E., & Vaaler, P.M. (2015). Economic informality and the venture funding impact of migrant remittances to developing countries. *Journal of Business Venturing*, 30(4), 526-545.
- Mohapatra, S., Blanca, M.D., & Dilip, R. (2012). Migration, taxation, and inequality. *Economic Premise*, 2(80), 1-10.
- Mesnard, A., & Ravallion, M. (2006). The wealth effect on new business startups in a developing economy. *Economica*, 73(291), 367-392.
- Orozco, M. (2004). *Remittances to Latin America and the CA ribbean: Issues and Perspectives on Development*. Washington. Report commissioned by the Organization of American States.
- Radović-Marković, M., & Salamzadeh, A. (2012). The nature of entrepreneurship: Entrepreneurs and entrepreneurial activities. *Lambert Academic Publishing*, 22(3), 105-110.

- Reynolds, P., Bosma, N., Autio, E., Hunt, S., De Bono, N., Servais, I., & Chin, N. (2005). Global entrepreneurship monitor: Data collection design and implementation 1998-2003. *Small Business Economics*, 24(3), 205-231
- Ruiz-Arranz, M. (2006). *Boosting Economic Growth*. IMF.
- Sanders, M. (2007). Scientific paradigms, entrepreneurial opportunities and cycles in economic growth. *Small Business Economics*, 28(4), 339-354.
- Schumpeter, J.A., (1942). *Capitalism, socialism and democracy*. New York: Harper and Row.
- Shane, S. (1993). Cultural influences on national rates of innovation. *Journal of Business Venturing*, 8(1), 30-59.
- Shane, S. (1994). Cultural values and the championing process. *Entrepreneurship Theory & Practice*, 18(4), 25-41.
- Sternberg, R., & Wennekers, S. (2005). Determinants and effects of new business creation using global entrepreneurship monitor data. *Small Business Economics*, 24(3), 193-203.
- Suro, R., (2005). *A survey of remittance senders and receivers*. Beyond Small Change: Making Migrant Remittances Work for Development. Washington, DC, Inter-American Development Bank.
- Thurik, A., Carree, M.A., van Stel, A., & Audretsch, D.B. (2008). Does self-employment reduce unemployment? *Journal of Business Venturing*, 23(6), 673-686.
- Vaaler, P.M. (2011). Immigrant remittances and the venture investment environment of developing countries. *Journal of International Business Studies*, 42(9), 1121-1149.
- Valliere, D., & Peterson, R. (2009). Entrepreneurship and economic growth: Evidence from emerging and developed countries. *Entrepreneurship & Regional Development*, 21(5/6), 459-480.
- Van Stel, A., Carree, M., & Thurik, R. (2005). The effect of entrepreneurial activity on national economic growth. *Small Business Economics*, 24(3), 311-321.
- Wong, P., Ho, Y.P., & Autio E. (2005). Entrepreneurship, innovation and economic growth: Evidence from GEM data. *Small Business Economics*, 24(3), 335-350.
- Woodruff, C., & Zenteno, R. (2007). Migration networks and microenterprises in Mexico. *Journal of Development Economics*, 82(2), 509-528.