DIASPORA ENGAGEMENT INSTITUTIONS AND VENTURE INVESTMENT

ACTIVITY IN DEVELOPING COUNTRIES

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DEDICATION

To Shaughan, Eva, Mo, Vivie, Jude, and Ellis. Dad's finally not a student anymore.

ABSTRACT

The research and policy importance of the worldwide diaspora has never been greater, given the approximately 250 million individuals worldwide living outside their countries of origin, remitting $583 billion dollars annually, the vast majority of which is sent to the developing world. In response to this, the majority of countries worldwide have formed formal governmental bodies—which I term Diaspora Engagement Institutions (DEIs)—dedicated to addressing diaspora-related issues. This dissertation study examines whether and under what circumstances developing country DEIs increase venture activity that is the backbone of innovation, economic growth, and poverty reduction in the developing world. Using Social Exchange and Organizational Identification as theoretical backdrops, I propose that these DEIs induce loyalty and reciprocity in diaspora members which then increase or facilitate investment into the home country. I first explore how remittances and the presence of a DEI impact new venture activity. I then examine how characteristics of the DEI, the diaspora population, country of origin, and transnational characteristics moderate this impact by changing the salience or strength of the social exchange obligation and social identification. The results suggest that DEIs increase the investment impact of remittances primarily for venture founding, but not for funding availability, and outline several contingencies under which developing countries that form DEIs can increase the strength of the diaspora identification with and loyalty toward the country of origin. (226 words)

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List of Abbreviations

COO   Country of Origin (Migrant Home Country or Sending Country)
COR   Country of Residence (Migrant Host Country or Receiving Country)
DEI   Diaspora Engagement Institution
NGO   Non-governmental Organization

1. Introduction

Processes of new business funding, founding and growth –entrepreneurship—are vital to developing country economic growth, poverty reduction and broader social stability. Countless studies have been done to explore, among other things, the geographic locations (Boschma & Martin, 2010) and institutional contexts (Bowen & De Clercq, 2008) under which entrepreneurial activity has a positive impact on economic growth. Some address the topic with more skeptical or cautious voices (Parker, 2007), but in large part, especially for countries looking to strengthen and move up in the global economy, entrepreneurship and entrepreneurship policy is believed to play a key role (Chrisman, Hynes, & Fraser, 1995; Hasan & Tucci, 2010; Thurik, 2009; Timmons & Bygrave, 1986). Somewhat paradoxically, those countries most in need of economic growth and development through entrepreneurship often lack access to necessary capital to accomplish that growth because institutional protections for investors may be weaker (Beck & Demirguc-Kunt, 2006; Guler & Guillén, 2010; Zacharakis, 1997).

In the developed world, traditional solutions to closing the finance gap may involve angel or VC funding (Samila & Sorenson, 2011; Shane, 2012), or more recent innovations such as crowdfunding (Belleflamme, Lambert, & Schwienbacher, 2014; Mollick, 2014). Yet in the developing world, where formal regulatory institutions are relatively weaker and capital tends to be especially scarce, these first-world solutions are substantially less applicable. Would-be-entrepreneurs must instead rely more heavily on sometimes predatory microloans (Lewis, 2008; McIntosh & Wydick, 2005; Morduch,

1999) or informal investments from family and friends (Bates, 1997; Bygrave &

Reynolds, 2006; Bygrave, Hay, Ng, & Reynolds, 2003; Kotha & George, 2012).

Recent work has begun to outline the economic role played by migrant diaspora,

that is, former residents or citizens of a country who live and work abroad. One way in

which they may contribute to filling this venture capital gap is by sending money home

via remittances (Vaaler, 2011; Yang, 2011). In the last few decades, remittances have

emerged as a new and increasingly important source of foreign capital for economic

growth and social development (De Haas, 2005; Ratha, 2005, 2011; Woodruff &

Zenteno, 2007). And although the individual transaction amounts tend to be relatively

low, the aggregate amounts are economically substantial. Remittances are the largest or

second-largest international capital flow (behind FDI) in most developing countries,

projected to reach $586 billion ($440 billion to developing countries) this year (World

Bank, 2015a). These financial remittances are not just used for household consumption

purposes, but for investments in human capital (Adams & Cuecuecha, 2010; Edwards &

Ureta, 2003) and the formation of new businesses (Woodruff & Zenteno, 2007).

Although outward migration has traditionally been thought of as a net loss for

developing countries who lose their best and brightest residents via "brain drain"

(Bhagwati & Hamada, 1974; Carrington & Detragiache, 1998), remittances' increasing

share of economic activity is perhaps one reason that scholars and policy makers have

recently expressed optimism that migration can be a net positive for developing home

countries (Collier, 2013; Kuznetsov, 2006). One element of this optimism is the

argument that if the diaspora are properly engaged by NGOs or home country

governments, their expertise, influence and wealth will tend to flow into more productive investments and offset losses incurred via "brain drain" (Gamlen, 2005). This engagement can occur in a variety of ways (Agunias & Newland, 2012; Gamlen, 2006; Lafleur, 2011) and some empirical evidence has begun to accumulate regarding the financial (Leblang, 2011) and nonfinancial (Smith, 2003a) impacts of these engagement efforts.

Despite this early evidence, the migration and investment impacts of home country emigration policies such as diaspora engagement are relatively understudied (For exceptions, see Leblang, 2010; McKenzie, 2007), suggesting there is more work to be done (Délano & Gamlen, 2014). Although there has been some case-study work on related topics, such as how investment promotion agencies can impact investment behaviors of diaspora members (Riddle, Brinkerhoff, & Nielsen, 2008) or the different ways in which country-of-origin ("COO") governments can engage their diasporas (Brinkerhoff, 2012), there has been little if any systematic cross-national investigation of the impact or effectiveness of one popular form of diaspora engagement—formal diaspora engagement institutions ("DEIs") (Gamlen, Cummings, Vaaler, & Rossouw, 2013). This dissertation fills that gap and extends work on remittances, entrepreneurship, and economic growth by investigating whether and how DEIs can enhance the venture investment environment.

In this dissertation I argue and then show empirically that in addition to serving diasporans' unique needs as members of a transnational community, DEIs may both motivate altruistic behavior and help productively direct diaspora attention to economic

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needs and opportunities in the home country. By doing so, developing countries can facilitate their diasporas to serve home-country development needs, including but not limited to provision of capital for entrepreneurial activity and economic growth.

This dissertation also promises to contribute in a few meaningful ways to scholarship and public policy. First, my dissertation study contributes to research in entrepreneurship by providing richer and more nuanced explanation of the drivers of capital availability and investment growth in the developing world. This dissertation fits into the broad set of scholarship which explores the antecedents and conditions of diaspora engagement (E.g., Brinkerhoff, 2012; Gamlen, Cummings, Vaaler, & Rossouw, 2013; Sørensen, 2007), as well as factors which enhance the role of remittances for entrepreneurship and development (Martinez, Cummings, & Vaaler, 2015; Vaaler, 2013).

Second, my dissertation study contributes to decades of International Business research on the role of governmental institutions and policies in stimulating economic activity such as internationalization and foreign direct investment (Blomström, Kokko, & Mucchielli, 2003; Lombard, 1978; Peng, Wang, & Jiang, 2008; Rugman & Verbeke, 1998; Wang, Hong, Kafouros, & Wright, 2012) that can have positive spillover effects in local economic contexts (Feinberg & Majumdar, 2001; Hejazi & Safarian, 1999; Kim & Li, 2014; Wei & Liu, 2006). I add to this research by theorizing and empirically testing a new and important institutional contingency for productive cross-border economic activity—DEIs in their various forms. The findings of this dissertation study have implications not only for research on diaspora engagement but for also practice. Many DEIs are new and their impacts yet untested. As policymakers become better aware of

which approaches to diaspora engagement are more effective, they can better harness the valuable economic, social, and knowledge resources of their migrants living abroad.

After this introductory section, this dissertation will proceed in four additional sections. In Section 2 entitled "Theory and Background", I review Social Exchange Theory and Organizational Identification Theory, discuss the DEI phenomenon, then apply the theories in the DEI context by developing empirical predictions exploring how remittances and DEIs affect venture activity, and how DEI characteristics, as well as factors related to diaspora and home- and host- country, moderate these effects by changing the salience or strength of the social exchange obligation and social identification experienced by the diaspora. Section 3, entitled "Empirical Model and Analytical Strategy", outlines my data sources, analytical approach, and sample descriptive statistics. In Section 4, "Results", I discuss the empirical results and how they inform and add nuance to our understanding of DEIs in this context. Lastly, in Section 5, "Discussion and Conclusion" I synthesize my empirical findings and highlight their implications for research and policy in management and related fields. I also point out how the limitations of the dissertation study suggest the need for future research on DEIs and related phenomena, and close with some final remarks. Section 6 contains my references and following that section are two appendices addressing empirical explanation or descriptive statistics.

2. Theory and background

2.1 Literature review

2.1.1 Social Exchange Theory

"[A]ll men, or most men, wish what is noble but choose what is profitable; and while it is noble to render a service not with an eye to receiving one in return, it is profitable to receive one. One ought, therefore, if one can, to return the equivalent of services received, and to do so willingly." Aristotle, The Nicomachean Ethics, as quoted by Blau (1964).

I begin with an explanation of the major concepts underlying Social Exchange Theory, which I use as one of my theoretical frameworks for this dissertation study. Social Exchange Theory stands for the proposition that exchange activity is the basis for much of social interaction and human behavior (Homans, 1974). Although the theory was developed to explain dyadic patterns of human interaction, it has also been utilized to explain broader network patterns of relationships and behaviors (Cook & Emerson, 1978; Emerson, 1976). The key component of Social Exchange Theory is that in a pattern of social exchange, resources are provided with an unenforceable expectation of future reciprocation. (Cropanzano & Mitchell, 2005; Muthusamy & White, 2005). For example, Tyler (1999) observed that when organizational members perceive that their organizations value and appreciate them, they reciprocate with behavior that benefits the organization (Tyler, 1999). Social Exchange Theory has been used across a variety of disciplines (Cropanzano & Mitchell, 2005) to explain patterns of human interaction in the workplace (Settoon, Bennett, & Liden, 1996), politics (Cann & Sidman, 2011), and the corporate boardroom (Westphal & Zajac, 1997).

It may be helpful here to distinguish between social exchange and economic exchange. Although there are some similarities, such as an implicit weighing of costs and benefits, there are some important differences. Unlike the negotiated, legally obligated, and contractually-specified nature of economic exchange, social exchange is comprised of voluntary action and entails unspecified future obligations that are rarely, if ever, negotiated in advance by the parties (Blau, 1964; Konovsky & Pugh, 1994; Whitener, Brodt, Korsgaard, & Werner, 1998). Also, the economic conception of wealth is narrower than the broader concept of resources contemplated in Social Exchange Theory; from a social exchange perspective, the concept of resources contains a socioemotional dimension as well as an economic one. A simplistic differentiation of these two resource types is that economic resources are tangible and address a party's financial needs, while socioemotional resources are symbolic and often address a party's need for esteem, value, or dignity (Cropanzano & Mitchell, 2005; Song, Tsui, & Law, 2008). The reciprocation expectation inherent in social exchange differs from the legally enforceable principle of economic or contractual exchange, and suggests that parties to a relationship will continue to participate in social exchange under circumstances when the anticipated exchange benefits outweigh the costs (Cook, Molm, & Yamagishi, 1993), rather than continuing the exchange to avoid penalties for legal breach of an agreement.

Cost-benefit analysis is not the only relevant framework to a social exchange participant; power and trust in an exchange relationship can also affect the likelihood of reciprocation (Blau, 1964; Emerson, 1962; Homans, 1974). Power is an important factor in exchange relationships within and between organizations (Pfeffer, 1992), and one

important dimension of power in these social exchanges is the extent to which one actor controls resources that are needed or valued by another (Wrong, 1980). Trust is similarly an important concept across disciplines (Rousseau, Sitkin, Burt, & Camerer, 1998) and can arise out of perceptions (institution-based trust) or out of interactions (process-based trust). In the DEI context, process-based trust is based on perceptions that government is responsive—that it cares about its citizens and their needs. Institution-based trust, on the other hand, arises out of current or historical institutional actions that conform to public expectations of what is right or appropriate (Miller & Listhaug, 1990; Thomas, 1998). A shift in either trust or power will change the nature of social exchange obligations arising out of DEI-diaspora relations.

2.1.2 Organizational Identification Theory

The use of social identity theory (borrowed from social psychology) has a long history in organizational scholarship that seeks to describe multilevel phenomena and relationships—how individuals relate with and behave toward broader groups or organizations of which they are a member. (Ashforth & Mael, 1989; He & Brown, 2013; Pratt, 1998; Pratt, Rockmann, & Kaufmann, 2006). Identity and identification research has explained individual behavior within and toward organizations on topics such as cooperation and citizenship (Dutton et al. 1994), loyalty (Mael & Ashforth 1992), and commitment (Whetten et al. 1992). This identification result has been tested in organizations ranging from an employer (Rousseau, 1998) to an alma mater (Mael & Ashforth, 1992) to a favorite sports team (Foster, Hyatt, & others, 2007).

This broad research agenda has two main research streams, the first of which is organizational identity, which addresses the question of what is central, distinctive, and enduring about an organization (Albert & Whetten, 1985; Whetten, 2006). It focuses on organization-level attributes at a collective level and is the higher-level analog to individual conceptions of identity.

On the other hand, the second main research stream, this one focusing on organizational identification, addresses the nature of the relationship between an individual and the organization (Dutton, Dukerich, & Harquail, 1994). Because it is a relational concept, it is measured at the dyadic level and for each individual member is manifest through an identity comparison which measures the degree of overlap between identity concepts of a given individual and identity concepts of the organization. These identity comparisons occur when a group member assesses the fit between their self-identity and the observable identity-relevant characteristics of the organization. (Foreman & Whetten, 2002). Essentially, the member asks him or herself the question "Who am I in relation to the organization?" (Pratt, 1998). The answer to this question in thought to manifest in three related dimensions: solidarity with the organization, loyalty in attitude and behavior, and perception of shared characteristics with other group members. (Ashforth & Mael, 1989; Patchen, 1970) The greater the degree of "fit" perceived by the group member, the higher the level of the member's identification with the group or organization, and the more the group member is prone to exhibit solidarity and group-benefitting behaviors.

Implicit in my use of this theory of organizational identification is the assumption that this theory developed to explain employee loyalty in organizations is relevant to identification of a diaspora member with the broader diaspora community or the homeland itself. Although a diaspora does not fit with traditional conceptions of a well-defined organization like many of those in theoretical or empirical work on organizational identification, its very existence depends on central issues of identity—a recognition and profession of the homeland (Vertovec, 2009) by individual members and by the collective. As such, one might consider a diaspora to be a network form of organizing (Biao, 2005; Kuznetsov, 2006; Leblang, 2010; Meyer & Wattiaux, 2006) made up of dispersed individuals with a shared identity or experience, somewhat akin to a loosely-connected multinational corporation (Ghoshal & Bartlett, 1990) or the alumni of a university who may have never met in person but share an alma mater (Mael & Ashforth, 1992).

2.2 Phenomenon of Interest: State development policy

2.2.1 Government role in economic development

A long history of literature in International Business has addressed the impact and contingent effects of government involvement in economic matters. In large part, the literature has indicated that state action has the *potential* to positively affect economic development such as the creation of new industries (Spencer, Murtha, & Lenway, 2005), though the direction and magnitude of this effect can depend on the state's institutional

context, the nature of its efforts, and the characteristics of the industry in question (Porter, 2000). Policies that are appropriately tailored can be effective, while those that are well-meaning but ill-fitting may "accomplish little beyond the expenditure of taxpayers' money" (Spencer et al., 2005: 332–33).

In some contexts, over-regulation is certainly a concern (Lindblom, 1977), with some researchers concluding that "government matters most which governs least" (Spencer et al., 2005: 334). Direct governmental involvement can reduce the creative freedom of private firms and individuals (Mahmood & Rufin, 2005), prompt expropriation of private assets (Jensen, 2008) or give rise to corrupt practices by public officials (Mauro, 1995; North, 1990). Consequently, the most effective governmental economic programs may be those that create incentives but let market actors work out the specifics. This is the approach I take with regard to diaspora engagement. On a practical level, I argue that engagement efforts will be most effective in situations where they create meaningful incentives for diaspora members to participate in the COO economy.

2.2.2 Diaspora engagement

Although migration is a topic of increasing importance in international management research (Barnard & Pendock, 2013; Kotabe, Riddle, Sonderegger, & Täube, 2013; Riddle & Brinkerhoff, 2011; Sonderegger & Täube, 2010) and related areas such as economics (Arango & Baldwin-Edwards, 2014; Hollifield, Martin, & Orrenius, 2014) and public administration (Andrews, Boyne, O'Toole, Meier, & Walker, 2013; Yanow, 2015), the study of institutions and policies in such research largely focuses more on *im*migration policies in migrants' country of residence ("COR") than *em*igration policies

created by migrants' country of origin ("COO").[1] Though such an imbalance is understandable given the relative paucity of such emigration policies, recent shifts in official COO attitudes toward diasporans merits a reconsideration of research focus. No longer traitorous deserters, diasporans are now often the subject of special holidays or national events (Durand 2004; Shain &Barth 2003) and targeted by campaigns to engage the diaspora in financial remittances, investments or investment promotion, donations, and 'roots tourism' (Brinkerhoff, 2011; Leblang, 2010; Terrazas, 2010).

One example of innovative diaspora engagement is Israel's Birthright program, which since 1999 has brought over half a million Jewish youth from across the world to Israel for educational programs designed to strengthen their cultural and national identities as members of the diaspora (Birthright Israel, 2015). The model appears to have been effective and has recently been expanded with the formation of the Jewish Women's Renaissance Project, which runs its program in formal partnership with the Israeli Ministry of Diaspora Affairs and brings mothers to Israel for a similar cultural education (Amouyal, 2014; Jewish Women's Renaissance Project, 2015; Kashti, 2015).

Another approach to diaspora engagement is to utilize diaspora members as an overseas economic lobby. Research has shown that diaspora members influence foreign direct investment flows (Leblang, 2010) and some countries are attempting to use this observation to stimulate economic growth. An example of this is ConnectIreland--a private organization with government support whose program uses job creation tax

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[1] This section is summarized in part from a working paper by (Gamlen, Cummings, Vaaler, & Rossouw, 2013)

incentives to provides financial motivation for diaspora members who refer foreign companies to Ireland as a base for international expansion (ConnectIreland, 2015).

In addition to participating in cultural trips and acting as investment consultants, diaspora members can act as investors themselves. Diaspora bonds are one avenue through which developing countries can attract additional revenue—by lending money to the COO state at below market rates, diaspora members can prop up a struggling economy and help it to weather financial storms (Ketkar & Ratha, 2010). Such bonds give diaspora investors a "warm glow" of knowing that they are benefitting the homeland, and may also increase their sense of ownership and voice in political and economic affairs. The two most prominent examples of successful diaspora bonds have been India and Israel, though other countries such as Ethiopia, Egypt, and Ghana have also marketed bonds to diaspora members.

Whatever the means of diaspora engagement, it represents, for the most part, a dramatic about-face in state-diaspora attitudes and practices. This shift has been accompanied and facilitated in part by the formation of DEIs, which I define as formal offices in the executive or legislative branches of government, whose focus is solely or primarily diaspora-related issues (Gamlen, 2014). This restrictive definition excludes legitimate and possibly effective diaspora-related efforts by subnational government entities (Bilgili & Agimi, 2015), neighborhood associations (Orozco & Lapointe, 2004), COO-specific NGOs (Fagen et al., 2009), public-private partnerships (ConnectIreland, 2015), or supranational or regional diaspora-centered NGOs (Kibaki, 2003). This isn't to say that other forms of diaspora organizations or diaspora engagement aren't important. Quite the contrary. Many DEIs would be unable to accomplish their objectives without a

network of other partner organizations in the nonprofit or private sector. One example of such an organization is the International Diaspora Engagement Alliance , a US State Department and USAID-sponsored public-private partnership which holds an annual Global Diaspora Week consisting of parallel events across a number of countries (IDEA, 2015). A DEI can piggyback on such an effort to tailor engagement initiatives and magnify its outreach message. Another example is annual events that are sponsored by country-specific nonprofit diaspora groups such as the National Association of Haitian Professionals (NAHP, 2015), whose annual conference has featured, among others, the prime minister of Haiti and a representative from the Ministry of Haitians Living Abroad, Haiti's formal, executive-level DEI.

Despite the fact that my restrictive definition leaves out some of these important diaspora engagement players, this more restrictive approach is necessary for a large, cross-national study due to significant differences in observability, longevity, focus, and formalization between national-level DEIs and local-level DEIs or diaspora-focused NGOs. In short, this approach ensures that the organizations under study are more or less comparable across countries.

Even among this more restrictive set of DEIs, there is fascinating variation in implementation: in the executive branch of government there are both ministerial-level DEIs (Serbia's Ministry of Religion and Diaspora or Somalia's Ministry for Diaspora and Investment) and diaspora-focused administrative departments (Albania's National Diaspora Institute and Ethiopia's Diaspora Coordinating Office). On the legislative side, some states address the diaspora issue through dedicated diaspora representation in the legislative body (Colombia, Ecuador, France), through the use of standing committees

(Nigeria's House Committee on Diaspora Affairs), or through formal advisory councils (the Hungarian Diaspora Council). This variation in DEI implementation gives rise to the empirical predictions in Hypotheses 3-6, below.

2.3 Hypothesis development

2.3.1 Basic predictions

I move now from an outline of the underlying theory and discussion of the phenomenon to my theoretical predictions. The common development refrain is that migration and remittances can be leveraged for financing purposes (Brinkerhoff, 2011; World Bank, 2015a). Although prior research (Dustmann & Kirchkamp, 2002; Martinez et al., 2015; Vaaler, 2011, 2013; Woodruff & Zenteno, 2007) has outlined some of the theoretical underpinnings for why and how remittances have a measurable impact on venture activity in developing countries, I outline the underlying logic for this prediction to set the stage for subsequent contingent predictions.

Migrant diaspora certainly participate in traditional forms of international capital investment (FDI, portfolio investments, etc.), but much or perhaps most migrant investment occurs via personal remittances. By way of explanation, remittances are private transfers of money between individuals or households in different countries. They are usually sent as gifts or as payments for goods or services, most often from countries of residence to countries of origin. They are also a major source of informal investment capital. Migrant remittances are often small, less than $500 in a given transaction. But the transactions are frequent –perhaps monthly or quarterly— and predictably regular in

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times of economic growth or decline. And the number of migrants has recently increased to more than 230 million, making migrants the fifth largest "country" in the world. Migrant remittances now exceed $550 billion with $440 billion going to developing countries (World Bank, 2015a). Migrant remittances to developing countries are either the number one or two (to FDI) international capital flow. They dwarf international lending, portfolio investment and government-to-government aid.

Recent scholarship on the role of migrant diaspora in economic development (e.g., Vaaler, 2011) has provided evidence that remittances serve more than just subsistence (e.g., food and clothing) needs in developing countries. Vaaler (2011) finds that remittances to these countries positively and substantially affect indicators of capital availability and entrepreneurial activity. In other words, migrants who send money home from abroad can be a substantial driving force for economic development (Adams & Page, 2005) and help developing country entrepreneurs overcome their endemic capital constraints (Ratha & Mohapatra, 2011).

Remittance value for venturing purposes arises because, relative to non-migrant foreign venture investors, migrant diaspora members are able to overcome the higher transaction costs of investing in an environment that otherwise lacks the requisite institutional framework to protect their capital. This ability to overcome or counteract opportunistic behavior is facilitated by the relationships migrants have with remittance recipients—typically community and family members with whom they share a set of beliefs and values (Ouchi, 1980; Ratha, 2011). Remitting migrant entrepreneurs can utilize these relationships as informal substitutes for relatively weak formal institutional

guarantees that come with funding new ventures in developing economies. This is

particularly relevant for small businesses or microenterprises that receive small but

frequent capital transfers. Even if only a small percentage of remittance funding goes for

business rather than household consumption, the cumulative effect of these transfers will

significantly and positively affect the new venture environment in the COO. (Martinez et

al., 2015). Therefore,

Hypothesis 1: Remittances are positively associated with home-country venture

investment activity.

Based on the foregoing general discussion of Social Exchange Theory and

Organizational Identification Theory I move now to an exploration of how the theories

apply in the DEI-diaspora context. The received wisdom is that in order for diaspora

members to engage in transformational activities *vis a vis* the COO, they must have the

motivation to do so and the ability to overcome local institutional constraints (Agunias &

Newland, 2012). My basic premise is that most states establishing DEIs provide a

combination of both economic and socioemotional resources in expectation of receiving

sought-after political support and economic resources from their diaspora. DEIs may

provide these two types of resources in a wide variety of ways, including organization of

diaspora investment conferences, facilitation of migrant dual citizenship, a greater sense

of belonging, and provision of a vote and a voice in national (and even sub-national)

politics back home (Gamlen, 2014). I argue that the provision of these resources both

lowers the transaction costs of remitting and creates a social exchange obligation in the diaspora.

For a given country, the baseline level and investment/noninvestment makeup of remittances depends on a variety of economic factors and social relationships. Establishment of a DEI has the potential to shift this baseline level by creating additional social exchange incentives. They do this by publicizing and promoting the idea that when overseas migrants remit or otherwise encourage investment, not only are they helping their immediate friends and family, but the multiplier effect of the influx of foreign capital also creates positive spillovers for the nation's broader economy. DEIs likely also increase the migrant's sense of belongingness—strengthening diasporans' identification with the COO. They can do this through direct diplomacy, or by sponsoring or participating in cultural events. For example, the Armenian Minister of Diaspora Affairs' website touts such diverse activities as meetings with ambassadors and diaspora-focused NGOs, as well as its sponsorship of a concert in Toronto featuring an Armenian songwriter (Ministry of Diaspora, 2015). Such outreach efforts strengthen a transnational identity which increases diaspora loyalty to the COO and subsequently induces positive emotions and behaviors. This can then give rise to a virtuous cycle, in which both the exchange-based reciprocity norm and the identity-based loyalty norms lead to increased diaspora commitment to the COO's political and economic success.

DEIs engage in a wide variety of activities directed toward creating, fostering, and benefitting from relationships with their diaspora. Examples include outreach (e.g., conferences and conventions), political inclusion (e.g., overseas voting and representation

in COO legislatures), civil rights promotion (e.g., timely payment of welfare and social security benefits to migrants in CORs), and economic development (e.g., subsidies to COO-investing migrants) (Gamlen, 2006). Such activity by DEIs represents, in social exchange terms, a provision of resources that may give rise to reciprocal behavior from the diaspora. In social identity terms, it may increase the diasporan's sense of identification with the diaspora and the COO, increasing loyal attitudes and behaviors. One way for migrants to reciprocate or show loyalty is to spread positive information about institutional characteristics and investment opportunities in the home country. Such a role is not unheard of—prior empirical work has explored the ways in which migrants and expatriates have been found to influence international flows of FDI and foreign aid (Alesina & Dollar, 2000; Hernandez, 2014; Leblang, 2010, 2011) as well as bilateral trade (Gould, 1994) between countries of origin and countries of residence. They can do this by sharing specialized knowledge and utilizing social networks and other relationships in both home and host-country. This hypothesized mechanism is that diasporans act as knowledge brokers to less knowledgeable non-migrant investors. The specialized knowledge helps the non-migrant investor navigate the intricacies of a new institutional climate, lowering the transaction costs of the foreign investment.

In addition to sharing knowledge of COO investment opportunities diasporans can respond to the perceived social exchange obligation or renewed identification with the home country is to invest money in entrepreneurial ventures back home. Migrants typically send money home via financial remittances for a wide variety of purposes, including healthcare, housing, and investment. I predict that as DEIs engage in

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reciprocity and loyalty-inducing behaviors, migrants will reciprocate by increasing the flow of investment relative to other remittance uses, resulting in a greater percentage of remittance dollars that will be allocated toward productive investments. Therefore,

Hypothesis 2a: DEIs are positively associated with home-country venture investment activity.

Hypothesis 2b: DEIs magnify the venture-investment impact of remittances.

2.3.2 DEI-based moderators

The prior hypotheses regarding DEI effects (H2a and H2b) did not consider the variety of ways in which diaspora engagement is carried out (Agunias & Newland, 2012), and it is likely that there is meaningful heterogeneity in the methods and configuration of DEIs. For example, a DEI may be organized as a full dedicated ministry, or it may address diaspora affairs as part of a broader policy agenda that also encompasses immigration and foreign affairs. These different autonomy levels (standalone versus portfolio approach) have significant implications for the way a DEI approaches its diaspora relationship. Countries may also have more than one DEI working in parallel, which may similarly influence the nature and extent of the state's relationship with the diaspora. This next set of hypotheses outline several DEI dimensions (including DEI configuration) that I predict are relevant to how diasporans will respond to the influence of DEIs.

One meaningful way in which DEIs may differ quite drastically is in their level of focus on the diaspora. For example, DEIs can range in importance from an office housed within a wider governmental ministry (e.g. the Irish Abroad Unit established in 2006 and housed within the consular division of Ireland's Department of Foreign Affairs) to a fully autonomous ministry dedicated to the diaspora (e.g. the Ministry of Overseas Indian Affairs established in 2004) (Gamlen et al., 2013).

The degree to which DEIs are prominent in the bureaucracy and focused on the diaspora impacts the DEI-diaspora exchange in at least two ways. First, there is a practical difference in the level of political and administrative autonomy among these organizations. A standalone organization may signify a greater commitment by the state to diaspora affairs, and will have relatively greater freedom to set policy agendas, allocate resources, adjust to shifting diaspora needs, etc. This autonomy allows the standalone DEI to be more effective at accomplishing the goal of providing resources to the diaspora, increasing exchange reciprocation and loyalty.

The second way in which a greater degree of focus matters to migrant perceptions is that a more autonomous DEI is most likely going to be perceived by migrant investors as a greater commitment by the state to the diaspora cause, even given the same level of organizational effectiveness. From a social identity perspective, a higher profile DEI means that diaspora issues are more identity-related (i.e. central and enduring) in turn increasing diasporan identification with the state—after all, if the state is focused on issues strongly relevant to diasporans, it increases the congruence between identity conceptions and consequently tips the balance in favor of greater loyalty toward the state.

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For DEIs with a more prominent place in the hierarchy of governmental entities, this combination of greater organizational effectiveness and policy coherence, combined with perceptions of a strong level of commitment or dedication to the diaspora will increase the diaspora level of trust in the state, as well as the power held by the state in its diaspora relations. All else equal, this increase in both trust and power will increase diaspora exchange obligations, leading to an increase in reciprocation behaviors, including the migrant goodwill contagion (indirect) and investment (direct) effects. Therefore,

Hypothesis 3a: DEI prominence in the state bureaucracy is positively associated with home-country venture investment activity.

Hypothesis 3b: Highly prominent DEIs magnify the venture-investment impact of remittances more than less prominent DEIs.

Another way in which DEIs differ is whether they are located in the executive branch or legislative branch of government. This matters because there are tradeoffs between the two approaches in terms of the resources they provide. A legislative DEI often means the diaspora have a vote and a direct voice in a lawmaking body, which is salient for the Social Exchange Theory and Organizational Identification Theory perspectives on diaspora-COO relations. This direct voice represents a substantial socioemotional resource to the diaspora, leading to reciprocal behaviors such as investment promotion or direct investment in the COO. On the other hand, an executive DEI lacks the same level of symbolic representativeness and is made up of political

appointees whose interests may not be as closely aligned with diasporans, possibly

decreasing their impact. Therefore,

Hypothesis 4a: Legislative DEIs are more positively associated with venture investment activity than are DEIs housed in the executive branch of government.

Hypothesis 4b: Legislative DEIs magnify the venture-investment impact of remittances in more than executive DEIs.

Another way that states can differ in their approach to formal diaspora

engagement is by forming more than one DEI. For example, within the last five years,

Algeria, Macedonia, Morocco, the Philippines, and Portugal have each increased their

focus on diaspora issues and currently operate four different DEIs as part of their policy

approach to managing diaspora relations. Having multiple organizations to facilitate

diaspora-DEI exchange matters because it allows for the differentiation of organizations

that can each focus on serving different needs of the diaspora, or on diaspora sub-

populations. Secondly, the existence of more than one DEI will be perceived by diaspora

members as a signal of strong commitment by the state. This greater focus and

effectiveness and strong level of commitment will increase diaspora feelings of loyalty

and reciprocity, and increase trust and power, positively influencing migrant

reciprocation behaviors, including direct (migrant investment) and indirect (information-

sharing) reciprocation. Therefore,

Hypothesis 5a: The number of DEIs is positively associated with venture investment activity.

Hypothesis 5b: The number of DEIs magnifies the venture-investment impact of remittances.

The final way in which DEIs differ is in their primary purpose or objective. There are at least three explanations for why states form DEIs: instrumentally rational states are "tapping" resources of emigrants and their descendants; value-rational states are "embracing" lost members of the nation-state; institutionally-converging states are "governing" diasporas consistent with global norms (Gamlen et al., 2013). Given the great diversity in these purposes, and the strong relationship between organizational purpose and organizational actions, I argue that a DEI established for purposes of financially tapping the diaspora is going to engage in more behaviors directed toward increasing migrant investment, increasing the likelihood of financial reciprocation by the diaspora. As with the other DEI characteristics, this one operates via direct as well as the indirect mechanisms. Compared to other forms of DEI, a "tapping" DEI is more likely to encourage migrant information sharing that is relevant to investment by non-migrants.

This can be done via sponsoring and organizing events such as The Kenya Diaspora Conference, typically held in Washington, DC, or similar events in the COO (Ministry of Foreign Affairs and International Trade, 2015). This increased focus on diaspora as a resource can directly impact migrant venture investment in at least two ways: First, compared to other DEIs less focused on exchange, "tapping" DEIs may

increase the migrants' perception of social exchange obligations, leading to an increase in *overall* reciprocating behavior, including investment via remittances. Second, even without increasing the overall perception of exchange obligation, a "tapping" DEI will increase the likelihood that migrants will satisfy their social exchange obligation by investing, rather than through other means (direct political participation, overseas advocacy, etc.). Therefore,

Hypothesis 6a: DEIs created to "tap" economic resources and capabilities of migrants increase venture investment re than DEIs not created for tapping purposes.

Hypothesis 6b: "Tapping" DEIs magnify the venture-investment impact of remittances more than DEIs not created for tapping purposes.

2.3.3 Diaspora characteristics moderators

In addition to variation in the implementation of DEIs, diaspora populations are not demographically uniform across states. One way in which diasporas differ is in terms of their tenure abroad. Some diaspora communities are relatively new (i.e. South Sudanese) while others have been abroad much longer (i.e. Armenians). As diaspora populations live abroad, they negotiate a transnational space in which they try to maintain an identity tie to the COO while living in and adapting to the COR. And the strength of that identification can decrease over time. In terms of diaspora relationships with DEIs, the stronger diasporans identify with the COO, the less of a difference DEIs can make, because they are already loyal.

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Another way in which length of time abroad can make diasporans more amenable to the social exchange and social identity overtures of DEIs is that, for recent out-migrants, the reasons for their out-migration—whether voluntary based on economic drivers (Sørensen, 2013), or forced by political or military upheavals (Colson, 2003)—may still be fresh in their minds. Some of these potential motivations may decrease trust in and loyalty toward the state. However, over time the specific memories of these negative events may be supplanted by positive emotions associated with belongingness, camaraderie, and a shared heritage among diaspora members. Such positive emotions increase the receptiveness of diasporans to DEIs. Therefore,

Hypothesis 7: DEIs magnify the venture investment impact of remittances from long-term migrants more than they magnify the venture investment impact of remittances from short-term migrants.

A second characteristic of diaspora populations that may impact the effectiveness of DEIs is their diffusion—the degree to which they are spread throughout the world. Some diaspora populations are spread across a wide variety of CORs (Indian diaspora in Europe, N. America, and Asia), while others may be concentrated primarily in one location (i.e. Mexican diaspora concentrated in the United States or Turkish diaspora in Germany).

As the diffusion of a diaspora population increases, so too does the cost of interacting and communicating with them. Diaspora spread across many countries (i.e. Armenia) can be much more difficult to target with advertising campaigns, conferences, and the like. This increased cost decreases DEI effectiveness and the magnitude of social

exchange. Secondly, aside from the actual performance of the DEI, diaspora concentration creates a denser network which magnifies the social capital of the diaspora (Herander & Saavedra, 2005), and consequently the number of vicarious interactions migrants will have with the DEI. If a given migrant has a good impression based on her interactions with the DEI but lives in a country with relatively fewer individuals who are co-citizens, the ripple effect of that positive impression on aggregate perceptions of social exchange obligations, social identification, and migrant reciprocation behavior will be decreased compared to a positive DEI impression held by a migrant living in an area with a high concentration of co-citizens, where the effects of that DEI experience is much more likely to ripple through the migrant social network. Therefore,

Hypothesis 8a: DEIs with a concentrated diaspora population are more positively associated with venture investment than DEIs with a diffuse diaspora population.

Hypothesis 8b: DEIs with a concentrated diaspora population magnify the venture-investment impact of remittances in the home country more than DEIs with a diffuse diaspora population.

2.3.4 Other COO-based moderators

Hypotheses 3-8 addressed the DEI and diaspora characteristics that influence the strength of diasporans' social exchange and social identification responses to engagement efforts by DEIs. Hypotheses 9 deals with a key COO attribute: its political environment.

Because social exchange is based on future unspecified reciprocity and lacks the enforceability of explicit economic contracts, the emergence and maintenance of a well-

functioning social exchange relationship depends in large part on the level of trust between the parties (Konovsky & Pugh, 1994). Prior research has highlighted that trust (or lack thereof) greatly influences citizen attitudes towards government and governmental participation (Citrin, 1974; Hetherington, 1998). This means that a DEI policy intervention will be more successful to the extent people trust the state (Tyler, 2006), that is, the extent to which they believe the commitment of the state to diaspora-relevant causes and concerns. Because of this, factors that increase (decrease) trust in government will increase (decrease) the salience of the social exchange message communicated via the establishment of a DEI. In the social exchange context, trust is driven by a variety of factors; among these is the sense of procedural or distributive fairness (Brockner, 1996; Korsgaard, Schweiger, & Sapienza, 1995; Whitener et al., 1998). In the context of a relationship between diaspora-COO, one factor that is associated with higher perceptions of fairness is its level of representative democracy (Tov & Diener, 2009).

But this trust mechanism is not the only reason that DEIs from democratic states should be more effective. Democracy also increases DEI effectiveness because of the incentives it creates for competing homeland politicians and political parties to seek support from residents living abroad (Levitt, 2001; Pearlman, 2014) which will then strengthen diaspora identification with the COO. Diaspora voters can be a significant force in determining electoral outcomes. For example, a full 5% of registered voters in the Dominican Republic live abroad, and there was speculation in the run-up to the 2012 presidential election about whether diaspora votes would be decisive in the outcome

(Keller, 2012). As democratically-elected officials seek to solidify re-election chances, they may choose to focus on their diaspora constituents by increasing DEI outreach and programs. This would, in turn, have the potential to increase the reciprocity and loyalty of diasporans and lead to an increase in investment-related activities. Diaspora members from less democratic countries are not subject to the same politically-motivated engagement efforts. For these reasons, I argue that:

Hypothesis 9a: DEIs in more democratic states increase venture investment more than DEIs in less democratic states

Hypothesis 9b: DEIs in more democratic states magnify the venture-investment impact of remittances in the home country more than DEIs in less democratic states

2.3.5 Transnational moderators

In contrast to the prior hypothesis which articulated the role that diaspora-COO trust plays in determining citizen reactions to policy initiatives such as DEIs, this hypothesis focuses on relationships between diasporans' COO and COR as they negotiate their transnational identities and practices.

The first transnational moderator of DEI impact is diasporans' physical distance from their COO. I argue that geographic distance both decreases the effectiveness of DEIs and decreases migrant receptiveness to the social exchange and social identity potential represented by DEI-initiated activities for two reasons. First, similar to my argument about diaspora concentration, distance decreases DEI effectiveness because it increases the cost faced by the state for each diaspora outreach action. Activities such as

organizing conferences, surveying expatriates, facilitating overseas voting are all more expensive as the geographic distance between home country and diaspora increases. With limited state resources, as costs increase, DEI effectiveness will see a corresponding decrease. Secondly, geographic distance increases the cost of migrants' return travel, which decreases the level of direct economic and interpersonal interaction between migrants and the home country. A high level of diaspora visibility may be key to home country politicians and governmental officials identifying (and treating) them as a key stakeholder of the state (Mitchell, Agle, & Wood, 1997). As distance increases and the physical presence of diaspora in the home country decreases, so too may the efforts of DEIs at addressing diaspora needs, leading to a decrease in perceived social exchange obligations. Therefore,

Hypothesis 10a: DEIs with a geographically proximate diaspora population increase venture investment more than DEIs whose diaspora are more geographically distant

Hypothesis 10b: DEIs with a geographically proximate diaspora population magnify the venture-investment impact of remittances in the home country more than DEIs whose diaspora are more geographically distant

The next way in which transnational characteristics of COO and COR operate is in their relative economic development status. Some diaspora populations, such as those that emigrated for political or religious reasons, may be located in countries whose economies are relatively on par with their COO. On the other hand, diaspora populations whose migration was more economically driven are more likely to experience a stark

contrast between the economic opportunities and development levels in COR and COO.

As migrants' country of residence becomes more attractive as a location for permanent

residence and investment, the relative attractiveness and power of the home country over

its diaspora decreases (Duval, 2002). This matters because as remitters consider the

relative value of various potential investments, the altruistic component of the motivation

to remit may not be able to overcome the hard reality that the economic returns in the

COO may be much lower than those available in the COR. As a general rule, the bulk of

diasporas reside in countries more economically attractive than their own. But the relative

distance between economic conditions in COO and COR can vary quite widely, shifting

the relative economic investment incentives of diaspora members. Therefore,

Hypothesis 11a: DEIs in countries with relatively strong economic conditions are more positively associated with venture investment than DEIs whose economies are relatively weaker compared to diasporas' COR

Hypothesis 11b: DEIs in countries with relatively strong economic conditions magnify the venture-investment impact of remittances in the home country more than DEIs whose economies are relatively weaker compared to diasporas' COR

Figure 1: Conceptual model
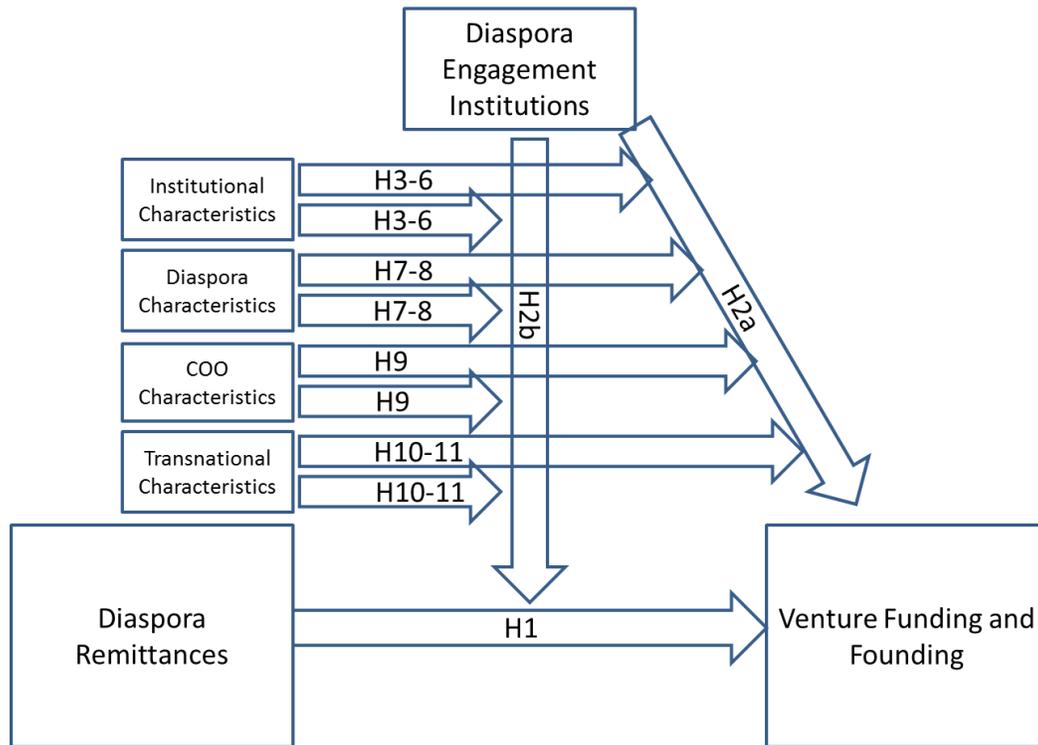
Figure 1 summarizes the 11 hypotheses developed for testing. The first two hypotheses predict direct effects on COO venture funding and founding outcomes related to the money migrants remit (Hypothesis 1) and whether the migrant and COO are linked by some DEI (Hypothesis 2a). But these two attributes are also linked, thus we also predict that DEIs will positively moderate the venture funding and founding effects of migrant remittances (Hypothesis 2b). The remaining hypotheses predict that characteristics of the DEI (Hypotheses 3-6), the diaspora population (Hypotheses 7-8), the COO setting (Hypothesis 9) and the COO/COR relationship (Hypotheses 10-11) will moderate the empirical relationships articulated in Hypotheses 2a and 2b—influencing the direct and moderating impact of DEIs.

3. Empirical model and analytical strategy

3.1 Overview

To investigate empirical support for this dissertation study's basic predictions regarding the impacts of diaspora engagement efforts on migrant investor behaviors, I define the following statistical model for estimation (Equation 1):

$$VentureActivity_{it} = \alpha + \sum_{s=1}^{s=n} \lambda_s\, Controls_{it-1} + \beta_1 Remit_{it-1} + \beta_2 DEI_{it-1} +$$

$$\beta_3 Remit * DEI_{it-1} + \sum_{j=1}^{j=n} \gamma_j Countries_i + \sum_{x=2001}^{x=2010} \psi Years_t + \varepsilon_{it}$$

Where *VentureActivity* refers to either 1) *VentureFunding*, a cross-country longitudinal measure of the availability of venture capital in a given country, based on the Global Competitiveness Index's "risky but innovative funding" measure (Schwab, 2013), or 2) *VentureFounding* a cross-country longitudinal measure of new business registrations (World Bank, 2015b); *Controls* refers to appropriate economic, political, and institutional characteristics of the home country, as well as demographic characteristics of its migrant diaspora; *Remit* refers to the economic contributions of a country's migrant diaspora via total remittances as a percentage of GDP; and *DEI* is a 0/1 measure that indicates whether the country had an operating DEI in a given year.

Based on Equation 1 I will regress *Venture Activity* in country *i* of year *t* on an intercept (α) and then several terms representing domestic country factors thought to influence new venture activity (*Controls*). I will also regress *Venture Activity* on two right-hand side terms ($\beta_{1\text{-}2}$) which facilitate initial tests of my first two hypotheses. Consistent with Hypothesis 1, I expect *Remit* to enter with a positive sign ($\beta_1 > 0$).

Consistent with Hypothesis 2a, I also expect *DEI* to enter with a positive sign ($\beta_2 > 0$). Hypothesis 2b predicting that DEI's effects are experienced indirectly through migrant investment activity will be supported if the sign on *Remit*DEI* is significantly positive ($\beta_3 > 0$). To round out the explanation of *Venture Activity*, I also regress it on individual country i (γ_{1-n}) and year t ($\psi_{2001-2010}$) 0-1 dummies to capture unspecified but idiosyncratic country- and time- specific effects. The error term (ε) picks up other unspecified effects varying by country i and year t.

Each subsequent hypothesis and robustness test builds upon this basic empirical model by introducing new terms, adding additional interaction terms, and identifying additional *DEI* effectiveness contingencies via sub-sampling strategies. Rather than write a separate equation for each of Hypotheses 3-11, I will write out and discuss a few representative examples for illustrative purposes. For example, Hypothesis 6 tests whether a DEI's effectiveness depends on the apparent purpose for which the DEI was established. It does so by estimating the following model (Equation 2):

$$Venture\ Activity_{it} = \alpha + \sum_{s=1}^{s=n} \lambda_s\ Controls_{it-1} + \beta_1 Remit_{it-1} + \beta_2 DEIOther_{it-1} +$$

$$\beta_3 DEITapping_{it-1} + \beta_4 Remit * DEIOther_{it-1} + \beta_5 Remit * DEITapping_{it-1} +$$

$$\sum_{j=1}^{j=n} \gamma_j Countries_i + \sum_{x=2001}^{x=2010} \psi Years_t + \varepsilon_{it}$$

Where *DEITapping* and *DEIOther* partition the *DEI* variable depending on whether the institution was established to tap diaspora resources or for some other purpose outlined in prior literature (Gamlen et al., 2013). In line with Hypothesis 6a and 6b, I predict a positive coefficient for *DEITapping* and *DEITapping*Remit*, respectively

(without similar support for *DEIOther* and *DEIOther*Remittances*), which would indicate that the effectiveness of a DEI for harnessing diaspora for investment depends in part upon the purpose for which the DEI was established.

The other DEI contingency hypotheses (Hypotheses 3 through 5 and 7 through 11) will be tested in similar fashion. For example, the test for Hypothesis 4, which predicts that Legislative DEIs outperform Executive DEIs, is comparable to that outlined in Equation 2, except I predict a positive coefficient for *DEILeg* and *DEILeg*Remittances*, respectively (without similar support for *DEIExec* and *DEIExec*Remittances*), which would indicate that the effectiveness of a DEI for harnessing diaspora for investment depends in part upon the bureacratic home of that DEI.

In other instances, the empirical test is much more similar to Equation 1, with a split sampling technique, in which the equation is estimated using a subsample of observations determined by high and low levels of some underlying variable. For example, Hypothesis 10 predicted that geographic distance between COO and COR would reduce the effectiveness of DEIs. To test this prediction, I estimate Equation 1 on a set of observations where the geographic distance is low, and a set of observations where the geographic distance is high. I expect that the coefficient for *DEI* and *DEI*Remittances* will be of greater magnitude and statistical significance for the low distance subsample than for the high distance subsample.

3.2 Data and methods

To test these hypotheses I gather and analyze a dataset of political, institutional, and economic data in developing countries. Although the majority of UN countries have DEIs, I restrict the sample to countries classified by the World Bank as developing (low, lower middle, and upper middle income), consistent with prior research on the impact of remittances for entrepreneurial outcomes (Martinez et al., 2015; Vaaler, 2011) which reflects an assumption that the potential influence of migrant investors and DEIs via remittances is most pronounced for countries with lower income levels. I then eliminate from the analysis all countries that are missing data for key independent and control variables. This results in a sample size of 213 observations in 35 countries,[2] which collectively have over 70 million migrants: more than 25% of the worldwide population of migrants living outside their COOs. As described above, in all estimations I lag independent and control variables to ensure temporal precedence and strengthen causal inference, and in sensitivity analyses use alternative methods (i.e. two-stage regression) to more fully address endogeneity concerns.

3.2.1 Variable data sources

Table 1 lists representative variables (and their data sources) which will be used in the analyses. Key variables relate to diaspora engagement institutions (*DEI*), remittances (*Remittances*), new venture funding (*VentureFunding)*, and new venture founding (*VentureFounding*).

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[2] Note that there are slightly fewer observations in the *VentureFunding* models—during the time period in question, the World Economic Forum did not perform complete economic surveys in Moldova or Togo.

TABLE 1: Selected variables, measures, and data sources

Type	Name	Measure	Data Source
Dependent Variables:	*VentureFunding*	1-7 perceptual measure of the availability of venture capital in country i in year t.	Global Competitiveness Index (Schwab, 2013)
	VentureFounding	Number of new businesses registered in country i in year t.	World Development Indicators ("WDI") (World Bank, 2015b)
Independent Variables:			
Remittances	*Remit*	Remittances as a percentage of country i's GDP in year t-1.	WDI
Institutional	*DEI*	0/1 indicator of whether country i has a DEI in year t-1.	Diaspora Institutions Database ("DID") (Gamlen et al., 2013)
	DEIHighStatus	0/1 indicator of whether country i has a high status DEI in year t-1.	DID
	DEILeg (DEIExec)	0/1 indicator of whether country i has a legislative (executive) DEI in year t-1	DID
	DEIMany (DEIone)	0/1 indicator of whether country i has multiple (single) DEIs in year t-1.	DID
	DEITap	0/1 indicator of whether country i has a "tapping" DEI in year t-1.	Constructed using DID
Diaspora	*WorkersRemit*	Remittances from long-term migrants (>1yr) as a percentage of country i's GDP in year t-1.	WDI
	EmpCompRemit	Remittances from short-term migrants (<1yr) as a percentage of country i's GDP in year t-1.	WDI
	Concentration	Herfindahl-Hirschman (hhi) concentration index of all destinations for country i's migrant diaspora.	Constructed using Global Bilateral Migration Database ("GBMD") (Özden, Parsons, Schiff, & Walmsley, 2011)
COO	*HomeDemocracy*	0-10 scale measuring the level of country i's "institutional democracy" in year t-1.	Polity IV Project, 2014
Transnational	*Geographic Distance*	Geographic distance between country i and its primary diaspora COR.	Constructed using Berry, Guillén, & Zhou, 2010 and GBMD
	Economic Distance	Geographic distance between country i and its primary diaspora COR.	Constructed using Berry, Guillén, & Zhou, 2010 and GBMD

Data for *VentureFunding* comes from the World Economic Forum's Executive

Opinion Survey ("EOS") which comprises part of the Global Competitiveness Index

(Schwab, 2013) and consist of a perceptual measure of the availability of venture capital

for "risky but innovative projects". The EOS is important for both practice and research.

It is used by prominent scholars in their study of finance, development and public policy

(e.g., La Porta & Shleifer, 2008) as well as entrepreneurship (e.g., Stenholm, Acs, &

Wuebker, 2013). It is included in important cross-country indices related to corruption

(e.g., Transparency International's Corruption Perceptions Index) and bribery (e.g.,

International Bribe Payers Index). Multilateral institutions like the World Bank use it to

gauge the progress of developing countries. And national government agencies and

ministries tout their ranking and changes-in-ranking in discussions with such institutions

as well as potential foreign investors.

Data for *VentureFounding* comes from the WDI's World Bank Group

Entrepreneurship Survey and reflect the number of new (LLC) business registrations in

each country in each year (World Bank, 2015b). The favorable aspect of this dataset is

that its focus on official business registrations makes it more or less comparable across

countries. But this comparability comes at a cost. Focus on formal registrations likely

undercounts smaller unregistered micro-enterprises so prevalent in less-developed

countries and reduces the likelihood of finding an effect in our empirical setting—making

this a somewhat conservative test of the foregoing hypotheses.

Data for *Remittances* comes from the World Bank's Development Prospects

Database and the IMF's Balance of Payments Statistics Yearbook. These data are

available through the World Development Indicators ("WDI"), which relies on annual country estimates of the three total remittance components: workers' remittances, compensation of employees and migrants' transfers, and is calculated in US dollars. This total is divided by country GDP to create a percentage measure. In addition to the total remittances measure (Hypothesis 1) the breakdown among the types of remittances allows me to test Hypothesis 7 regarding diaspora tenure abroad.

Data for the DEI variables comes from a comprehensive dataset on Diaspora Engagement that has been compiled through a combination of archival and interview research by associates at the Diaspora Engagement Policies Project, part of the broader Oxford Diasporas Programme. A preliminary version of the dataset was used in a recent working paper (Gamlen et al., 2013). The primary (moderating) independent variable—*DEI*—is measured as a 0/1 and indicates whether the country has any formal DEI in a given year. The same dataset also provides information regarding the number (*DEICount*), bureaucratic location (*DEILegislative* and *DEIExecutive*) and status (*DEIHighStatus*). I also use the dataset to determine whether a DEI is a "tapping" DEI (*DEITap*) by running separate probit regression models predicting establishment, one each for the tapping, embracing, and governing perspectives (Gamlen et al., 2013). I then use these regression results to determine which model fits the data best, i.e., which model has a predicted value closest to 1 in the year each DEI was established. This allows me to classify each DEI into one of three types: tapping, embracing, and governing. For more details on this process, see Appendix A and pages 73-75.

I use the World Bank's Global Bilateral Migration Database ("GBMD") (Özden et al., 2011) to calculate diaspora concentration measures. This database is the state of the art for bilateral migration and is based on harmonizing extensive census records in over 200 countries and territories over the last 50 years. It has been used extensively in recent studies of migration-related economic development (Alesina, Harnoss, & Rapoport, 2013; Artuç, Docquier, Özden, & Parsons, 2015). Data on COO *Democracy* comes from the Polity IV Project (2014), which tracks political characteristics of all countries with populations over 500K—currently 167 in the database (Center for Systemic Peace, 2014). It has been extensively relied on as a cross-country measure of political characteristics (Brunnschweiler, 2008; Li & Resnick, 2003).

To construct the *Geographic Distance* and *Economic Distance* measures I use data from GBMD to identify the diaspora's primary COR and combine it with bilateral distance data from Berry et al (2010) to calculate the appropriate COO/COR distance measures. This bilateral distance dataset contains several multidimensional constructs that are useful for measuring location-based institutional differences relevant in international business and economic settings. Berry et al's effort also represent a methodological upgrade over prior research by implementing the Mahalanobis method which is computationally more complex but a measurable improvement over prior efforts (Berry et al., 2010). Lastly, the dataset has been used in prior international business (Rugman & Oh, 2013) and entrepreneurship (Li, Vertinsky, & Li, 2014) scholarship.

My control measures come primarily from the sources listed above such as the WDI and GBMD. These include indicators measuring various components of the

institutional (*Rule of Law*, *Government Share of Economy*), macroeconomic (*GDP*, *Economic Growth*, *Wealth*, *Inflation*, *Economic Openness*), diaspora (*Diaspora Size*) and foreign capital (*Foreign Aid*, *Portfolio Investment*, *Foreign Direct Investment*) environments of my 35 countries.

3.2.2 Methods

I estimate Equation 1 and Equation 2 using Stata 13. Analysis of the relationship between *Remittances*, *DEIs*, and *VentureFunding* relies on a panel-feasible generalized least squares estimator ("xtgls" in Stata) with panel-specific first-order autoregressive processes which reduce the concern associated with serial correlation.

This estimator is ill-suited, however, to count data like *VentureFunding*. To decide on the appropriate count model, I regress *VentureFounding* on all control variables, *Remittances*, and country and year dummies using the user-written Stata command *countfit* which, among other things, compares the predictive value and goodness of fit between various count models (Long & Freese, 2014). In head-to-head pairwise comparisons among negative binomial, poisson, zero-inflated negative binomial, and zero-inflated poisson models, the results strongly indicated that the negative binomial model was preferred over all others in terms of its goodness of fit and ability to minimize information loss ($p<0.01$). Therefore I rely on a panel negative binomial regression estimator to estimate the effects of *Remittances* and *DEIs* for the *VentureFounding* models (Stata's *xtnbreg* command). Such a panel estimator provides the flexibility to address unobserved heterogeneity, such as the possibility that countries may differ on other unmeasured characteristics not included in the model (Hausman, Hall, & Griliches,

1984). Unless otherwise stated, all models include country fixed effects and year dummies.

3.2.3 Descriptive statistics, correlations, and nonparametric analyses

The descriptive statistics (Table 2, below) reveal interesting points. First, the descriptives for new business starts (standard deviation exceeding the mean), suggest the use of negative binomial regression techniques to perform the analysis for the venture founding models.[3] Secondly, note also the positive but relatively weak correlation (0.07) between new business starts and the availability of venture capital funding. This suggests that the two measures may be capturing different aspects of the health of the entrepreneurial ecosystem, and suggests the possibility of different findings for the two dependent measures.

Looking at the pairwise correlations in Table 2, most control variables show the predicted signs. For example, *Wealth*, *Economic Growth*, and *GDP* are all positively associated with my dependent measures, suggesting their consistency and validity as measures of economic well-being. *FDI* is positively correlated with both measures of *VentureFunding*, though not with *VentureFounding*, suggesting that if there is a spillover impact of foreign investment by multinationals, its most primary impact may be in terms of capital availability and scaling, rather than increasing the number of registered businesses. On the other hand, there is a negative relationship between *Remittances* and all three dependent measures, indicating that the positive relationship between

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[3] Additionally, with the help of the *counfit* command in Stata, which compares relative fit of various count model approaches to estimation, I have identified negative binomial regression as superior to poisson or other count models, because it minimizes information loss.

Remittances and the venture investment environment in developing countries, if any, is more complicated than a bivariate correlation would indicate. Those countries with the highest remittances as a percentage of GDP –in my sample, Jordan and Moldova, with over 20% of their economy coming from remittances—suffer from low levels of institutional and economic development. In a certain sense, it is unsurprising that remittances are highest at lower levels of economic development—that is where the need for outside capital from migrants abroad is greatest. It is important to point out, however, that my primary interest is not primarily in the bivariate relationships between my variables of interest—it is the within-country effect of increasing remittances, given a particular institutional setting and level of economic development. For that, panel regression methods are most appropriate.

Because there are several highly significant correlations, I calculated the variance inflation factor (VIF) of my simple model based on Equation 1. As expected given their high correlation (0.67), *GDP* and *Diaspora Size* exhibited extremely high VIF values. This is likely because each variable is highly correlated with the underlying population of a given country. As a result of the multicollinearity, individual coefficients for GDP and Diaspora Size may be unstable, but this is of little concern, given their status as control variables. Excluding these two, the other variables, including my variables of interest, averaged a VIF score of 5.6, which is below commonly accepted thresholds for indicating problems with multicollinearity.

TABLE 2: Pairwise correlations of selected variables

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 *Founding*	27609.15	66411.84	1.00															
2 *Funding*	2.92	0.58	0.07	1.00														
3 *GDP*	24.44	1.71	0.48	0.08	1.00													
4 *Econ.Growth*	5.01	4.00	0.01	0.24	-0.05	1.00												
5 *Wealth*	3161.26	2416.69	0.22	0.08	0.36	-0.13	1.00											
6 *Inflation*	0.07	0.05	0.15	-0.11	0.13	-0.03	-0.02	1.00										
7 *Rule of Law*	-0.35	0.49	-0.06	0.48	-0.09	0.07	0.38	-0.11	1.00									
8 *Govt_Econ*	13.82	4.82	0.19	0.24	-0.12	-0.14	0.33	-0.03	0.52	1.00								
9 *Economic Open*	76.62	33.60	-0.29	0.28	-0.63	0.07	-0.07	-0.09	0.22	0.26	1.00							
10 *Diaspora Size*	13.20	1.38	0.29	-0.13	0.67	-0.06	-0.06	0.09	-0.49	-0.38	-0.42	1.00						
11 *Foreign Aid*	0.02	0.03	-0.25	-0.37	-0.56	0.09	-0.47	-0.04	-0.13	-0.09	0.17	-0.34	1.00					
12 *Portfolio Invest*	1.12	5.21	0.24	0.09	0.39	0.06	0.17	-0.06	0.09	0.09	-0.29	0.14	-0.14	1.00				
13 *FDI*	0.04	0.04	-0.10	0.12	-0.28	0.12	0.15	0.07	0.27	0.27	0.47	-0.37	0.03	-0.11	1.00			
14 *Remittances*	0.06	0.07	-0.28	-0.20	-0.41	-0.05	-0.38	-0.03	-0.12	-0.08	0.32	-0.03	0.24	-0.15	0.18	1.00		
15 *EmployeeComp*	0.01	0.03	-0.13	-0.19	-0.38	0.06	-0.22	0.05	-0.01	0.16	0.38	-0.03	0.22	-0.08	0.21	0.62	1.00	
16 *WorkersRemit*	0.05	0.05	-0.28	-0.15	-0.30	-0.09	-0.35	-0.05	-0.13	-0.17	0.19	-0.02	0.17	-0.14	0.11	0.91	0.23	1.00
17 *DEI*	0.59	0.49	-0.14	0.04	0.42	-0.04	-0.04	-0.04	-0.15	-0.28	-0.35	0.50	-0.20	0.11	-0.37	-0.12	-0.24	-0.02
18 *LegislativeDEI*	0.13	0.34	0.03	0.08	0.42	-0.05	0.10	-0.09	-0.07	-0.16	-0.34	0.38	-0.24	0.15	-0.10	-0.08	-0.15	-0.01
19 *ExecutiveDEI*	0.54	0.50	-0.12	0.03	0.37	-0.02	-0.01	0.00	-0.09	-0.22	-0.28	0.46	-0.16	0.11	-0.32	-0.15	-0.21	-0.07
20 *TappingDEI*	0.44	0.50	-0.04	0.03	0.45	-0.11	0.03	-0.04	-0.25	-0.24	-0.39	0.51	-0.23	0.17	-0.24	-0.14	-0.29	-0.03
21 *DiasporaConc*	0.34	0.22	-0.14	-0.17	-0.04	-0.16	0.26	-0.10	-0.20	-0.29	0.09	0.15	-0.21	-0.15	0.02	0.12	-0.12	0.22
22 *Polity*	5.83	4.36	0.15	0.06	0.17	-0.12	0.29	0.03	0.07	0.06	-0.09	0.13	-0.19	0.11	-0.16	-0.17	0.02	-0.21
23 *GeographicDist*	4001.37	3954.31	0.06	-0.15	-0.00	0.08	-0.07	0.03	-0.29	-0.11	0.19	0.06	0.14	0.05	-0.06	-0.07	0.11	-0.16
24 *EconomicDist*	13.11	11.25	0.00	-0.02	0.02	0.05	0.12	-0.05	-0.16	-0.32	0.24	-0.04	-0.10	0.09	0.24	0.17	0.12	0.14

TABLE 2, cont.

	17	18	19	20	21	22	23	24
17 *DEI*	1.00							
18 *LegislativeDEI*	0.88	1.00						
19 *ExecutiveDEI*	0.33	0.31	1.00					
20 *TappingDEI*	0.92	0.80	0.10	1.00				
21 *DiasporaConc*	0.74	0.67	0.44	0.63	1.00			
22 *Polity*	-0.17	-0.28	0.21	-0.22	0.05	1.00		
23 *GeographicDist*	-0.05	-0.16	0.20	-0.09	0.04	0.18	1.00	
24 *EconomicDist*	0.06	-0.11	-0.20	0.09	-0.14	-0.21	0.16	1.00

Figure 2: Locally weighted scatterplot smoothing graphs
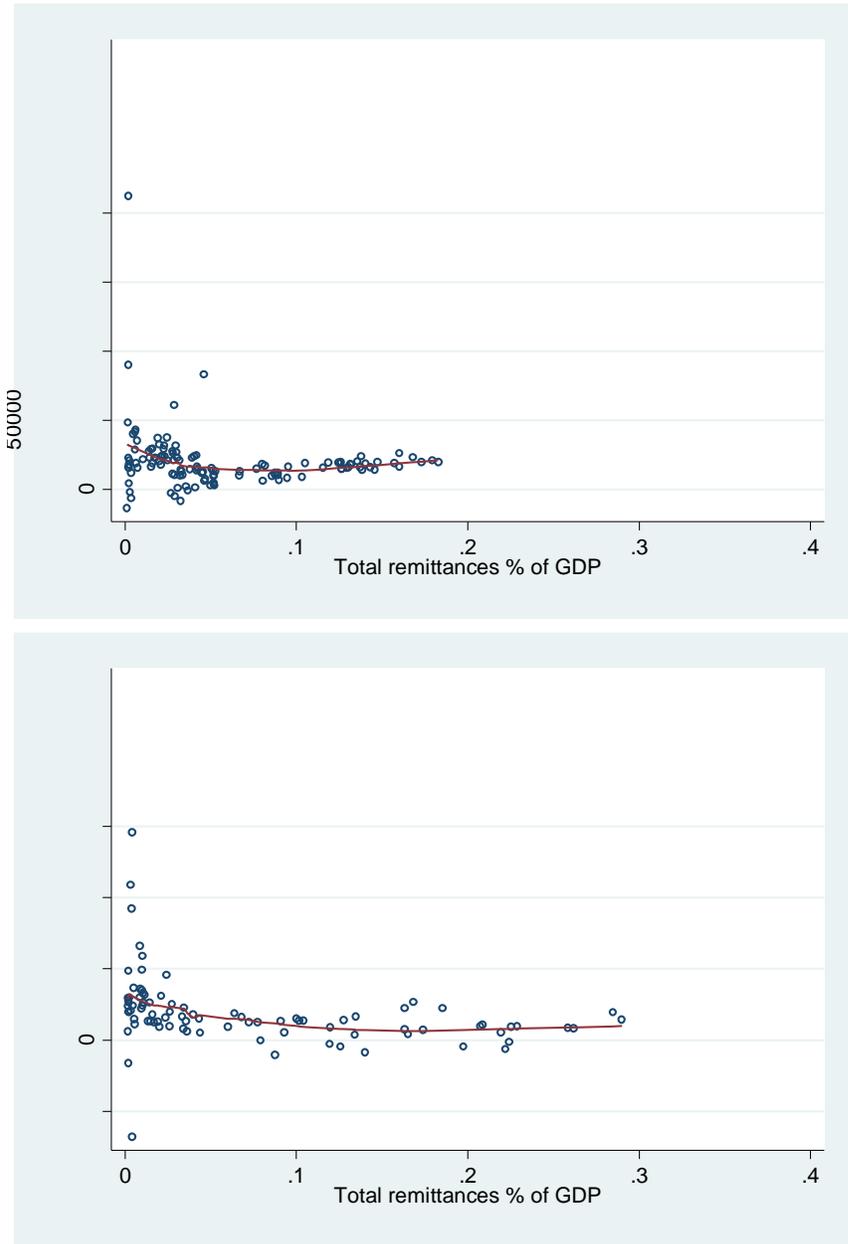
The figures above are simple LOWESS plots which graphically depict the bivariate relationship between remittances (as a percentage of GDP) and my first dependent measure, *VentureFounding*. Figure 2a (above) shows the bivariate relationship in the presence of a DEI, while Figure 2b (below) shows the bivariate relationship in countries without a DEI. Note the slight upward trend in 2a, starting at about 0.08, suggesting a stronger positive relationship between remittances and business starts where there is a DEI.

As an initial test of the hypothesis that DEIs magnify the venture investment impact of remittances, I perform some nonparametric analyses. Figures 2a and 2b above illustrate locally-weighted scatterplots of the relationship between *Remittances* and *VentureFounding* in 33 developing countries between 2001-2010, split between observations with (2a) and without (2b) *DEIs*. Plots were generated using Stata's "mlowess" command, controlling for institutional quality (*Rule of Law*) and some financial variables (*GDP*, *Economic Growth*, *Wealth*, and *FDI*). Note that Figure 2a trends slightly upward from about 0.08, while Figure 2b trends downwards or flat over the same span, providing some suggestion of a weaker connection between *Remittances* and *VentureFounding* in the absence of DEIs.

I find similar results with nonparametric analysis using the alternative dependent measure, *VentureFunding*. Figures 3a and 3b below illustrate locally-weighted scatterplots of the relationship between *Remittances* and *VentureFunding* in 33 developing countries between 2001-2010, split between observations with (3a) and without (3b) *DEIs*. As before, plots were generated using Stata's mlowess command, controlling for institutional quality (*Rule of Law*) and some financial variables (*GDP*, *Economic Growth*, *Wealth*, and *FDI*). Similar to the prior nonparametric result, there are stark differences in the trend lines where *Remittances* reach approximately 8-10 % of GDP, further suggesting a positive relationship between migrant *Remittances* and *VentureActivity*, both in terms of new businesses started, but in terms of the broader availability of equity financing for new ventures.

Figure 3: Locally weighted scatterplot smoothing graphs
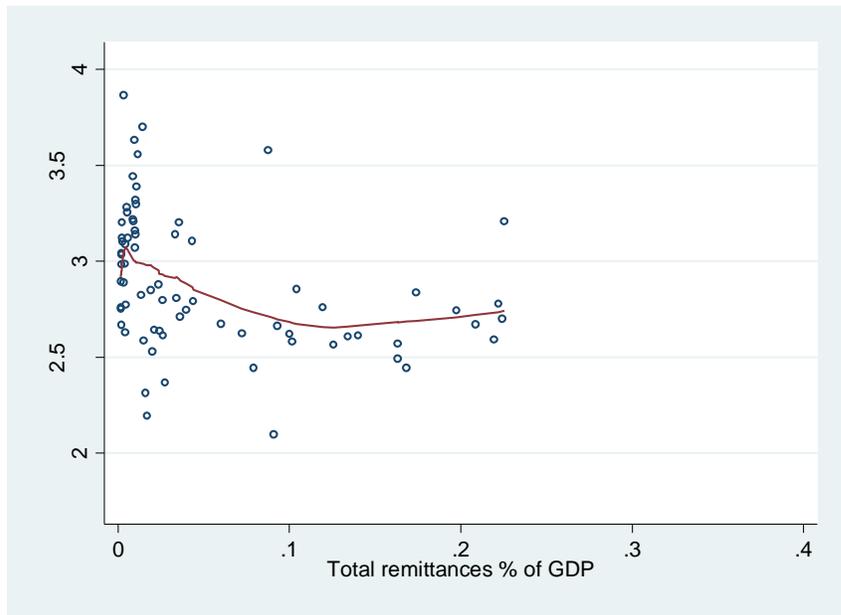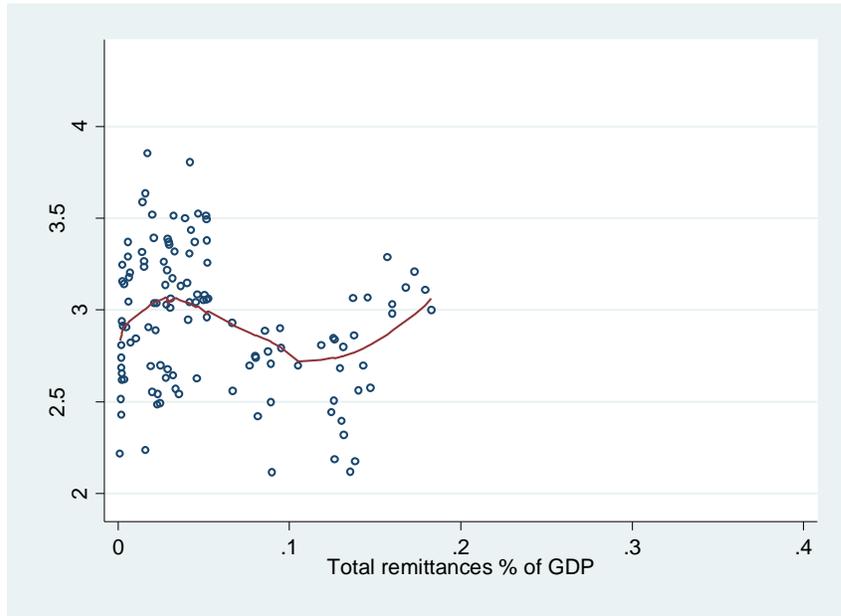
The figures above are simple LOWESS plots which graphically depict the bivariate relationship between remittances (as a percentage of GDP) and my second dependent measure, *VentureFunding*. Figure 3a (above) shows the bivariate relationship in the presence of a DEI, while Figure 3b (below) shows the bivariate relationship in countries without a DEI. Note the upward trend in 3a, starting at about 0.08.

4. Results

4.1 Results for basic predictions

Results from multiple regression analyses related to Hypotheses 1 and 2 are presented in Tables 3 and 4. Table 3 presents results from regression analyses of venture activity and remittances with two alternative dependent variables: *VentureFounding*, and *VentureFunding*. These analyses permit a test of my baseline Hypothesis 1 which predicted that, consistent with prior literature (Brown, 2006; Martinez et al., 2015; Vaaler, 2011; Woodruff & Zenteno, 2007), remittances would have a significant positive impact on COO venture activity in the form of new venture funding and founding.

This first hypothesis is supported. Remittances have a measurable impact on both the funding and the founding of new businesses in developing countries. Observe that in Table 3, Columns 1 and 2, the coefficient for *Remittances* is both positive and statistically significant (coef=3.29, p<.01 and coef=2.99, p<.05, respectively). Looking first at Column 1 for an explanation of remittances' practical effect on new business foundings, the results suggest that when holding all other values at their means, a one percent increase in *Remittances* as a percentage of GDP (from 6% to 7%) increases the rate of new business starts by approximately 3% (1.03=exp(3.29*0.01)).

A comparable impact can be found in the venture funding model results reported in Table 3 Column 2. There, a one percent increase in *Remittances* as a percentage of GDP increases *VentureFunding* from 2.92 to 2.95 (2.95=2.92+2.99*0.01). In practical terms, on the 2010 World Governance Index rankings for this measure of capital

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availability, such an increase results in a 4-spot rise in the rankings (from 44th place to 40th place out of 138 assessed countries) (Schwab, 2013). Together, these results provide moderately strong evidence that remittances positively enhance broader environment of entrepreneurship and economic growth.

TABLE 3: Regression analyses, remittance effects on venture activity (H1)

	(1) *Founding*	(2) *Funding*
VARIABLES	XTNBREG	XTGLS
GDP	-0.25*	0.38**
	(0.12)	(0.13)
Economic Growth	0.02	0.02*
	(0.01)	(0.01)
Wealth	0.00	-0.00+
	(0.00)	(0.00)
Inflation	2.98**	0.37
	(0.88)	(0.50)
Rule of Law	0.46**	0.15
	(0.17)	(0.13)
Govt Share of Economy	0.00	0.01
	(0.02)	(0.01)
Economic Openness	-0.00*	-0.00*
	(0.00)	(0.00)
Diaspora Size	0.47**	0.32**
	(0.17)	(0.09)
Foreign Aid	1.82	-1.45
	(1.96)	(1.34)
Portfolio Investment	0.00	0.00
	(0.01)	(0.00)
Foreign Direct Investment	0.98	0.40
	(1.11)	(0.65)
Remittances	3.29**	2.99*
	(1.24)	(1.37)
Constant	1.92	-11.35**
	(1.77)	(3.71)
N (Country N)	213	192
	(35)	(33)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture founding in up to 35 countries observed from 2001-2010. Hypothesis 1 is assessed, which predicted that remittances would be positively associated with venture activity. The dependent measure in Column 1 is *VentureFounding*, while in Column 2 it is *VentureFunding*. *VentureFounding* (*VentureFunding*) models were estimated in Stata using panel negative binomial (panel generalized least squares) estimation with country fixed effects and year dummies. + $p<10\%$; * $p> 5\%$; ** $p> 1\%$; *** $p> 0.1\%$

Table 4 builds on the prior set of regression analyses by introducing a key term, *DEI*, and its interaction with *Remittances*, thus allowing a formal test of Hypothesis 2, which predicted that DEIs would have a direct positive impact on new venture funding and founding (Hypothesis 2a), and would positively moderate the venture funding and venture founding impact of remittances (Hypothesis 2b). This hypothesis garners partial support. As it relates to Hypothesis 2a, the coefficient for *DEI* is negative and insignificant in Table 4, Columns 1 and 3, suggesting that the overall effect of DEIs on venture investment activity is unlikely to be direct, setting up the possibility of a moderation effect.

In related analyses on the moderating impact of DEIs on venture activity, Hypothesis 2b is more strongly supported. The coefficient for the interaction between *Remittances* and *DEI* is positive and significant (coef=2.68, $p<0.05$) in the founding model (Table 4, Column 2) while in the funding model (Table 4, Column 4) the coefficient, although positive, lacks statistical significance. This suggests that the moderating impact of DEIs on the relationship between remittances and venture activity is more far-reaching in its impacts than the direct effect, and that the impact has largely to do with formal new business registrations.

TABLE 4: Regression analyses, DEI effects on venture activity (H2a-b)

	(1) Founding	(2) Founding	(3) Fund_VC	(4) Fund_VC
VARIABLES	XTNBREG	XTNBREG	XTGLS	XTGLS
GDP	-0.24*	-0.23*	0.38**	0.37**
	(0.12)	(0.12)	(0.13)	(0.13)
Economic Growth	0.02	0.02	0.02*	0.02*
	(0.01)	(0.01)	(0.01)	(0.01)
Wealth	0.00	0.00	-0.00+	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	2.87**	3.20**	0.37	0.39
	(0.88)	(0.91)	(0.50)	(0.50)
Rule of Law	0.47**	0.46**	0.15	0.14
	(0.18)	(0.18)	(0.13)	(0.13)
Govt Share of Economy	0.00	0.01	0.01	0.01
	(0.02)	(0.02)	(0.01)	(0.01)
Economic Openness	-0.01*	-0.01**	-0.00*	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.51**	0.53**	0.33**	0.33**
	(0.17)	(0.17)	(0.09)	(0.09)
Foreign Aid	1.53	1.45	-1.49	-1.56
	(2.01)	(2.01)	(1.34)	(1.34)
Portfolio Investment	0.00	0.00	0.00	0.00
	(0.01)	(0.01)	(0.00)	(0.00)
Foreign Direct Investment	0.88	1.05	0.41	0.39
	(1.12)	(1.13)	(0.65)	(0.65)
Remittances	3.29**	3.15*	3.02*	2.78+
	(1.22)	(1.25)	(1.38)	(1.46)
DEI	-0.16	-0.40*	-0.01	-0.05
	(0.10)	(0.16)	(0.07)	(0.10)
Remittances*DEI		2.68*		0.49
		(1.35)		(0.95)
Constant	1.32	0.80	-11.34**	-11.21**
	(1.80)	(1.78)	(3.70)	(3.71)
N (Country N)	213	213	192	192
	(35)	(35)	(33)	(33)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture founding in 33 countries observed from 2001-2010. Hypotheses 2a (Column 3) and 2b (Column 4) are assessed, which predicted that DEIs would increase venture activity and magnify the venture investment impact of remittances. The dependent measure in Columns 1-2 is *VentureFounding*, while in Columns 3-4 it is *VentureFunding*. *VentureFounding* (*VentureFunding*) models were estimated in Stata using panel negative binomial (panel generalized least squares) estimation with country fixed effects and year dummies. + p<10%; * p> 5%; ** p> 1%; *** p> 0.1%

Based on the results in Table 4, Column 2, a country with a DEI that experiences a one percent increase in remittances as a percentage of GDP (from 6% to 7%) will experience a 6% increase in the rate of new business starts ($1.06=\exp(3.15*.01+2.68*(1)*.01)$), holding all other variables at their means. In comparison, if a country is without a DEI, a one percent increase in remittances as a percentage of GDP leads to only a 3% increase in the rate of new business starts ($1.03=\exp(3.15*.01+2.68*(0)*.01)$). This moderating relationship is represented graphically in Figure 5 below. Note the much steeper slope delineating the relationship between remittances and new business starts when countries have DEIs.

Figure 4: Moderating effect of DEIs on venture founding
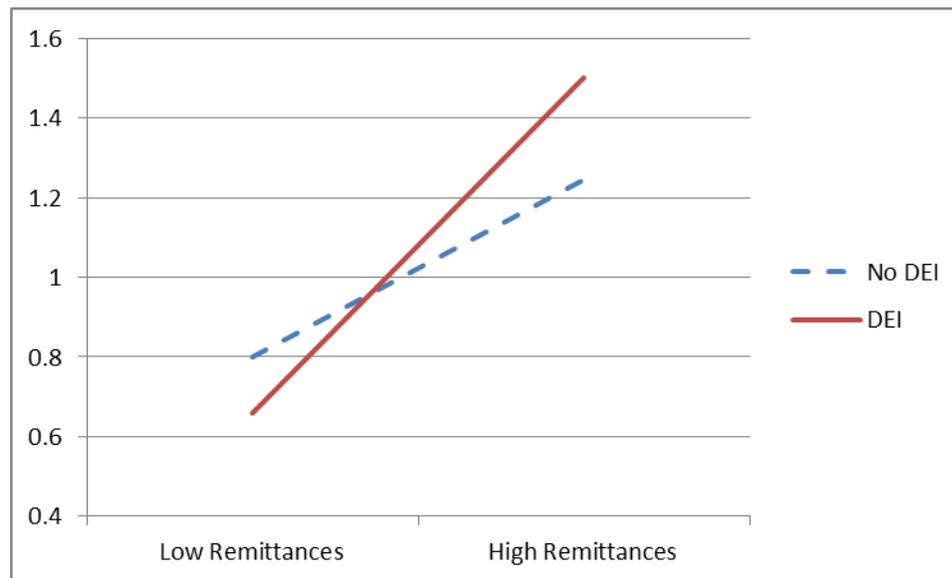
This is a two-way interaction graph of remittances and DEIs based on Table 4, Column 2. The binary moderator is represented by values of 0 and 1, while high and low remittance values are +/- one standard deviation from the mean. All other variables are set to their mean values. The y axis represents the rate of new business regisltrations (*VentureFounding*).

To ensure the robustness of this empirical finding I perform supplementary analyses. These analyses are necessary because DEIs may arguably be endogenously determined. This is the case if their establishment is determined by COO factors relevant to the same outcomes and relationships I am trying to predict (i.e. economic development and political characteristics). Prior work (Martinez et al., 2015; Vaaler, 2011, 2013) has shown the direct positive effect of remittances COO venture activity (H1) is robust to endogeneity concerns. With that in mind, I focus possible endogeneity concerns related to the impact of DEIs on venture activity (Hypothesis 2). I perform supplemental two-stage analyses based on the model in Table 3, Column 4 using Stata's *xtivreg* command. In the first stage, I predict the likelihood of a DEI based on a country's level of diplomatic exchange, which is indicative of the COO's orientation toward broader world politics but not likely to be strongly correlated with new business starts, one indicator of COO venture activity.[4] This is consistent with prior work explaining the emergence of DEIs (Gamlen et al., 2013). The second stage uses the predicted value of *DEI* for the main and interaction effects outlined in Equation 1. See Table 5, below. The coefficient for the interaction *Remittances*DEIHat* is positive and significant (coef=3.94, $p < 0.05$), suggesting that the positive moderating impact of DEIs remains even when addressing their possible endogeneity. This strengthens support for Hypothesis 2b and for the findings that follow.

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[4] Although I acknowledge that some portion of diplomatic efforts are directed at broader economic development, it is unclear that a greater degree of diplomacy is always positively (or negatively) associated with indicators of venture activity—states that are not doing well economically may increase their diplomatic efforts in response, and diplomatic efforts may successfully broker trade partnerships and investments.

TABLE 5: Two-stage regression results, DEI effects, founding DV

VARIABLES	(1) Log of Founding XTIVREG
GDP	0.04
	(0.23)
Economic Growth	-0.01
	(0.01)
Wealth	-0.00
	(0.00)
Inflation	1.73+
	(0.95)
Rule of Law	0.02
	(0.26)
Govt Share of Economy	-0.05+
	(0.03)
Economic Openness	-0.00
	(0.00)
Diaspora Size	0.00
	(0.00)
Foreign Aid	-0.72
	(2.64)
Portfolio Investment	0.01+
	(0.01)
Foreign Direct Investment	0.63
	(1.40)
Remittances	-1.56
	(2.19)
DEIHat	-0.54*
	(0.22)
Remittances*DEIHat	3.94*
	(1.99)
Constant	9.04
	(5.27)
N (Country N)	213
	(35)

This table presents point estimates and standard errors (in parentheses) from analyses of DEI moderating effects on new venture founding in 35 countries observed from 2001-2010. The dependent measure is the natural log of *VentureFounding*, with DEI being predicted by a country's level of diplomatic exchange, consistent with prior research by Gamlen et al (2013). The model was estimated in Stata using panel fixed effect instrumental variables (xtivreg, fe) estimation with country fixed effects and year dummies. + $p<10\%$; * $p>5\%$; ** $p>1\%$; *** $p>0.1\%$

Results reported above are also vulnerable to criticism that establishment of a

DEI is a symptom or result of a broader COO institutional capacity, rather than an

independent driver of the magnified effect of remittances on COO venture activity. To

address this possibility, I include as a control in all my estimations a variable, *Rule of

Law*, which is a well-recognized measure of country institutional quality. At a basic level,

this means that I am already correcting for important differences in the institutional

quality of my sampled countries. As an additional check against this alternative

hypothesis that my *DEI* measure merely reflects underlying institutional capabilities, I

split my sample based on high and low levels of institutional quality, using the

Regulatory Quality measure from the World Governance Indicators (Kaufmann, Kraay,

& Mastruzzi, 2009). In my sampled countries, the average regulatory quality score is -

0.10 on a scale that ranges from -10 to 10. If this alternative hypothesis is correct, the

observed effect should disappear once I account for the quality of COO institutions. In a

split sample estimation using the *VentureFounding* dependent measure, I observe that the

Remittances*DEI interaction is positive and significant in both my low and high

institutional quality conditions, suggesting that the observed DEI effects are not just the

result of underlying institutional resources or capabilities.

4.2 Results for DEI-based moderators

Tables 6 through 14 present analyses which allow empirical tests of Hypotheses 3-6. In

Tables 6 and 7 I introduce analysis of my first DEI-based characteristic: its status in the

organizational hierarchy of COO government. This allows for an empirical test of

Hypothesis 3, which predicted that the main effect and moderating impact of DEIs would be greater for higher status DEIs than for lower status DEIs. I test this by categorizing DEIs based on their relative place in the governmental hierarchy. Executive DEIs fall into one of four categories: 1) Ministries solely dedicated to the diaspora; 2) Ministries that shares another executive function (such as culture or foreign affairs); 3) Administrative departments or units that focus on diaspora affairs; or 4) Interdepartmental committees that focus on diaspora affairs and are made up of individuals from several offices. Legislative DEIs fall into one of three categories based on their organizational hierarchy and autonomy: 1) Stand-alone DEIs in the legislative office; 2) Diaspora have a dedicated legislative seat; or 3) Legislative diaspora advisory council to provide a nonbinding voice on policy and law. To test Hypothesis 3 I create a dummy variable that is equal to 1 if a DEI occupies one of the top two positions in the hierarchy in either the legislative or the executive branch. Table 6 presents analyses of Hypothesis 3 for *VentureFounding*, while Table 7 presents analyses of Hypothesis 3 for *VentureFunding*.

The results partially support the predicted effect. I first examine the *VentureFounding* results in Table 6. Although the main effect of *HighStatusDEI* is positive (Column 1) and the main effect of *LowStatusDEI* is negative (Column 3), neither coefficient reaches statistical significance. However, the interaction term for *Remittances*HighStatusDEI* is positive and statistically significant in Table 4, Columns 2 and 5 (coef=6.63, $p<0.05$ & coef=7.36, $p<0.01$, respectively). In practical terms, for a country with a prominent DEI, each 1% increase in remittances as a percentage of GDP is associated with a 10% increase in the rate of new business starts

(1.10=exp(2.76*.01+6.63*(1)*.01). The corresponding interaction term for

LowStatusDEI indicates no such moderating impact—although the coefficient is positive,

its magnitude and statistical significance are insubstantial.

TABLE 6: Regression analyses, high-status DEI effects, founding DV (H3a-b)

VARIABLES	(1) *Founding* XTNBREG	(2) *Founding* XTNBREG	(3) *Founding* XTNBREG	(4) *Founding* XTNBREG	(5) *Founding* XTNBREG
GDP	-0.25*	-0.25*	-0.26*	-0.27*	-0.26*
	(0.12)	(0.11)	(0.12)	(0.12)	(0.11)
Economic Growth	0.02	0.01	0.02	0.02	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Wealth	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	2.99**	3.03**	2.98**	2.98**	3.11**
	(0.88)	(0.85)	(0.88)	(0.91)	(0.89)
Rule of Law	0.46**	0.43*	0.47**	0.47**	0.45*
	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)
Govt Share of Economy	0.00	0.01	0.00	0.01	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Economic Openness	-0.00*	-0.01*	-0.01*	-0.01*	-0.01**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.47**	0.51**	0.50**	0.52**	0.57**
	(0.17)	(0.16)	(0.17)	(0.17)	(0.17)
Foreign Aid	1.86	1.36	1.82	1.76	1.20
	(1.97)	(1.98)	(1.95)	(1.96)	(1.99)
Portfolio Investment	0.00	0.00	0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Foreign Direct Investment	0.97	1.10	0.94	0.87	1.08
	(1.12)	(1.11)	(1.12)	(1.13)	(1.13)
Remittances	3.31**	2.76*	3.34**	3.27**	2.67*
	(1.25)	(1.29)	(1.23)	(1.23)	(1.29)
High Status DEI	0.02	-0.57*			-0.67**
	(0.14)	(0.24)			(0.25)
*Remittances*HighStatusDEI*		6.63*			7.36**
		(2.77)			(2.85)
Low Status DEI			-0.06	-0.17	-0.27
			(0.13)	(0.17)	(0.17)
*Remittances*LowStatusDEI*				0.66	1.55
				(1.40)	(1.36)
Constant	1.95	1.58	1.89	1.64	1.00
	(1.79)	(1.80)	(1.77)	(1.77)	(1.79)
N (Country N)	213	213	213	213	213
	(35)	(35)	(35)	(35)	(35)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture founding (*Founding*) in 35 countries observed from 2001-2010. Columns 1 & 2 test the impact of High Status DEIs, while Columns 3-4 provide the comparison case of Low Status DEIs. Column 5 represents a fully partitioned model with both interaction effects. Equations were estimated in Stata using panel negative binomial (xtnbreg) estimation with country fixed effects and year dummies. + p<10%; * p< 5%; ** p< 1%; *** p< 0.1%

I also examine support for Hypothesis 3 in the context of my other dependent measure—*VentureFunding*—in parallel analyses reported in Table 7. I examine the main effect of DEI status by comparing the coefficients of *High Status DEI* and *Low Status DEI* in Table 7, Columns 1 and 3 where the dependent measure is *VentureFunding*. Although the high status coefficient is positive while the corresponding low status coefficient is negative, neither reaches statistical or practical significance, indicating a lack of support for Hypothesis 3a's prediction that higher status DEIs would be more effective at stimulating venture activity in developing countries.

I now move to Table 7, Columns 2 and 4 to assess support for Hypothesis 3b. Rather than the predicted positive coefficient for *Remittances*HighStatusDEI*, we observe a negative, though statistically insignificant, coefficient in Table 7, Column 2. This indicates a lack of support for Hypothesis 3b. This result, however, is not surprising in light of the mixed findings related to Hypothesis 2b, which was supported for *VentureFounding*, but not for *VentureFunding*.

TABLE 7: Regression analyses, high-status DEI effects, funding DV (H3a-b)

VARIABLES	(1) Funding XTGLS	(2) Funding XTGLS	(3) Funding XTGLS	(4) Funding XTGLS	(5) Funding XTGLS
GDP	0.38**	0.43**	0.38**	0.39**	0.44**
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Economic Growth	0.02**	0.02**	0.02*	0.02*	0.02*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Wealth	-0.00+	-0.00*	-0.00+	-0.00+	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	0.37	0.27	0.38	0.41	0.32
	(0.50)	(0.51)	(0.50)	(0.50)	(0.51)
Rule of Law	0.14	0.15	0.15	0.12	0.13
	(0.13)	(0.13)	(0.13)	(0.13)	(0.14)
Govt Share of Economy	0.01	0.01	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Economic Openness	-0.00*	-0.00*	-0.00*	-0.00*	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.33**	0.32**	0.32**	0.32**	0.32**
	(0.09)	(0.08)	(0.09)	(0.09)	(0.08)
Foreign Aid	-1.32	-1.32	-1.47	-1.54	-1.42
	(1.35)	(1.34)	(1.34)	(1.34)	(1.34)
Portfolio Investment	0.00	-0.00	0.00	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Foreign Direct Investment	0.38	0.47	0.40	0.39	0.47
	(0.65)	(0.65)	(0.65)	(0.65)	(0.65)
Remittances	3.03*	3.28*	3.04*	2.45+	2.76+
	(1.37)	(1.38)	(1.42)	(1.46)	(1.49)
High Status DEI	0.10	0.14			0.10
	(0.11)	(0.21)			(0.22)
Remittances*HighStatusDEI		-3.62			-3.02
		(2.53)			(2.63)
Low Status DEI			-0.01	0.03	0.03
			(0.08)	(0.10)	(0.10)
Remittances*LowStatusDEI				0.56	0.47
				(0.89)	(0.89)
Constant	-11.45**	-12.66**	-11.27**	-11.73**	-12.84**
	(3.73)	(3.69)	(3.74)	(3.74)	(3.72)
N (Country N)	192	192	192	192	192
	(33)	(33)	(33)	(33)	(33)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture funding (*Funding*) in 33 countries observed from 2001-2010. Columns 1 & 2 test the impact of High Status DEIs, while Columns 3-4 provide the comparison case of Low Status DEIs. Column 5 represents a fully partitioned model with both interaction effects. Equations were estimated in Stata using panel feasible generalized least squares (xtgls) estimation with country fixed effects and year dummies. + $p<10\%$; * $p<5\%$; ** $p<1\%$; *** $p<0.1\%$

Taken together, the results in Tables 6 and 7 suggest that, to the extent DEI status matters for venture activity, it matters via the channel of remittances (and not directly), and there may be differential status effects for venture founding and funding. Although Hypothesis 3b's prediction that high status positively moderates the impact of DEIs is supported by the venture founding results in Table 6, I do not find a similar result for the venture funding availability measure. One possible explanation is that there may be functional differences as well as status differences between these different types of DEIs—specifically, in addition to the greater level of commitment evidenced by high status DEIs, there may be a partially counteracting effect of the particular activities lower-status DEIs engage in. Perhaps because they are relatively lower on the bureaucratic hierarchy, low status DEIs may try harder in collaborating with other governmental offices such as a Ministry of Finance or Office of Economic Development, which then has a positive impact in terms of loan availability for new diaspora-driven ventures. Unfortunately the data on intragovernmental collaborations such as this are extremely limited but this interesting result suggests a potential avenue for future research.

In Tables 8 and 9 I introduce my second DEI-based characteristic: its location in the bureaucracy, specifically whether it is housed in the legislative or executive branch of government. This allows for an empirical test of Hypothesis 4, which predicted that a DEI housed in a legislative office would have a greater direct and moderating impact than a DEI housed in an executive body. The results partially support the predicted effect. I first examine the *VentureFounding* results in Table 8. In this table, the results for the

main effects of legislative versus executive DEIs are opposite the hypothesized prediction—the direct effect of *ExecutiveDEI* is positive and statistically significant (coef=0.21, p<0.05), while the direct effect of *LegislativeDEI* is negative and marginally significant (coef=-0.32, p<0.10). This suggests that instead of legislative DEIs spurring greater venture activity by inducing reciprocation and identity-based loyalty, executive DEIs may have greater resources to organize investment conferences or other events to directly attract investment.

The remittance moderation hypothesis, however, is supported in the context of *VentureFounding*. The coefficient for *Remittances*LegislativeDEI* is positive and marginally significant (coef=6.54, p<0.10) in Table 8, Column 2, while the *Remittances*ExecutiveDEI* coefficient, though positive, fails to reach statistical significance. Based on the Column 2 results, the practical impact of a legislative DEI is such that a one percent increase in remittances as a percentage of GDP (from 6% to 7% of GDP) leads to a 10% increase in the rate of new business starts (1.10=exp(3.42*.01+6.54*(1)*.01). This lends support to the theoretical insight regarding representativeness of legislative DEIs and their identity impact on diasporans. Although *Remittances*LegDEI* falls slightly short of statistical significance (coef=5.69, p=0.16) in the fully partitioned model including both interaction terms (Table 5, Column 5), it is important to recognize that these two categories (Legislative and Executive DEIs) are not entirely mutually exclusive. Given that some countries have multiple DEIs, the loss of significance may be attributed to the fact that the interaction term in the combined model

represents the effect of legislative DEIs when there are no executive DEIs. Perhaps the combination of the two proves to be especially valuable.

As indicated in my descriptive analysis, there is a high correlation between the presence of Tapping DEIs and Legislative DEIs. As further robustness to address the possibility that the results for the two measures are being conflated, I perform supplementary analysis which takes the model described in Table 8, Column 2 and adds *TappingDEI* as a control variable. The magnitude and statistical significance of the *Remittances*LegislativeDEI* remain, addressing concerns that the effect I observe arises only if I omit variables accounting for alternative DEI-emergence motivations.

TABLE 8: Regression analyses, legislative DEI effects, founding DV (H4a-b)

VARIABLES	(1) Founding XTNBREG	(2) Founding XTNBREG	(3) Founding XTNBREG	(4) Founding XTNBREG	(5) Founding XTNBREG
GDP	-0.24*	-0.19	-0.22+	-0.23*	-0.18
	(0.12)	(0.12)	(0.11)	(0.11)	(0.12)
Economic Growth	0.02	0.02	0.02	0.02	0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Wealth	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	2.66**	2.67**	2.96**	3.17**	2.86**
	(0.87)	(0.86)	(0.87)	(0.90)	(0.88)
Rule of Law	0.51**	0.50**	0.43*	0.43*	0.48**
	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)
Govt Share of Economy	-0.00	-0.01	-0.00	0.00	-0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Economic Openness	-0.00*	-0.00*	-0.00*	-0.00*	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.52**	0.52**	0.42**	0.44**	0.51**
	(0.17)	(0.16)	(0.16)	(0.16)	(0.16)
Foreign Aid	1.94	2.01	2.12	2.21	2.18
	(1.94)	(1.93)	(1.92)	(1.93)	(1.93)
Portfolio Investment	0.00	0.00	-0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Foreign Direct Investment	1.17	1.27	1.16	1.19	1.39
	(1.11)	(1.11)	(1.12)	(1.12)	(1.12)
Remittances	3.28**	3.42**	3.42**	3.25*	3.27**
	(1.22)	(1.20)	(1.24)	(1.27)	(1.24)
Legislative DEI	-0.32+	-1.03*			-0.96+
	(0.18)	(0.49)			(0.54)
*Remittances*LegislativeDEI*		6.54+			5.69
		(3.62)			(4.08)
Executive DEI			0.21*	0.02	-0.10
			(0.10)	(0.14)	(0.15)
*Remittances*ExecutiveDEI*				1.29	1.61
				(1.35)	(1.37)
Constant	1.22	0.15	1.87	1.84	0.10
	(1.82)	(1.95)	(1.80)	(1.79)	(1.98)
N (Country N)	213	213	213	213	213
	(35)	(35)	(35)	(35)	(35)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture founding in 35 countries observed from 2001-2010. Columns 1 & 2 test the impact of legislative-based DEIs, while Columns 3-4 provide the comparison case of executive-based DEIs. Column 5 represents a fully partitioned model with both interaction effects. Equations were estimated in Stata using panel negative binomial (xtnbreg) estimation with country fixed effects and year dummies. + p<10%; * p< 5%; ** p< 1%; *** p< 0.1%

I also examine support for Hypothesis 4 in the context of my other dependent measure—*VentureFunding*—in parallel analyses reported in Table 9. I first examine the main effect of DEI bureaucratic location by comparing the coefficients of *LegislativeDEI* and *ExecutiveDEI* in Table 9, Columns 1 and 3, where the dependent measure is *VentureFunding*. Although the *LegislativeDEI* coefficient is positive and larger than the corresponding coefficient for *ExecutiveDEI*, neither is statistically significant. This is consistent with but not supportive of the prediction of Hypothesis 4a.

I next assess the empirical support for Hypothesis 4b by comparing the interaction coefficients for *Remittances*LegislativeDEI* and *Remittances*ExecutiveDEI* in Table 9, Columns 2 and 4 where the dependent measure is *VentureFunding*. Both are negative, and neither are statistically distinguishable from zero. This provides little in the way of support for Hypothesis 4b. However, this is consistent with the empirical observations for prior hypotheses which failed to find a moderating effect in the *VentureFunding* setting despite support in the context of other dependent measures.

Taken together, the evidence suggests support for Hypothesis 4b, which predicted that Legislative DEIs would have a greater venture-enhancing impact through remittances than DEIs housed in the executive branch. There was little support, however, for Hypothesis 4a, which predicted a main positive effect of Legislative DEIs.

	(1)	(2)	(3)	(4)	(5)
	Funding	*Funding*	*Funding*	*Funding*	*Funding*
VARIABLES	XTGLS	XTGLS	XTGLS	XTGLS	XTGLS
GDP	0.38**	0.38**	0.37**	0.39**	0.39**
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Economic Growth	0.02*	0.02*	0.02*	0.02*	0.02*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Wealth	-0.00+	-0.00+	-0.00+	-0.00+	-0.00+
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	0.41	0.33	0.36	0.36	0.34
	(0.50)	(0.50)	(0.50)	(0.50)	(0.51)
Rule of Law	0.14	0.15	0.15	0.16	0.17
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Govt Share of Economy	0.01	0.01	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Economic Openness	-0.00*	-0.00+	-0.00*	-0.00*	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.33**	0.30**	0.31**	0.32**	0.31**
	(0.09)	(0.08)	(0.09)	(0.09)	(0.08)
Foreign Aid	-1.53	-1.55	-1.47	-1.45	-1.56
	(1.34)	(1.35)	(1.35)	(1.34)	(1.35)
Portfolio Investment	0.00	-0.00	0.00	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Foreign Direct Investment	0.35	0.36	0.40	0.40	0.37
	(0.65)	(0.66)	(0.66)	(0.65)	(0.66)
Remittances	2.84*	2.59+	2.99*	3.27*	2.78+
	(1.38)	(1.41)	(1.39)	(1.42)	(1.45)
Legislative DEI	0.13	1.19			1.00
	(0.12)	(0.83)			(0.90)
*Remittances*LegislativeDEI*		-7.20			-5.79
		(5.47)			(6.11)
Executive DEI			0.01	0.01	0.02
			(0.07)	(0.09)	(0.09)
*Remittances*ExecutiveDEI*				-0.64	-0.62
				(0.94)	(0.99)
Constant	-11.47**	-11.03**	-11.03**	-11.52**	-11.41**
	(3.72)	(3.72)	(3.78)	(3.72)	(3.69)
N (Country N)	192	192	192	192	192
	(33)	(33)	(33)	(33)	(33)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture funding (*Funding*) in 33 countries observed from 2001-2010. Columns 1 & 2 test the impact of legislative-based DEIs, while Columns 3-4 provide the comparison case of executive-based DEIs. Column 5 represents a fully partitioned model with both interaction effects. Equations were estimated in Stata using panel feasible generalized least squares (xtgls) estimation with country fixed effects and year dummies. + $p<10\%$; * $p< 5\%$; ** $p< 1\%$; *** $p< 0.1\%$

In Tables 10 and 11 I introduce my third DEI-based characteristic: the number of such DEIs established in a given state. This allows for an empirical test of Hypothesis 5, which predicted that the number of DEIs would increase venture activity and positively moderate the impact of remittances on venture activity. This hypothesis is partially supported. I begin by examining Table 10, where the dependent measure is *VentureFounding*. Note that in Table 10, Column 1 the main effect of *DEICount* is positive and marginally significant (coef=0.14, p<0.10), supporting Hypothesis 5a. To further explore this finding, I reran the analysis using 122 observations excluding those observations where the DEI count was zero. Results strengthened slightly (coef=0.25, p<0.05), thus also strenthening the conclusion that multiple DEIs can have a direct positive effect at stimulating venture activity. In practical terms, increasing the number of DEIs by one is associated with an increase in the annual rate of COO new business starts by 15% (1.15=exp(0.14))

I also test the moderation hypothesis by interacting the *DEICount* variable with *Remittances* in Table 10, Column 2. The coefficient is positive but insignificant, thus not supportive of Hypothesis 5b. To explore this possibility further, I introduce into the model (Table 10, Columns 3-5) dummy variables indicating the existence of a single DEI(*OneDEI*) or multiple DEIs (*MultDEI*). Contrary to hypothesized predictions, the results provide moderate support for the idea that single DEIs are more effective at channeling productive remittances than are multiple DEIs. The *Remittances*OneDEI* coefficient is positive and significant (coef=2.86, p<0.05) in Table 10, Column 3, while the corresponding *Remittances*MultDEI* result is not significant in either Column 4 or

Column 5 (the fully partitioned model). Note, however, that the main effect of multiple DEIs remains positive and significant in Column 4 (coef=0.55, pval<0.55), suggesting that the direct effect of multiple DEIs may be offsetting the lack of a moderating effect.

It is important to note that although the *Remittances*OneDEI* coefficient loses statistical significance in the full model, the coefficient and standard error indicate a p-value of 0.11, barely outside the significance threshold. In sum, these results for Hypotheses 5a and 5b suggest that as far as remittance impacts are concerned, a concentration of power in a single DEI may be preferable to a (possibly uncoordinated) effort via multiple DEIs. However, the positive main effect of having multiple DEIs appears to counteract the lack of a remittance-moderating impact.

TABLE 10: Regression analyses, DEI count, founding DV (H5a-b)

VARIABLES	(1) Founding XTNBREG	(2) Founding XTNBREG	(3) Founding XTNBREG	(4) Founding XTNBREG	(5) Founding XTNBREG
GDP	-0.23*	-0.25*	-0.22*	-0.24*	-0.22*
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
Economic Growth	0.02	0.02	0.02	0.02	0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Wealth	0.00	0.00	0.00+	0.00	0.00+
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	2.97**	3.21**	3.45**	3.62**	3.75**
	(0.88)	(0.90)	(0.87)	(0.86)	(0.89)
Rule of Law	0.41*	0.45**	0.43*	0.40*	0.40*
	(0.18)	(0.17)	(0.17)	(0.17)	(0.17)
Govt Share of Economy	0.00	0.00	0.01	-0.00	0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Economic Openness	-0.00+	-0.00*	-0.01*	-0.00*	-0.01*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.41*	0.43**	0.51**	0.41**	0.46**
	(0.17)	(0.16)	(0.16)	(0.16)	(0.16)
Foreign Aid	2.05	2.06	1.29	1.98	1.63
	(1.94)	(1.93)	(1.99)	(1.92)	(1.96)
Portfolio Investment	-0.00	0.00	0.00	-0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Foreign Direct Investment	0.95	0.97	0.57	0.52	0.56
	(1.12)	(1.13)	(1.11)	(1.11)	(1.12)
Remittances	3.36**	3.39**	3.42**	3.73**	3.60**
	(1.24)	(1.26)	(1.22)	(1.21)	(1.23)
DEICount	0.14+	0.09			
	(0.08)	(0.11)			
Remittances*DEICount		0.15			
		(0.91)			
OneDEI			-0.49**		-0.37*
			(0.12)		(0.16)
Remittances*OneDEI			2.86*		2.36
			(1.35)		(1.51)
Multiple DEIs				0.55**	0.21
				(0.15)	(0.21)
Remittances*MultDEI				-1.30	0.34
				(1.68)	(1.79)
Constant	2.11	2.33	0.85	2.47	1.47
	(1.80)	(1.82)	(1.69)	(1.73)	(1.75)
N (Country N)	213	213	213	213	213
	(35)	(35)	(35)	(35)	(35)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture founding in 35 countries observed from 2001-2010. Columns 1 & 2 test the linear impact of multiple DEIs, while Columns 3-4 provide the comparison case of single versus multiple DEIs. Column 5 represents a fully partitioned model with both single and multiple interaction effects. Equations were estimated in Stata using panel negative binomial (xtnbreg) estimation with country fixed effects and year dummies. + p<10%; * p< 5%; ** p< 1%; *** p< 0.1%

I also examine support for Hypothesis 5 in the context of my other dependent measure—*VentureFunding*—in parallel analyses reported in Table 11. I first examine the main effect of DEI count by examining the coefficient for *DEICount* in Table 11, Column 1, where the dependent measure is *VentureFunding*. The coefficient is negative and insignificant. This suggests that if there is a direct impact associated with the establishment of multiple DEIs, it is felt on the founding, rather than the funding, of new ventures.

I now move to an examination of the moderation hypothesis by interacting the *DEICount* variable with Remittances in Table 11, Column 2 where the dependent measure is *VentureFunding*. Although the coefficient is positive (coef=0.34), it is not statistically significant at commonly accepted levels. This is entirely consistent with the *VentureFounding* results in Table 10 and suggests that a greater number of DEIs does not have a widespread measurable impact when it comes to enhancing the venture environment via remittances.

To further explore the issue, I introduce into my empirical model several dummy variables indicating the existence of a single DEI(*OneDEI*) or multiple such DEIs (*MultDEI*). In Table 11, Columns 3 and 4, both *Remittances*OneDEI* and *Remittances*MultDEI* are positive but neither is statistically insignificant. This is consistent with the *VentureFounding* result from Table 10 and suggests that a single, focused, DEI may in some cases outperform possibly uncoordinated efforts by multiple DEIs.

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TABLE 11: Regression analyses, DEI count, funding DV (H5a-b)

VARIABLES	(1) Funding XTGLS	(2) Funding XTGLS	(3) Funding XTGLS	(4) Funding XTGLS	(5) Funding XTGLS
GDP	0.38**	0.39**	0.41**	0.43**	0.42**
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Economic Growth	0.02*	0.02**	0.02*	0.02**	0.02**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Wealth	-0.00+	-0.00	-0.00*	-0.00*	-0.00+
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	0.37	0.27	0.32	0.15	0.17
	(0.50)	(0.50)	(0.50)	(0.50)	(0.50)
Rule of Law	0.16	0.17	0.13	0.17	0.16
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Govt Share of Economy	0.01	0.01	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Economic Openness	-0.00*	-0.00*	-0.00*	-0.00*	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.31**	0.28**	0.28**	0.23*	0.25**
	(0.09)	(0.09)	(0.09)	(0.09)	(0.10)
Foreign Aid	-1.46	-1.51	-1.41	-1.43	-1.51
	(1.34)	(1.32)	(1.34)	(1.32)	(1.32)
Portfolio Investment	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Foreign Direct Investment	0.41	0.46	0.48	0.52	0.51
	(0.65)	(0.64)	(0.65)	(0.65)	(0.64)
Remittances	3.07*	2.96*	2.73+	2.93*	2.73+
	(1.37)	(1.43)	(1.43)	(1.37)	(1.44)
DEICount	-0.03	-0.11+			
	(0.06)	(0.06)			
Remittances*DEICount		0.34			
		(0.58)			
OneDEI			0.08		-0.05
			(0.08)		(0.11)
Remittances*OneDEI			0.04		0.59
			(0.97)		(1.05)
Multiple DEIs				-0.19+	-0.23+
				(0.10)	(0.14)
Remittances*MultDEI				0.21	0.43
				(1.29)	(1.37)
Constant	-11.10**	-11.09**	-11.58**	-11.35**	-11.23**
	(3.74)	(3.64)	(3.70)	(3.63)	(3.63)
N (Country N)	192	192	192	192	192
	(33)	(33)	(33)	(33)	(33)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture funding (*VentureFunding*) in 33 countries observed from 2001-2010. Columns 1 & 2 test the linear impact of multiple DEIs, while Columns 3-4 provide the comparison case of single versus multiple DEIs. Column 5 represents a fully partitioned model with both single and multiple interaction effects. Equations were estimated in Stata using panel feasible generalized least squares (xtgls) estimation with country fixed effects and year dummies. + $p < 10\%$; * $p < 5\%$; ** $p < 1\%$; *** $p < 0.1\%$

In Tables 12 and 13 I introduce my fourth DEI-based characteristic: the ostensible purpose for which the DEI was established. This allows for an empirical test of Hypothesis 6, which predicted that the intent of DEIs would have a positive main effect and moderate the impact of remittances on venture activity such that "Tapping" DEIs would have a greater impact than DEIs established for other purposes. As described below, I classified each DEI based on the relative predictive value of competing empirical models (Tapping, Embracing, and Governing) based on prior research (Gamlen et al., 2013).

There are a number of possible ways to identify the purpose for which a state has established a particular type of governmental institution. For example, one might read the press release or records of governmental debates and discussion prior to and contemporaneously with the creation of an agency and qualitatively assign a descriptive motivation to the state's establishment of a DEI. This method is intuitively attractive because it relies on a set of formal governmental statements to characterize governmental action—who would know better than the decision makers themselves? But a politician's or bureaucrat's explanation of his or her actions may reflect political expediency rather than an objective or unbiased reality. A second difficulty with this approach is that for some countries, English-language sources of this type may be difficult to come by or prohibitively expensive and time-consuming to identify.

A second possible approach to identifying the purpose or focus of a DEI is to examine its primary actions to see whether it primarily engages in a particular type of

rhetoric or conduct that fits with the theoretical frameworks identified in the literature. This possible approach eliminates the politicking concerns present in the prior method, but the potential linguistic, financial, and time difficulties remain.

Given the pragmatic realities of the multilingual, geographically dispersed, and data-fragmented research setting, I build closely on prior research which identifies the motivation of a DEI with the predictive ability of certain factors influencing its establishment. Gamlen et al's 2013 study examines three theoretically-grounded perspectives on DEI emergence: one that predicts countries *tapping* into the resources of the diaspora; another which predicts countries are *embracing* extra-territorial citizens; and a third which predicts that states are *governing* diasporas consistent with emerging global governance norms.

Based on this framework I run a series of logistic regressions the likelihood of DEI occurrence in a broad set of up to 177 countries observed from 1990 to 2012. Tapping-based DEI occurrence is explained by variables measuring: battle related deaths, diplomatic exchange, diaspora education, FDI, remittances, wealth, nonresident citizen taxation. Embracing-based DEI occurrence is explained by variables measuing: ease of extra-territorial voting, right wing executive, polity, polity squared. Governing-based DEI occurrence is explained by variables measuring: geographic proximity, colonial influence, international association membership, foreign aid. I also include in these models other controls measuring: population density, diaspora size, and diaspora concentration, and year and geographic region dummies.

Using these estimations and their predicted values, I categorize each DEI based on the highest predicted value in the year the DEI was established. Of the 166 countries that had predicted values for at least two perspectives (making a comparison possible), 98 of them had DEIs between 1980 and 2014, and of these, 72 are easily classified into one of the three categories—they exhibit predicted values for all three models at the time of DEI establishment. However, for the other 26 there is missing data in or around the year of DEI establishment for one of the perspective, which necessitated a more qualitative assignment to one of the three categries. In order to do so, I examined relative predicted values in the 2 years before and after DEI establishment. In those few cases where there was no predicted value in the year of establishment, I expand the window for comparison to 2 years before and after the establishment of the DEI. It is also important to note that in an instance where a country establishes a second DEI, I do not reestimate the relative predictive power of the three theoretical perspectives, rather I make the assumption that the second DEI's founding motivation was consonant with the first.

Table 12 reports coefficients (standard errors) from logistic regression estimations of diaspora emergence likelihoods on variables linked to tapping, embracing and governing perspectives. The dependent variable is a 0-1 DEI emergence dummy (0 = no DEI, 1 = some DEI). TAP indicates model variables based on tapping perspective. EMB indicates model based on embracing perspective. GOV indicates model variables based on governing perspective. ** $p<0.01$, * $p<0.05$, + $p<0.1$

TABLE 12: Regression analyses facilitating identification of DEI motivation

VARIABLES	(1) LOGIT TAP	(2) LOGIT EMB	(3) LOGIT GOV
Population Density	0.00**	0.00*	0.00+
	(0.00)	(0.00)	(0.00)
Diaspora Size	0.01	0.01	-0.00
	(0.00)	(0.01)	(0.00)
Diaspora Density	-1.29**	-1.23**	-0.86**
	(0.31)	(0.26)	(0.23)
Nonresident Taxation (0/1)	0.95**		
	(0.23)		
Diaspora Remittances	0.02*		
	(0.01)		
Foreign Investment	-0.03*		
	(0.01)		
Diaspora Skill	-4.66**		
	(0.37)		
Wealth	-0.00**		
	(0.00)		
Diplomatic Exchange	0.03**		
	(0.00)		
Battle-related Deaths	0.11*		
	(0.05)		
Right-Wing Exec (0/1)		-0.00	
		(0.11)	
Voting Index		0.05+	
		(0.03)	
Polity		0.10**	
		(0.01)	
Polity^2		-0.01**	
		(0.00)	
Geographic Proximity			1.88*
			(0.78)
Colonial Heritage			0.45
			(0.31)
UIA Index			0.05**
			(0.01)
Aid Dependence			-0.66
			(0.42)
Constant	-1.56**	-1.67**	-2.11**
	(0.40)	(0.31)	(0.28)
Observations	2,978	3,535	3,887
Number of countries	166	160	177
Regions and *Years*	Both	Both	Both
Pseudo R^2	0.281	0.159	0.139

This table presents point estimates and standard errors (in parentheses) from analyses DEI establishment in 166 countries based on three alternative theoretical frameworks. Column 1 shows the Tapping framework results, Column 2 shows the Embracing framework results, and Column 3 shows the Governing framework results. Equations were estimated in Stata using panel logistic estimation with region fixed effects and year dummies. + p<10%; * p< 5%; ** p< 1%; *** p< 0.1%

Review of pseudo R-squared statistics in Table 12 suggests that the Tapping

model provides most explanation. Indeed, it foreshadows the observation that once we

consider the country-specific model factors, we end up explaining the emergence of most

DEIs primarily based on a "Tapping" rationale.

With these preliminary results regarding DEI intent at emergence, I can now

begin exploration of empirial support for Hypothesis 6 with analyses reported in Table

13, where the dependent measure is *VentureFounding*. The main right-hand side variable

is a 0-1 dummy term, *TappingDEI*, taking the value of 1 when, in preliminary analyses,

Tapping terms provide the best explanation of DEI emergence. The main effect

hypothesis —that tapping DEIs have a direct positive effect on venture activity— is not

supported. The coefficient for *TappingDEI* is negative and statistically insignificant in

Table 13, Column 1. This indicates a lack of support for Hypothesis 6a.

However, the results do support the prediction that DEIs founded primarily to

"tap" diaspora are more effective at harnessing remittances for productive purposes than

DEIs founded for primarily political or other reasons (Hypothesis 6b). The coefficient for

Remittances*TappingDEI is positive and statistically significant (coef=2.88, $p<0.05$) in

Table 13, Column 2, while the *Remittances*OtherDEI* coefficient, though positive, fails

to reach statistical significance. Practically speaking, for a country with a "tapping" DEI,

a 1% increase in remittances as a percentage of GDP results in a 6% increase in the rate

of new business starts ($1.06 = \exp(3.18 \times .01 + 2.88 \times (1) \times .01)$). This result is strengthened in

the fully partitioned model in Table 13, Column 5.

As indicated in my descriptive analysis, there is a high correlation between Tapping DEIs and Legislative DEIs. As further robustness to address the possibility that the observed results for the two measures are being conflated, I perform supplementary unreported analysis which takes the model described in Table 13, Column 2 and adds *LegislativeDEI* as a control variable. The magnitude and statistical significance of the *Remittances*TappingDEI* strengthen rather than dissipate, addressing concerns that the effect I observe is due to the strong correlation between the two DEI characteristics.

VARIABLES	(1) Founding XTNBREG	(2) Founding XTNBREG	(3) Founding XTNBREG	(4) Founding XTNBREG	(5) Founding XTNBREG
GDP	-0.23*	-0.22+	-0.25*	-0.25*	-0.23*
	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)
Economic Growth	0.02	0.02	0.02	0.02	0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Wealth	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	2.81**	3.10**	2.99**	2.99**	3.13**
	(0.88)	(0.91)	(0.88)	(0.88)	(0.91)
Rule of Law	0.45*	0.42*	0.46**	0.46**	0.44*
	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)
Govt Share of Economy	0.00	0.01	0.00	0.00	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Economic Openness	-0.01*	-0.01*	-0.00*	-0.01*	-0.01*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.53**	0.56**	0.47**	0.47**	0.56**
	(0.17)	(0.17)	(0.17)	(0.16)	(0.17)
Foreign Aid	1.93	1.95	1.78	1.74	1.71
	(1.99)	(1.98)	(2.01)	(2.00)	(2.03)
Portfolio Investment	0.00	0.00	0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
FDI	0.98	1.17	0.97	0.97	1.13
	(1.12)	(1.13)	(1.12)	(1.12)	(1.14)
Remittances	3.33**	3.18**	3.29**	3.29**	3.16*
	(1.21)	(1.23)	(1.24)	(1.24)	(1.24)
Tapping DEI	-0.19	-0.46**			-0.47**
	(0.12)	(0.17)			(0.17)
Remittances*TappingDEI		2.88*			2.96*
		(1.42)			(1.42)
Other DEI			-0.02	-0.12	-0.18
			(0.17)	(0.33)	(0.31)
Remittances*OtherDEI				1.40	1.36
				(3.76)	(3.61)
Constant	0.87	0.12	1.96	2.03	0.30
	(1.87)	(1.84)	(1.80)	(1.81)	(1.85)
N (Country N)	213	213	213	213	213
	(35)	(35)	(35)	(35)	(35)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture founding. Columns 1 & 2 test the impact of DEIs founded to "tap" migrants, while Columns 3-4 provide the comparison case of DEIs founded for other purposes. Column 5 represents a fully partitioned model with both interaction effects. Equations estimated in Stata using panel negative binomial (xtnbreg) estimation with country fixed effects and year dummies. + p<10%; * p< 5%; ** p< 1%; *** p< 0.1%

I also examine support for Hypothesis 6 in the context of my other dependent measure—*VentureFunding*—in analysis reported in Table 14. I first examine the main effect of tapping DEIs by evaluating the regression coefficient for *TappingDEI* in Table 14, Column 1, where the dependent measure is *VentureFunding*. It is positive (coef=0.03) while the corresponding regression coefficient for *OtherDEI* is negative (coef= -0.11) but both are statistically insignificant. This is consistent with the prediction of Hypothesis 6a, but not supportive of it.

I move now to Hypothesis 6b which predicted that tapping DEIs are more effective at harnessing remittances for venture activity by examining Table 14, where *VentureFunding* is the dependent measure. Looking at the relevant interaction coefficients, the result is again consistent with the prediction, but not supportive of it. The coefficient for *Remittances*TappingDEI* is positive (coef=0.74) in Table 14, Column 2, while the coefficient for *Remittances*OtherDEI* is negative (coef= -2.77) in Table 14, Column 4, but neither are statistically significant. Overall, these results suggest that although there is not support for the direct prediction of Hypothesis 6a, there is much stronger support for the proposition that "tapping" DEIs have an indirect impact via enhancing remittance effectiveness for new venture starts.

TABLE 14: Regression analyses, "tapping" DEI effects, funding DV (H6a-b)

VARIABLES	(1) Funding XTGLS	(2) Funding XTGLS	(3) Funding XTGLS	(4) Funding XTGLS	(5) Funding XTGLS
GDP	0.39**	0.37**	0.40**	0.40**	0.39**
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Economic Growth	0.02*	0.02*	0.02*	0.02*	0.02*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Wealth	-0.00+	-0.00	-0.00+	-0.00+	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	0.40	0.41	0.40	0.39	0.44
	(0.50)	(0.50)	(0.50)	(0.50)	(0.51)
Rule of Law	0.15	0.13	0.16	0.15	0.14
	(0.13)	(0.13)	(0.13)	(0.13)	(0.14)
Govt Share of Economy	0.01	0.01	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Economic Openness	-0.00*	-0.00*	-0.00*	-0.00*	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.32**	0.33**	0.33**	0.32**	0.33**
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)
Foreign Aid	-1.52	-1.58	-1.53	-1.37	-1.50
	(1.34)	(1.34)	(1.34)	(1.35)	(1.35)
Portfolio Investment	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
FDI	0.40	0.39	0.36	0.41	0.41
	(0.65)	(0.65)	(0.66)	(0.66)	(0.66)
Remittances	2.87*	2.59+	2.91*	3.17*	2.80+
	(1.40)	(1.47)	(1.37)	(1.39)	(1.49)
Tapping DEI	0.03	-0.03			-0.03
	(0.09)	(0.12)			(0.12)
Remittances*TappingDEI		0.74			0.69
		(1.01)			(1.02)
Other DEI			-0.11	0.10	0.09
			(0.14)	(0.20)	(0.20)
Remittances*OtherDEI				-2.77	-2.65
				(2.36)	(2.38)
Constant	-11.56**	-11.27**	-11.98**	-11.89**	-11.79**
	(3.78)	(3.81)	(3.79)	(3.78)	(3.88)
N (Country N)	192	192	192	192	192
	(33)	(33)	(33)	(33)	(33)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture founding. Columns 1 & 2 test the impact of DEIs founded to "tap" migrants, while Columns 3-4 provide the comparison case of DEIs founded for other purposes. Column 5 represents a fully partitioned model with both interaction effects. Equations estimated in Stata using panel negative binomial (xtnbreg) estimation with country fixed effects and year dummies. + p<10%; * p< 5%; ** p< 1%; *** p< 0.1%

4.3 Results for diaspora characteristics moderators

Tables 15 through 18 present analyses which allow empirical tests of Hypotheses 7-8. In

Tables 15 and 16 I introduce my first diaspora-based moderator: the relative financial

contribution of long-term versus short-term migrant remitters. This allows for an

empirical test of Hypothesis 7, which predicted that the characteristics of remitting

migrants would moderate the impact of remittances on venture activity such that DEIs

would have a greater impact on long-term migrant remitters than on short-term migrant

remitters. The logic is that when there is short-term presence in the COR or circular

migration, the diaspora members retain a much closer tie with the COO, reducing the

need for formal institutional facilitation of high impact remittance behaviors. In order to

test this I rely on fine-grained remittance data which break up contributions between

those diasporans who are short-term guest workers or recent arrivals (<1yr) and those

who reside abroad on a more long-term basis (>1yr). Note that because my measurement

of the diaspora characteristic (tenure) is tied up in the measurement of remittance dollars,

there is no associated DEI main effect hypothesis or empirical test.

I begin my empirical exploration in Table 15, where *VentureFounding* is the

dependent measure. Note that across all five columns, the main effects of both types of

remittances remain positive and statistically significant, strengthening support for

Hypothesis 1 regarding the venture investment impact of remittances. Moving to the

empirical predictions for Hypothesis 7, the coefficient for *WorkersRemit*DEI* is positive

and statistically significant (coef=2.58, p<0.10) in Table 15, Column 2. It also increases

in both magnitude and statistical significance in the fully partitioned model in Table 15,

Column 5. This supports the theoretical prediction that long-term migrant remitters are more sensitive to the presence of DEIs. For a country with a DEI, a one percent increase in *Workers Remittances* as a percentage of GDP (from 5% to 6% of GDP) is associated with an 6% increase in the rate of new business starts (1.06=exp(2.81*0.01+2.58*(1)*.01)). In contrast, the regression coefficient for *EmpComp*DEI* is negative and lacks statistical significance at commonly accepted levels. This provides strong initial support for the prediction that long-term migrant remitters are more sensitive to the presence of DEIs than are remittance-senders whose tenure abroad is relatively shorter.

TABLE 15: Regression analyses, diaspora tenure abroad, founding DV (H7)

	(1)	(2)	(3)	(4)	(5)
	Founding	*Founding*	*Founding*	*Founding*	*Founding*
VARIABLES	XTNBREG	XTNBREG	XTNBREG	XTNBREG	XTNBREG
GDP	-0.24*	-0.23*	-0.28*	-0.28*	-0.24*
	(0.12)	(0.12)	(0.11)	(0.11)	(0.11)
Economic Growth	0.01	0.01	0.01	0.01	0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Wealth	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	3.02**	3.37**	2.25*	2.28**	3.01**
	(0.91)	(0.94)	(0.88)	(0.88)	(0.96)
Rule of Law	0.51**	0.49**	0.44*	0.44*	0.44*
	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)
Govt Share of Economy	0.00	0.01	0.01	0.01	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Economic Openness	-0.01*	-0.01*	-0.01*	-0.01*	-0.01**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.51**	0.52**	0.57**	0.56**	0.54**
	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)
Foreign Aid	1.23	1.04	1.27	1.23	1.53
	(2.07)	(2.09)	(2.10)	(2.11)	(2.01)
Portfolio Investment	0.00	0.00	0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Foreign Direct Investment	0.74	0.89	0.80	0.80	1.11
	(1.15)	(1.16)	(1.14)	(1.14)	(1.12)
WorkersRemittances	3.20*	2.81+			2.45+
	(1.56)	(1.59)			(1.46)
DEI	-0.16	-0.35*	-0.15	-0.14	-0.39*
	(0.10)	(0.14)	(0.11)	(0.13)	(0.16)
*WorkersRemit*DEI*		2.58+			2.84*
		(1.35)			(1.37)
EmployeeCompensation			5.43*	5.44*	5.12+
			(2.60)	(2.60)	(2.66)
*EmpComp*DEI*				-0.69	1.87
				(2.81)	(3.10)
Constant	1.35	0.94	1.65	1.71	0.83
	(1.82)	(1.82)	(1.78)	(1.80)	(1.78)
N (Country N)	213	213	213	213	213
	(35)	(35)	(35)	(35)	(35)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture founding in 35 countries from 2001-2010. Columns 1 & 2 test the impact of DEIs on longer-term diaspora (those in the country one year or more), while Columns 3-4 provide the comparison case of shorter-term employees. Column 5 represents a fully partitioned model with both interaction effects. Equations estimated in Stata using panel negative binomial (xtnbreg) estimation with country fixed effects and year dummies. + p<10%; * p< 5%; ** p< 1%; *** p< 0.1%

I also examine support for Hypothesis 7 in the context of my other dependent measure—*VentureFunding*—in parallel analyses reported in Table 16. Beginning in Table 16, the coefficient for *WorkersRemittances*DEI* is positive (coef=1.38) in Column 2 though statistically insignificant, while the corresponding coefficient for *EmployeeCompensation*DEI* is negative and significant (coef= -5.25, $p<0.05$). Though the evidence is not entirely determinative, it suggests that the impact of DEIs is more positive (or less negative) for long-term than for short-term migrant remitters, which is consistent with Hypothesis 7. Taken together, this is moderately convincing evidence of the differential impact of DEIs depending on the tenure abroad of their remitting migrants, and supports my social identity and social exchange explanations of DEI effectiveness. Ceteris paribus, the longer diaspora members live and work abroad, the less they identify with their COO, increasing the chance that a targeted policy intervention like a DEI will make a meaningful and measurable difference.

TABLE 16: Regression analyses, diaspora tenure abroad, funding DV (H7)

VARIABLES	(1) Funding XTGLS	(2) Funding XTGLS	(3) Funding XTGLS	(4) Funding XTGLS	(5) Funding XTGLS
GDP	0.38**	0.39**	0.37**	0.48**	0.48**
	(0.13)	(0.13)	(0.13)	(0.14)	(0.14)
Economic Growth	0.02*	0.02*	0.02*	0.02*	0.02*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Wealth	-0.00	-0.00	-0.00*	-0.00*	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	0.47	0.54	0.17	0.39	0.63
	(0.50)	(0.50)	(0.54)	(0.55)	(0.54)
Rule of Law	0.16	0.13	0.11	0.09	0.12
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Govt Share of Economy	0.01	0.01	0.00	-0.00	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Economic Openness	-0.00*	-0.00*	-0.00+	-0.00+	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.34**	0.36**	0.29**	0.34**	0.38**
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)
Foreign Aid	-1.43	-1.61	-1.21	-1.13	-1.51
	(1.34)	(1.34)	(1.39)	(1.38)	(1.34)
Portfolio Investment	0.00	0.00	0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Foreign Direct Investment	0.48	0.42	0.24	0.33	0.45
	(0.66)	(0.65)	(0.66)	(0.66)	(0.66)
WorkersRemittances	3.29*	2.53			2.58+
	(1.46)	(1.55)			(1.55)
DEI	-0.02	-0.11	0.02	0.10	-0.00
	(0.07)	(0.09)	(0.08)	(0.08)	(0.11)
WorkersRemit*DEI		1.38			0.98
		(0.93)			(0.96)
EmployeeCompensation			3.63	0.92	-0.40
			(5.49)	(5.65)	(5.57)
EmpComp*DEI				-5.25*	-4.57+
				(2.42)	(2.43)
Constant	-11.50**	-11.97**	-10.68**	-14.08**	-14.71**
	(3.74)	(3.71)	(3.67)	(3.95)	(4.01)
N (Country N)	192	192	192	192	192
	(33)	(33)	(33)	(33)	(33)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture funding (*VentureFunding*) in 33 countries from 2001-2010. Columns 1 & 2 test the impact of DEIs on longer-term diaspora (those in the country one year or more), while Columns 3-4 provide the comparison case of shorter-term employees. Column 5 represents a fully partitioned model with both interaction effects. Equations estimated in Stata using panel feasible generalized least squares (xtgls) estimation with country fixed effects and year dummies. + $p<10\%$; * $p< 5\%$; ** $p< 1\%$; *** $p< 0.1\%$

In Tables 17-18 I introduce my second diaspora-based moderating characteristic: their relative concentration across all diaspora CORs. This allows me to test Hypothesis 8, which predicted that the characteristics of remitting migrants would moderate the impact of DEIs on venture activity such that DEIs would have a greater impact for highly concentrated diaspora than for diaspora populations spread across a wider variety of host countries. To test this hypothesis, I rely on a subsampling methodology-- I first calculated the concentration measure for each country in my sample then tried to find a natural break point near the median. In this sample, my break point is at approximately 0.27 on the continuous 0-1 concentration index. Countries above this level are considered to have a high concentration diaspora, while countries below this level are considered to have a low concentration diaspora. [5]

I initially test Hypothesis 8 in Table 17, with *VentureFounding* as my dependent measure. Using a split sampling technique, I test the main and moderating impacts of DEIs on *Founding*. The main effect prediction of Hypothesis 8a is not supported. I find no statistically significant differences between the main effect DEI coefficients in the split samples in Columns 1 and 2. DEIs do not appear to have a different impact based on the relative concentration of their targeted diaspora populations. The moderating result is, however, statistically significant and in conflict with my theoretical predictions. The "low concentration" coefficient for *Remittances*DEI* is positive and statistically significant

[5] Countries in my high concentration group: Armenia, Bangladesh, Bolivia, Cambodia, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Indonesia, Jamaica, Mexico, Namibia, Panama, Philippines, Tunisia, Turkey, Ukraine. Countries in my low concentration group: Argentina, Botswana, Brazil, Ethiopia, India, Jordan, Latvia, Lithuania, Macedonia, Moldova, Pakistan, Romania, Russia, Senegal, Sri Lanka, Syria, and Togo.

(coef=10.58, p<0.01), while the corresponding coefficient in the "high concentration" sample is negative and fails to reach a level of statistical significance. In practical terms, in a "low concentration" diaspora population with a DEI, a one percent increase in remittances as a percentage of GDP is associated with an increase in the rate of new business starts by 15% (1.15=exp((3.41*0.01)+10.58*(1)*0.01)).

TABLE 17: Regression analyses, diaspora concentration, founding DV (H8a-b)

VARIABLES	(1) Founding XTNBREG Low Conc	(2) Founding XTNBREG High Conc	(3) Founding XTNBREG Low Conc	(4) Founding XTNBREG High Conc
GDP	-0.15	0.57*	-0.29+	0.61*
	(0.19)	(0.25)	(0.17)	(0.28)
Economic Growth	0.04	-0.00	0.04	0.00
	(0.03)	(0.02)	(0.02)	(0.02)
Wealth	0.00	-0.00	0.00*	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	4.70**	-0.52	4.87**	-0.56
	(1.29)	(1.17)	(1.28)	(1.18)
Rule of Law	0.64*	0.14	0.74*	0.13
	(0.30)	(0.22)	(0.30)	(0.22)
Govt Share of Economy	-0.00	0.01	0.02	0.01
	(0.03)	(0.04)	(0.02)	(0.04)
Economic Openness	-0.00	-0.01*	-0.00	-0.00+
	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.20	0.12	0.45	0.06
	(0.31)	(0.28)	(0.27)	(0.31)
Foreign Aid	5.66**	2.71	5.04**	3.36
	(2.06)	(3.19)	(1.92)	(3.57)
Portfolio Investment	0.00	-0.01	0.00	-0.01
	(0.01)	(0.02)	(0.01)	(0.02)
Foreign Direct Investment	3.84**	-2.65	3.76**	-2.68
	(1.20)	(1.66)	(1.11)	(1.65)
Remittances	2.68	4.07+	3.41+	4.87
	(2.03)	(2.38)	(1.98)	(3.11)
DEI	-0.01	-0.19+	-0.63*	-0.11
	(0.21)	(0.11)	(0.25)	(0.22)
*Remittances*DEI*			10.58**	-0.81
			(3.07)	(1.98)
Constant	2.52	-11.91**	2.53	-12.33**
	(2.98)	(3.84)	(2.73)	(4.04)
N (Country N)	99	114	99	114
	(17)	(18)	(17)	(18)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture founding in 35 countries observed from 2001-2010. The estimations in this table are performed using subsamples of low and high diaspora concentration levels. Equations were estimated in Stata using panel negative binomial (xtnbreg) estimation with country fixed effects and year dummies. $+ p<10\%$; $* p< 5\%$; $** p< 1\%$; $*** p< 0.1\%$

I also examine support for Hypothesis 8 in the context of my other dependent measure—*VentureFunding*—in parallel analyses reported in Table 19. I first examine support for Hypothesis 8a which predicted that DEIs would have a stronger main effect for concentrated diaspora than for less concentrated diaspora. This hypothesis is not supported. In Columns 1-2 where *VentureFunding* is my dependent measure, I find some suggestion of the opposite effect. The coefficient for *DEI* is positive and statistically significant in Column 1 (coef=0.35, $p<0.05$), while it is negative (n.s.) in Column 2.

I move now to the moderating hypothesis 8b, which predicts that DEIs have a stronger moderating effect on remittance impacts at high levels of diaspora concentration. In Columns 3-4, where *VentureFunding* is the dependent measure, both *Remittances*DEI* coefficients are negative and statistically insignificant. As before, this is somewhat unsurprising, given the lack of support for Hypothesis 2 in the venture funding models.

Taken together, these results suggest a complex picture. As far as new business starts are concerned, rather than DEI effectiveness being entirely an issue of cost, coherence of message, and social spillovers of DEI interactions with diasporans, the issue of diffusion/concentration seems to operate similarly to the issue of diaspora tenure abroad. For concentrated diaspora, like for recent out-migrants, there may be a ceiling effect for the social exchange and social identity impacts of the DEI. In other words, DEIs and strong, concentrated diaspora communities may act as substitutes in mobilizing diaspora members for productive purposes such as new venture starts. One possible reason for this is that concentrated diaspora may have greater access to enclave-type

entrepreneurial opportunities (Salaff, Greve, Siu-Lun, & Ping, 2003) that fulfil the

perceived social obligation to support clan and community (Ouchi, 1980). Or it could be

the case that concentrated diasporas have less of a need for governmental outreach and

engagement efforts—their sense of loyalty and community (those social exchange and

social identity outcomes I theorize about) may already be high. I discuss potential

research implications in more detail in my concluding section.

TABLE 18: Regression analyses, diaspora concentration, funding DV (H8a-b)

VARIABLES	(1) Funding XTGLS Low Conc	(2) Funding XTGLS High Conc	(3) Funding XTGLS Low Conc	(4) Funding XTGLS High Conc
GDP	1.15**	0.22+	1.01**	0.26*
	(0.28)	(0.12)	(0.30)	(0.12)
Economic Growth	0.05**	0.02*	0.06**	0.02*
	(0.02)	(0.01)	(0.02)	(0.01)
Wealth	-0.00**	-0.00	-0.00+	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	1.18	0.78	1.40	0.71
	(0.98)	(0.55)	(1.03)	(0.57)
Rule of Law	0.57*	-0.06	0.63*	-0.06
	(0.28)	(0.13)	(0.29)	(0.13)
Govt Share of Economy	0.01	0.02	0.02	0.02
	(0.02)	(0.02)	(0.02)	(0.02)
Economic Openness	-0.00	-0.00*	-0.00	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	-1.99**	0.15	-1.73**	0.06
	(0.54)	(0.17)	(0.56)	(0.17)
Foreign Aid	0.61	-1.54	0.42	-0.84
	(2.20)	(1.65)	(2.34)	(1.68)
Portfolio Investment	-0.00	0.01	-0.00	0.01
	(0.00)	(0.01)	(0.00)	(0.02)
Foreign Direct Investment	-0.20	1.49*	-0.11	1.41*
	(1.14)	(0.70)	(1.18)	(0.70)
Remittances	0.47	0.97	2.56	1.35
	(4.08)	(1.35)	(5.13)	(1.53)
DEI	0.35*	-0.07	0.02	0.11
	(0.17)	(0.07)	(0.18)	(0.14)
*Remittances*DEI*			-1.93	-1.00
			(10.69)	(1.12)
Constant		-5.34**		-5.25**
		(1.74)		(1.76)
N (Country N)	80	112	80	112
	15	18	15	18

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture founding in up to 33 countries observed from 2001-2010. The estimations in this table are performed using subsamples of low and high diaspora concentration levels. Equations were estimated in Stata using panel feasible generalized least squares (xtgls) estimation with country fixed effects and year dummies. + $p < 10\%$; * $p < 5\%$; ** $p < 1\%$; *** $p < 0.1\%$

4.4 Results for COO-based moderators

In Tables 19-20 I introduce an important COO-based moderating characteristic: its level of democracy. This allows me to test Hypothesis 9, which predicted that the characteristics of the home country political environment would moderate the impact of remittances on venture activity such that DEIs would have a greater impact where home country democracy levels are higher. I test this hypothesis by partitioning my sample into low and high democracy scores, reported by the Polity IV Project (Center for Systemic Peace, 2014). As with the diaspora concentration measure, I tried to find a meaningful break point in the underlying continuous measure of COO political environment. My natural break point is at 7.9 out of 10. Those observations above that level are in the High Polity sample, while all others are assigned to the Low Polity category.[6]

Using this breakdown, I test the main and moderating impacts of DEIs on *VentureFounding* in the results in Table 19. The main effect hypothesis—that DEIs in democratic regimes will be directly more effective at generating new venture activity— is not supported in this set of analyses. The *DEI* coefficients in Table 19, Columns 1 and 2 are both negative, with the High Polity marginally significant. Although this is opposite the predicted effect for Hypothesis 9a, a postestimation Wald test indicates that there is no statistically meaningful difference between the *DEI* in Columns 1 and 2. Rather than an opposite effect, this indicates a mere lack of support for Hypothesis 9a. The

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[6] The countries in my high democracy condition are: Argentina, Bolivia, Botswana, Brazil, Costa Rica, Dominican Republic, Guatemala, India, Jamaica, Latvia, Lithuania, Macedonia, Mexico, Moldova, Panama, Philippines, and Romania. The countries in my low democracy condition are: Armenia, Bangladesh, Cambodia, Colombia, El Salvador, Ethiopia, Jordan, Namibia, Pakistan, Russia, Senegal, Sri Lanka, Syria, Togo, Tunisia, Turkey, and Ukraine.

moderating hypothesis—that DEIs get an effectiveness boost from democracy in terms of their ability to harness remittances toward productive uses is, however, supported. The "high polity" *Remittances*DEI* coefficient is positive and statistically significant (coef=3.24, p<0.10), while the corresponding coefficient for the low polity sample is negative and fails to reach statistical significance. In practical terms, a 1% increase in remittances as a percentage of GDP (from 6% of GDP to 7% of GDP) results in an 11% increase in the rate of new business starts (1.11=exp((7.54*0.01)+3.24*(1)*0.01)).

TABLE 19: Regression analyses, COO democracy, founding DV (H9a-b)

VARIABLES	(1) XTNBREG Low Polity	(2) XTNBREG High Polity	(3) XTNBREG Low Polity	(4) XTNBREG High Polity
GDP	0.46*	-0.63**	0.48*	-0.57**
	(0.19)	(0.16)	(0.20)	(0.15)
Economic Growth	0.04*	0.04*	0.04*	0.04+
	(0.02)	(0.02)	(0.02)	(0.02)
Wealth	-0.00	0.00*	-0.00	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	0.46	2.59	0.39	3.40*
	(1.18)	(1.60)	(1.19)	(1.69)
Rule of Law	0.16	0.26	0.14	0.20
	(0.26)	(0.31)	(0.27)	(0.31)
Govt Share of Economy	-0.04	0.04+	-0.04	0.04+
	(0.03)	(0.02)	(0.03)	(0.02)
Economic Openness	-0.00	-0.01*	-0.00	-0.01**
	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	-0.10	0.70*	-0.13	0.71**
	(0.25)	(0.28)	(0.26)	(0.27)
Foreign Aid	5.91*	2.25	5.85*	2.54
	(2.38)	(2.96)	(2.38)	(2.87)
Portfolio Investment	-0.01	0.00	-0.01	0.01
	(0.04)	(0.01)	(0.04)	(0.01)
Foreign Direct Investment	2.45+	-2.43+	2.35+	-1.99
	(1.41)	(1.31)	(1.41)	(1.38)
Remittances	0.26	7.44**	0.71	7.54**
	(2.63)	(1.73)	(2.86)	(1.68)
Diaspora Institution	-0.04	-0.20+	0.03	-0.57*
	(0.14)	(0.12)	(0.24)	(0.25)
Remittances*Institution			-1.01	3.24+
			(2.71)	(1.88)
Constant	-6.61*	7.83**	-6.84*	6.26*
	(3.14)	(2.50)	(3.18)	(2.59)
N (Country N)	106	107	106	107
	(18)	(17)	(18)	(17)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture founding in 35 countries observed from 2001-2010. The estimations in this table are performed using subsamples of low and high home country polity scores and permit testing of the hypothesis that democratic DEIs will be more effective at enhancing venture investment activity.. Equations were estimated in Stata using panel negative binomial (xtnbreg) estimation with country fixed effects and year dummies. + p<10%; * p< 5%; ** p< 1%; *** p< 0.1%

I also examine support for Hypothesis 9 in the context of my other dependent measure—*VentureFunding*—in parallel analyses reported in Table 20. I first examine support for Hypothesis 9a which predicted that DEIs from more democratic countries would have a stronger main effect than those from less democratic countries. I find partial support for my predictions. The *DEI* coefficient in the *VentureFunding* estimation is positive in Column 2 (high polity) while negative in Column 1 (low polity), although neither coefficient is statistically significant at commonly accepted levels. This is consistent with, but not supportive of Hypothesis 9a.

The results in Table 20 also permit an examination of Hypothesis 9b, which predicted that DEIs from more democratic countries would more strongly increase the venture investment impact of remittances. I find no support for this hypothesis in Columns 3-4, as the High Polity *Remittances*DEI* coefficients is not statistically significant. Taken together, the evidence suggests that, like with legislative-based DEIs, those based in highly democratic governments may have an easier time stimulating venture activity, but the moderating impact of democratic DEIs is more likely via increased instances of new venture registrations, rather than through increased funding availability.

TABLE 20: Regression analyses, COO democracy, funding DV (H9a-b)

VARIABLES	(1) Funding XTGLS Low Polity	(2) Funding XTGLS High Polity	(3) Funding XTGLS Low Polity	(4) Funding XTGLS High Polity
GDP	0.43**	0.73*	0.43**	0.69*
	(0.14)	(0.31)	(0.14)	(0.32)
Economic Growth	0.02+	0.04*	0.01+	0.04**
	(0.01)	(0.01)	(0.01)	(0.01)
Wealth	-0.00	-0.00+	-0.00+	-0.00+
	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	0.69	0.01	0.82	-0.14
	(0.56)	(1.12)	(0.55)	(1.17)
Rule of Law	0.42**	0.07	0.43**	0.17
	(0.15)	(0.26)	(0.15)	(0.27)
Govt Share of Economy	0.01	0.01	0.01	0.02
	(0.02)	(0.03)	(0.02)	(0.03)
Economic Openness	-0.00+	-0.00+	-0.00+	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	-0.05	1.03*	-0.05	1.02*
	(0.20)	(0.43)	(0.19)	(0.45)
Foreign Aid	-1.72	3.67	-1.09	3.87
	(1.68)	(2.51)	(1.68)	(2.60)
Portfolio Investment	-0.06*	0.00	-0.08*	0.00
	(0.03)	(0.00)	(0.03)	(0.00)
Foreign Direct Investment	0.84	-1.29	1.02	-1.39
	(0.71)	(1.09)	(0.69)	(1.12)
Remittances	0.41	8.54**	-1.47	9.48**
	(1.64)	(2.41)	(1.97)	(2.62)
DEI	-0.07	0.09	-0.24	-0.06
	(0.09)	(0.11)	(0.15)	(0.16)
Remittances*DEI			1.84	-0.01
			(1.45)	(1.44)
Constant	-6.72**	-29.35*	-6.55**	-27.98*
	(1.58)	(13.00)	(1.54)	(13.40)
N (Country N)	94	98	94	98
	17	16	17	16

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture funding (*Funding*) in up to 33 countries observed from 2001-2010. The estimations in this table are performed using subsamples of low and high COO democracy levels, and permit testing of the hypothesis that democratic DEIs will be more effective at enhancing venture investment activity. Equations were estimated in Stata using panel feasible generalized least squares (xtgls) estimation with country fixed effects and year dummies. + $p<10\%$; * $p< 5\%$; ** $p< 1\%$; *** $p< 0.1\%$

4.5 Results for transnational moderators

Tables 21 through 24 present analyses which allow empirical tests of Hypotheses 10-11. In Tables 21-22 I introduce my first transnational moderator: the geographic distance between COO and COR. This allows an empirical test of Hypothesis 10, which predicted that DEIs would have a lesser (greater) impact where the degree of geographic separation between diaspora members and their countries of origin is higher (lower). In order to test this hypothesis I combine bilateral migration data (Özden et al., 2011) with data on geographic and economic distance (Berry et al., 2010). Among the 33 COOs in my sample, I identify the COR that has the highest percentage of diaspora members relative to other diaspora destination countries; there are 18 different "primary host" destinations for the 33 countries in my sample. The average percentage of the diaspora in these "primary host" countries is 44%. The highest is Mexico, with 92% of its diaspora in the US, while the lowest is Romania, with 14% of its diaspora in Hungary. The most common diaspora locations are the US, Russia, and India. These primary CORs are identified in Appendix A.

Using the primary COR as identified above described in the prior paragraph, I split my sample into "high" and "low" geographic distance to test the main and moderating DEI hypotheses. The average distance between origin and destination states is approximately 4000 km. The greatest distance is 13915 km (Cambodian migrants in the USA—44% of its diaspora), while the lowest distance is 185 km (Jordanian migrants in Palestine—48% of its diaspora). Defining a COO/COR dyad as "close" if it is less than 3400 km apart, I first test the main and moderating impacts of DEIs on *VentureFounding*

and report results in Table 21 below.[7] The main effect prediction of Hypothesis 10a is not

supported--the *DEI* coefficients are both negative and statistically indistinguishable in the

split samples, suggesting that there is no measurable difference in DEI effectiveness

based on how far it is from its target diaspora.

The moderating result is not supported, either. The "low distance"

Remittances*DEI coefficient, though positive, fails to reach a level of statistical

significance, while the "high distance" coefficient for *Remittances*DEI* is positive and

marginally significant (coef=4.02, p<0.10), suggesting that if there is an effect of

distance, it is that geographically distant (rather than geographically proximate) DEIs are

more effective at harnessing remittances for venture investment purposes. This strongly

suggests that engagement efforts are more necessary (and therefore more effective) under

conditions where return travel by diaspora members is less likely. This contrary result is

similar to that suggested in analysis of Hypothesis 8, which suggested that it is among

diffuse, rather than concentrated, diasporas that DEIs would have their greatest impact.

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[7] The countries in my "high distance" group are: Argentina, Armenia, Brazil, Cambodia, Ethiopia, Latvia, Lituania, Macedonia, Moldova, Panama, Philippines, Russia, and Ukraine. The countries in my "low distance" group are: Bangladesh, Bolivia, Botswana, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, India, Indonesia, Jamaica, Jordan, Mexico, Namibia, Pakistan, Romania, Senegal, Sri Lanka, Syria, Togo, Tunisia, and Turkey.

TABLE 21: Regression analyses, geographic distance, founding DV (H10a-b)

VARIABLES	(1) Founding XTNBREG High Geo Dist	(2) Founding XTNBREG Low Geo Dist	(3) Founding XTNBREG High Geo Dist	(4) Founding XTNBREG Low Geo Dist
GDP	-0.45**	0.27+	-0.51**	0.27+
	(0.17)	(0.15)	(0.16)	(0.15)
Economic Growth	-0.01	0.01	-0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Wealth	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	0.46	1.51	0.49	1.48
	(1.06)	(0.92)	(1.02)	(0.92)
Rule of Law	-0.12	0.09	-0.14	0.07
	(0.35)	(0.24)	(0.34)	(0.24)
Govt Share of Economy	-0.02	0.00	-0.00	0.00
	(0.03)	(0.03)	(0.03)	(0.03)
Economic Openness	-0.01*	-0.00	-0.01**	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.96**	-0.19	1.00**	-0.19
	(0.23)	(0.23)	(0.23)	(0.23)
Foreign Aid	0.05	2.14	-0.13	2.02
	(3.17)	(1.90)	(3.00)	(1.90)
Portfolio Investment	0.00	0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)
Foreign Direct Investment	2.17	1.47	1.66	1.53
	(2.09)	(1.18)	(2.02)	(1.18)
Remittances	4.75**	0.34	4.81**	-0.22
	(1.10)	(2.25)	(1.10)	(2.37)
DEI	-0.00	-0.22	-0.31	-0.41
	(0.17)	(0.13)	(0.25)	(0.25)
Remittances*DEI			4.02+	1.94
			(2.41)	(2.21)
Constant	0.98	-1.65	1.92	-1.71
	(4.65)	(2.28)	(4.19)	(2.29)
N (Country N)	81	132	81	132
	13	22	13	22

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture founding in 35 countries observed from 2001-2010. The estimations in this table are performed using subsamples of low and high diaspora geographic distance, permitting a test of the hypothesis that DEIs will be more effective for geographically proximate diasporas. Equations were estimated in Stata using panel negative binomial (xtnbreg) estimation with country fixed effects and year dummies. + $p<10\%$; * $p<5\%$; ** $p<1\%$; *** $p<0.1\%$

I also examine support for Hypothesis 10 in the context of my other dependent measure—*VentureFunding*—in parallel analyses reported in Table 26. Hypothesis 10a predicted an enhanced main effect of DEIs for geographically proximate COO/COR pairings. I evaluate support for this hypothesis by comparing the DEI coefficients in Table 26, Columns 1-2. The result offers little support for Hypothesis 10a, and suggests the possibility of an opposite effect. For the *VentureFunding* measure, *DEI* is positive and significant (coef=0.36, $p<0.05$) at high levels of geographic distance, while at low levels of geographic distance, *DEI* is negative. I move now to Hypothesis 10b which predicted an enhanced effect of DEIs on the investment impact of remittances when diaspora members are geographically proximate. This hypothesis is not supported. In columns 3-4, both *Remittances*DEI* coefficients are negative and statistically insignificant.

The results for Hypothesis 10, taken together, suggest that if geographic distance has an effect, it is that geographically disparate DEI/Diaspora relationships are the most productive for venture investment purposes. Although this is somewhat opposite the hypothesized predictions, it is coherent with the diaspora concentration and diaspora tenure results. For geographically distant diaspora, like for concentrated diaspora and recent out-migrants, there may be a ceiling effect for the social exchange and social identity impacts of the DEI. In other words, the return visits and circular migration patterns of geographically proximate diaspora members may dampen the realized economic impacts of DEIs.

TABLE 22: Regression analyses, geographic distance, funding DV (H10a-b)

VARIABLES	(1) Funding XTGLS High Geo Dist	(2) Funding XTGLS Low Geo Dist	(3) Funding XTGLS High Geo Dist	(4) Funding XTGLS Low Geo Dist
GDP	0.82**	0.12	0.78**	0.23
	(0.27)	(0.19)	(0.28)	(0.19)
Economic Growth	0.03+	0.02*	0.03*	0.03**
	(0.02)	(0.01)	(0.02)	(0.01)
Wealth	-0.00**	0.00	-0.00*	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	-0.07	0.71	0.01	0.70
	(0.91)	(0.66)	(0.96)	(0.67)
Rule of Law	0.48	0.15	0.55+	0.10
	(0.32)	(0.13)	(0.33)	(0.12)
Govt Share of Economy	0.00	0.02	0.01	0.02
	(0.04)	(0.01)	(0.04)	(0.01)
Economic Openness	-0.01*	-0.00	-0.01*	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.40*	0.63	0.44*	0.52
	(0.16)	(0.84)	(0.17)	(0.80)
Foreign Aid	8.52	-2.28+	8.40	-2.21+
	(5.27)	(1.23)	(6.24)	(1.22)
Portfolio Investment	-0.01	0.00	-0.00	0.00
	(0.01)	(0.00)	(0.01)	(0.00)
Foreign Direct Investment	-1.40	0.46	-0.82	0.32
	(1.56)	(0.61)	(1.63)	(0.60)
Remittances	9.18*	3.67*	7.86	3.05*
	(4.43)	(1.48)	(4.79)	(1.49)
DEI	0.36*	-0.09	-0.02	0.31+
	(0.15)	(0.09)	(0.19)	(0.16)
Remittances*DEI			-0.85	-1.47
			(2.44)	(1.18)
Constant	-22.42**	-10.85	-21.99**	-11.99
	(7.51)	(16.09)	(7.91)	(15.69)
N (Country N)	81	132	81	132
	13	22	13	22

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture founding in up to 33 countries observed from 2001-2010. The estimations in this table are performed using subsamples of low and high diaspora geographic distance, permitting a test of the hypothesis that DEIs will be more effective for geographically proximate diasporas. Equations were estimated in Stata using panel feasible generalized least squares (xtgls) estimation with country fixed effects and year dummies. + $p<10\%$; * $p< 5\%$; ** $p< 1\%$; *** $p< 0.1\%$

In Tables 27-28 I introduce my second transnational moderator: economic distance between COO/COR. This allows an empirical test of Hypothesis 11, which predicted that DEIs would have a lesser (greater) impact where economic distance levels are higher (lower). Economic distance is measured as a positive number and represents the degree of difference between two states in their economic development and macroeconomic characteristics (Berry et al., 2010). This distance measure is calculated using comparisons of several economic indicators such as GDP, imports, and exports. The more similar the economic conditions in two countries, the closer they are. The average economic distance in my 35 sampled countries is about 13 (corresponding most closely to the Indonesian diaspora residing in Malaysia), with values ranging from 0.03 (the Pakistani diaspora residing in India) to 35.38 (the Cambodian diaspora residing in the United States).

Using a technique similar to the one I used for geographic distance, I split my sample into "high" and "low" economic distance at about the median value (above and below 11) to test the main and moderating DEI hypotheses. I start with analysis of Table 23 which reports the regression results for the *VentureFunding* dependent measure. The main effect prediction of Hypothesis 11a is not supported. Although the *DEI* coefficient in the "low" economic distance sample is positive and the *DEI* coefficient in the "high" economic distance sample is negative , neither are statistically significant at meaningful levels.

The moderating result is more strongly supported. The "high distance" *Remittances*DEI* coefficient, though positive, does not reach a level of statistical significance, while the "low distance" coefficient for *Remittances*DEI* is positive and marginally significant (coef=7.50, p<0.10). For COOs whose migrants reside in an economically similar COR, DEIs seem to be more impactful in terms of increasing the venture impact of remittances. However, it is important to note that the main effect of remittances is opposite—negative in the "low distance" sample, while positive in the "high distance" sample. One interpretation is that although remittances themselves have a greater impact when arriving from more economically distant (i.e. richer) countries, the presence of a DEI targeting diasporans in an economically proximate (i.e. poorer) COR can partially offset this by positively magnifying remittance impacts.

TABLE 23: Regression analyses, economic distance, founding DV (H11a-b)

VARIABLES	(1) Founding XTNBREG High Econ Dist	(2) Founding XTNBREG Low Econ Dist	(3) Founding XTNBREG High Econ Dist	(4) Founding XTNBREG Low Econ Dist
GDP	-0.43**	0.26	-0.38*	-0.08
	(0.14)	(0.25)	(0.16)	(0.31)
Economic Growth	0.02	0.04*	0.03	0.03
	(0.02)	(0.02)	(0.02)	(0.02)
Wealth	-0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	3.25**	0.38	3.57**	0.65
	(1.23)	(1.17)	(1.34)	(1.16)
Rule of Law	0.18	-0.09	0.17	-0.03
	(0.26)	(0.28)	(0.26)	(0.28)
Govt Share of Economy	0.04	-0.03	0.04	-0.03
	(0.02)	(0.03)	(0.03)	(0.03)
Economic Openness	-0.01+	-0.01	-0.01*	-0.01
	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	0.59*	-0.10	0.59*	0.20
	(0.25)	(0.28)	(0.25)	(0.31)
Foreign Aid	-0.50	0.60	0.01	-1.62
	(2.50)	(3.15)	(2.62)	(3.59)
Portfolio Investment	0.00	0.04	0.00	0.05
	(0.01)	(0.04)	(0.01)	(0.04)
Foreign Direct Investment	-0.40	0.71	0.04	0.13
	(1.46)	(1.80)	(1.60)	(1.80)
Remittances	3.57*	-4.71	3.64*	-8.34+
	(1.51)	(4.51)	(1.54)	(4.71)
DEI	-0.11	0.06	-0.29	-0.21
	(0.12)	(0.20)	(0.29)	(0.25)
*Remittances*DEI*			1.58	7.50+
			(2.28)	(4.24)
Constant	4.52	-1.77	3.43	2.53
	(2.84)	(3.72)	(3.21)	(4.58)
N (Country N)	118	95	118	95
	18	17	18	17

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture founding in 33 countries observed from 2001-2010. The estimations in this table are performed using subsamples of low and high economic distance, permitting a test of the hypothesis that DEIs will be more effective for economically proximate diasporas. Equations were estimated in Stata using panel negative binomial (xtnbreg) estimation with country fixed effects and year dummies. + p<10%; * p< 5%; ** p< 1%; *** p< 0.1%

I also examine support for Hypothesis 11 in the context of my other dependent measure—*VentureFunding*—in parallel analyses reported in Table 24. Hypothesis 11a predicted an enhanced main effect of DEIs for economically proximate COO/COR pairings. I evaluate support for this hypothesis by comparing the DEI coefficients in Table 24, Columns 1-2. The result offers little support for Hypothesis 11a, and suggests the possibility of an opposite effect. For the *VentureFunding* measure, *DEI* is negative and significant (coef= -0.57, $p<0.05$) at low levels of economic distance, while at high levels of economic distance, *DEI* is negative and not statistically significant. This suggests that the main effect of DEIs is more positive in countries that have economically distant (rather than economically proximate) diaspora populations.

I move now to Hypothesis 11b which predicted an enhanced effect of DEIs on the investment impact of remittances when diaspora members are economically proximate. This hypothesis is not supported, and in fact the results are contrary. In Table 24, Columns 3-4, the *Remittances*DEI* coefficient is positive and statistically significant in the high economic distance subsample (coef=2.75, $p<0.05$), and is negative and significant in the low economic distance subsample (coef= -8.43, $p<0.05$). It appears that rather than economic proximity enhancing the impact of DEIs for venture funding availability, the opposite is true. Remittances from economically distant (i.e. richer) countries are more strongly impactful in the presence of a DEI. This is contrary to predictions and opposite the results found in relation to the other dependent measure, suggesting the need for a nuanced interpretation. One possible resolution of this is to recognize that the two measures of venture capital activity may be picking up

complementary but not fully overlapping aspects of the entrepreneurial development process. If we take these results seriously, it appears to be the case that in the presence of an operating DEI, diaspora members in close economic proximity (poorer CORs) are more likely to help found new businesses, while diaspora members residing at a greater economic distance (richer CORs) are more likely to invest their resources in more formal financial markets.

TABLE 24: Regression analyses, economic distance, funding DV (H11a-b)

VARIABLES	(1) *Funding* XTGLS High Econ Dist	(2) *Funding* XTGLS Low Econ Dist	(3) *Funding* XTGLS High Econ Dist	(4) *Funding* XTGLS Low Econ Dist
GDP	0.01	0.93**	0.08	1.12**
	(0.21)	(0.19)	(0.21)	(0.22)
Economic Growth	0.01	0.05**	0.01	0.05**
	(0.01)	(0.01)	(0.01)	(0.01)
Wealth	-0.00	-0.00+	0.00	-0.00*
	(0.00)	(0.00)	(0.00)	(0.00)
Inflation	0.60	-0.72	0.74	-0.86
	(0.68)	(0.73)	(0.64)	(0.77)
Rule of Law	0.81**	0.11	0.75**	0.29
	(0.22)	(0.16)	(0.21)	(0.22)
Govt Share of Economy	-0.02	0.00	-0.02	0.01
	(0.03)	(0.02)	(0.03)	(0.02)
Economic Openness	-0.00	-0.00+	-0.00	-0.00+
	(0.00)	(0.00)	(0.00)	(0.00)
Diaspora Size	-0.02	2.36	0.10	1.05
	(0.19)	(1.45)	(0.18)	(1.73)
Foreign Aid	-0.10	-2.79	0.34	1.13
	(1.96)	(2.14)	(1.93)	(2.13)
Portfolio Investment	0.00	-0.14**	0.00	-0.15**
	(0.00)	(0.05)	(0.00)	(0.05)
Foreign Direct Investment	0.74	0.57	0.87	-0.37
	(0.87)	(1.02)	(0.83)	(1.07)
Remittances	0.35	-1.56	-1.97	4.41
	(2.25)	(2.15)	(2.26)	(3.05)
DEI	-0.01	-0.57*	-0.25+	-0.04
	(0.08)	(0.26)	(0.14)	(0.17)
*Remittances*DEI*			2.75*	-8.43*
			(1.17)	(3.87)
Constant	3.26	-56.36*	-0.19	-40.90
	(6.27)	(22.70)	(6.19)	(25.63)
N (Country N)	107	85	107	85
	(17)	(16)	(17)	(16)

This table presents point estimates and standard errors (in parentheses) from analyses of remittances and DEI moderating effects on new venture funding in up to 33 countries observed from 2001-2010. The estimations in this table are performed using subsamples of low and high diaspora economic distance, permitting a test of the hypothesis that DEIs will be more effective for economically proximate diasporas. Equations were estimated in Stata using panel feasible generalized least squares (xtgls) estimation with country fixed effects and year dummies. + p<10%; * p< 5%; ** p< 1%; *** p< 0.1%

4.6 Summary of empirical findings

For a summary of my empirical results related to each empirical prediction, see Table 25 below. A few items are worth special mention. First, I receive at least partial support for nine out of my twenty hypotheses or hypothesis sub-parts. And each hypothesized prediction led to interesting findings. The geographic distance and diaspora concentration hypotheses are the only ones that are fully unsupported by the evidence (neither Hypothesis 8a-b nor Hypothesis 10a-b are supported any prediction-consistent results), but even in this instance the contrary result gives rise to interesting implications about the conditions of DEI influence—geographical factors that reduce (increase) the cost of DEI outreach efforts may also reduce (increase) the need for and effectiveness of such formal institutional efforts. Informal engagement such as return travel, neighborhood associations, and the like may substitute for the impact of formal DEIs.

Second, it is remarkable to note the overwhelming relative strength of the moderated impact of DEIs (the "b" hypotheses) compared to the main effect of DEIs (the "a" hypotheses). At least with regard to venture activity in developing countries, the effect of DEIs seems to occur primarily by changing the investment patterns and behaviors of migrants themselves—the composition and impactfulness of diaspora remittances. Much less supported is the argument that DEIs are directly impacting the broader capital environment or that they are inducing migrants' advocacy of the COO as a destination for non-migrant FDI or other investment. Seven moderation predictions were at least partially supported, compared to only one DEI main effect prediction.

Thirdly, the venture investment impact of DEIs seems to occur primarily with regard to the founding aspects of new venture creation. Other than Hypothesis 1, none of the *Funding* models supported the hypothesized predictions. Lastly, the apparent conflicts between findings suggest important heterogeneity in new venture funding and founding processes. For example, one of my moderation hypotheses (Hypothesis 11b) resulted in apparently conflicting results for the *VentureFounding* and *VentureFunding* dependent measures. At high economic distance, the moderation effect of DEIs is reduced with regard to the founding of new firms. But when it comes to the funding available to nascent entrepreneurs, we find an opposite effect—DEIs have a stronger moderating impact on venture funding at high levels of economic distance. These processes of new venture development, though related, seem to have distinct contingent drivers related to DEI, diaspora, and transnational characteristics. In the discussion section below I explore the research and practical implications of my findings.

TABLE 25: Summary of empirical findings

		Description	DV	DEI Main Effect	DEI Moderation Effect
	Hypothesis 1	Remittances increase Venture Activity	*Founding* *Funding*	✓ ✓	
				DEI Main Effect	**DEI Moderation Effect**
Institutional	*Hypothesis 2*	DEIs increase Venture Activity and moderate remittance impacts	*Founding* *Funding*	-- --	✓ --
	Hypothesis 3	DEI power magnifies main and moderating effects	*Founding* *Funding*	-- --	✓ --
	Hypothesis 4	Legislative DEI magnifies main and moderating effects	*Founding* *Funding*	✘ --	✓ --
	Hypothesis 5	DEI count magnifies main and moderating effects	*Founding* *Funding*	✓ --	-- --
	Hypothesis 6	Tapping DEI magnifies main and moderating effects	*Founding* *Funding*	-- --	✓ --
Diaspora	*Hypothesis 7*	Diaspora tenure abroad magnifies moderating effects	*Founding* *Funding*	n/a	✓ --
	Hypothesis 8	Diaspora concentration magnifies main and moderating effects	*Founding* *Funding*	-- ✘	✘ --
COO	*Hypothesis 9*	COO democracy magnifies main and moderating effects	*Founding* *Funding*	-- --	✓ --
Transnational	*Hypothesis 10*	Geographic distance diminishes main and moderating effects	*Founding* *Funding*	-- ✘	✘ --
	Hypothesis 11	Economic distance diminishes main and moderating effects	*Founding* *Funding*	-- ✘	✓ ✘

This table summarizes the empirical findings from Tables 3 through 24. A check mark (✓) indicates at least moderate support for a hypothesis test associated with a particular dependent measure. A dash (-) indicates no support (or inconclusive evidence) for a hypothesis test associated with a particular dependent measure. A cross-out (✘) indicates a potential opposite result for a hypothesis test associated with a particular dependent measure.

5. Discussion and conclusion

5.1 Discussion and implications

The objective of this dissertation was to explore whether and how an increasingly popular form of governmental activity, the formation and operation of a DEI, has economic impacts through the funding and founding of new business ventures. Although some prior research has addressed the broader topic of engagement with diaspora populations (Brinkerhoff, 2012; Smith, 2003b), it has largely been case-study or theoretic work; this is (to my knowledge) the first cross-country empirical study of the practical impact of DEIs. My hypotheses and empirical tests were designed to uncover not just an economic effect but a proposed mechanism of influence—that DEIs induce social exchange obligations among diaspora members which are then reciprocated through venture investment activity. In this discussion of the findings, I focus not on the specifics of the individual empirical results, but on drawing connections between them, and to additional implications for research, practice, and public policy debates about migration, diaspora engagement, and entrepreneurship.

As discussed in the introduction, this dissertation's findings contribute to the broader stream of entrepreneurship and IB research on the role of governmental policy in enabling entrepreneurial activity that is critical for economic growth in the developing world. Support for Hypothesis 1 was expected, given its congruence with prior empirical work. But the findings for the remainder of the hypotheses represent an empirical setting and exploration that are both quite novel.

These results provide insights into the mechanisms of how DEIs influence the investment behaviors of their primary constituency. One important difference between this dissertation study and other related work in industrial policy (i.e., FDI or trade gravity models using domestic institutional or policy conditions as a predictor for the flow of international capital) is that the governmental policy at issue (a DEI) is not solely economic in its actions, even if the motivation may in some instances have resource-seeking roots, such as with those DEIs with primarily "tapping" drivers. In other words, this dissertation examines the second-order economic and entrepreneurial effects of state policy, and such a context represents a rich arena for future management, entrepreneurship, and international business research.

My results suggest that if DEIs have an economic impact, it is likely because of the social exchange obligations or social identity-based loyalty they create. As I explored the contingencies in Hypotheses 3 through 11, I answered the question not just *whether* DEIs matter for influencing venture investment activities—DEIs do in fact have an impact on venture founding in developing countries—but *how* they matter and under what circumstances. For example, my results suggest that DEIs' vector of economic impact occurs largely through increasing the investment allocation or impact of migrant remittances, rahter than an alternative, more direct means. For example, Hypothesis 6b, which predicted that DEIs established for primarily economic purposes would outperform others in terms of inducing reciprocity and social identity-based loyalty, and Hypothesis 7b, which predicted that diaspora members residing longer abroad would be more responsive to the social exchange motivations of DEIs.

Finally, aside from the academic research implications of this dissertation study, it has significant policy importance. As origin states and international policymakers become more aware of which approaches to diaspora engagement are more (or less) effective, they can better harness the valuable economic, social, and knowledge resources of their migrants living abroad. Existing academic and policy research (Leblang, 2011; Ratha, 2011) has identified several contingencies that influence the positive impact diasporas can have on their COOs--this study highlights an additional one in the form of formal engagement through a DEI. Migration related NGOs such as the International Organization on Migration, the Migration Policy Institute, and the World Bank care deeply about making migration work both for the diaspora members who have gone abroad, as well as for those who have remained, and this study adds credibility to the idea that formal engagement matters (Agunias & Newland, 2012).

5.2 Limitations and future research

This dissertation makes several contributions to research, policy, and practice, but there are a few study limitations that I would like to discuss. For example, one might argue that an ideal study to test the applicability of Social Exchange Theory in a diaspora relations context would measure the *actual* resources provided by states as they engage diaspora, rather than just the existence of a DEI that represents the potential provision of obligation-creating resources. Or that invoking theories of organizational identification would require individual survey responses about the perceived identity overlaps of the COO, the diaspora, and the individual.

Perhaps that type of examination would be possible in single-country longitudinal work, or with smaller samples. It is, however, extremely difficult and costly to obtain reliable large-scale cross-country data measures of economic and socioemotional resources accessed by the diaspora via the home state. Given these limitations, for purposes of this study I measure the existence (and type) of DEI (representing *potential* state-diaspora social exchange and identification-inducement) as a proxy for *realized* social exchange and social identification that occurs between the state and its individual diaspora members. Although the results for DEI status and legislative/executive DEIs were not exactly as predicted (were supported in the *VentureFounding* but not *VentureFunding* models), the results do suggest that heterogeneity in DEI activities does result in measurably different outcomes and DEIs should not be treated as monolithic entities. Future research may be able to study more nuanced details regarding the specific types of policies, or the nature and quantity of provided economic or socioemotional resources that are most influential for diaspora members the institution is attempting to engage.

Secondly, in focusing solely on the investment impact of DEIs, this dissertation study leaves to future research many other potentially interesting consequences of diaspora engagement efforts. DEIs may be successful at increasing philanthropic behaviors by wealthy migrants, and completely ineffective at changing investment behaviors, or vice versa. They may increase overseas election participation by diaspora, foreign aid contributions, return migration, satisfaction with government, or dual citizenship rates. DEIs may provide tangible political benefits to incumbents seeking

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reelection. Future research should investigate these and related questions to fully understand the role of DEIs in shaping the economic and political realities of the migration experience.

Next, although the formality and relative comparability of DEIs make them an attractive object for empirical research, collectively they represent only one factor in the broad array of governmental, non-governmental, and supra-national actors with an interest in diaspora issues and economic development. Little is known about how these organizations interact and whether they have complementary or substitution effects. Although not the focus of my study, the mostly contrary result for Hypothesis 8 suggests there may be substitution effects of engagement efforts, because countries with concentrated diaspora populations not only ease the engagement process for formal DEIs (as predicted by my hypothesis), but also result in conditions that are conducive to other types of engagement organizations. For example, the United Kingdom has recently become one of the top destinations worldwide for Somalian diaspora, with approximately 200,000 Somali residents. As a result of this diaspora concentration, not only has the IOM recently engaged in Somali-specific diaspora outreach focused on state-building (IOM-UK, 2014), the UK is also the headquarters of the Worldwide Somali Students and Professionals, an NGO founded at University College London (WSSP, 2015). In addition to examining DEI impacts outside of the venture activity context, future research should also examine how additional diaspora-related organizations (NGOs, regional diaspora associations) interact with formal DEIs to accomplish shared policy goals.

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Lastly, although my empirical examination has examined some characteristics of diaspora members as important measurements, this study has focused primarily on variables and impacts that are observable in the COO. But that is only part of the engagement equation. Another potentially fruitful avenue for research on the impacts and mechanisms of diaspora engagement would be a diaspora-focused study similar to those that have been conducted to explore diaspora investment interest and relationships with COO (Riddle & Nduom, 2014). In addition to asking diaspora members questions regarding giving intentions and return travel patterns, similar future studies could include questions relating to feelings toward, perceptions of, and responses to engagement efforts by the COO. Such a study could make a significant contribution to our collective understanding of the mechanisms driving the diaspora-DEI relationship.

5.3 Concluding remarks

This dissertation study set out to be among the first to theoretically outline and empirically test the venture investment effects of DEIs—formal governmental institutions established to address diaspora-related issues. I used social exchange and organizational identification theories as explanatory mechanisms for how diasporans would respond to the existence and policy initiatives of DEIs. Although not all hypothesized relationships were supported, taken together, this empirical study highlights that DEIs do have a measurable economic impact that is contingent on several meaningful political, geographic, and migrant-related characteristics. The study also suggests several avenues

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for productive future research that has the potential to contribute to scholarship in management, political science, and related policy.

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Appendix A: Selected COO and DEI characteristics

This table below lists the primary diaspora country of residence, DEI founding dates, and DEI primary formation motivation for the 35 countries in my sample. Data on the diasporas' primary country of residence comes from the Global Bilateral Migration Database (Özden et al., 2011). The institution motivation designation is determined by the methods outlined in pages 73-75. The diaspora institutions database (Gamlen et al., 2013) only goes back to 1980, which means that for Argentina, Macedonia, Pakistan, and the Phillippines, exact dates of DEI establishment are not indicated. Primary COR data comes from the Global Bilateral Migration Database (Özden et al., 2011).

Origin Countries	Primary Destination COR	Institution Motivation	Date Established
Argentina	USA	Tapping	<1980
Armenia	RUS	Embracing	2008
Bangladesh	IND	Tapping	2001
Bolivia	ARG	None	---
Botswana	ZAF	None	---
Brazil	USA	Tapping	2007
Cambodia	USA	None	---
Colombia	VEN	Tapping	2001
Costa Rica	USA	None	---
Dominican Republic	USA	Tapping	2006
El Salvador	USA	Tapping	2004
Ethiopia	USA	Embracing	1992
Guatemala	USA	Tapping	2007
India	ARE	Tapping	2000
Indonesia	MYS	Tapping	1984
Jamaica	USA	Tapping	2008
Jordan	PSE	None	---
Latvia	RUS	Embracing	2002
Lithuania	RUS	Embracing	1989
Macedonia, FYR	AUS	Tapping	<1980
Mexico	USA	Tapping	1990
Moldova	RUS	Embracing	2010
Namibia	MOZ	None	---
Pakistan	IND	Tapping	<1980
Panama	USA	None	---
Philippines	USA	Embracing	<1980
Romania	HUN	Tapping	1994
Russian Federation	UKR	Tapping	2008
Senegal	GMB	Tapping	2003
Sri Lanka	IND	Embracing	1985
Syrian Arab Republic	SAU	Governing	2002
Togo	NGA	Governing	2010
Tunisia	FRA	Tapping	1988
Turkey	DEU	Tapping	2010
Ukraine	RUS	Tapping	1991