

Diaspora Investment Impact

Transnational ties and homeland investment

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Abstract

The diaspora has increasingly become the focus of attention in the migration and development field. As scholars and policymakers look for ways to harness the diasporas for development purposes, studying the factors that determine the impact of diaspora presence on economic outcomes becomes increasingly relevant. This thesis contributes to the study of migration linkages by examining how diasporas' transnational ties influence cross-border capital flows. While previous literature has found evidence of a migration-investment nexus – demonstrating that larger migrant stocks are associated with more investment to the home country – earlier models have largely ignored the non-tangible linkages of diaspora engagement. In this thesis we propose three main determinants for diasporas' investment impact: (i) absolute and relative diaspora population; (ii) patriotic sentiments; and (iii) the extent of community participation. Estimating a cross-sectional gravity model for portfolio and direct investment, we find a positive relationship between diaspora presence and homeland investment. We show that nationalism and blind patriotism appear to dampen the overall positive effect of diaspora presence on investment, while constructive patriotism and a culture of active community participation are both associated with an enhanced diaspora investment impact. We conclude that tangible and non-tangible linkages jointly influence outcomes within migration systems and that to fully understand the diaspora's role in bridging the home and the host country, the nature of migrants' transnational ties has to be considered. Under the right circumstances, significant linkage effects can be captured by mobilising diasporic engagement.

Keywords: Diaspora engagement, migration linkage effects, cross-border investment, patriotism, community participation

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List of Abbreviations

CDIS	Coordinated Direct Investment Survey
CEPII	Centre d'Etudes Prospectives et d'Informations Internationales
CPIS	Coordinated Portfolio Investment Survey
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
ICAPM	International Capital Asset Pricing Model
IMF	International Monetary Fund
ISSP	International Social Survey Programme
NELM	New Economics of Labour Migration
OLS	Ordinary Least Squares
PPP	Purchasing Power Parity
PWT	Penn World Table
UN COMTRADE	United Nations Commodity Trade Statistics Database
WVS	World Values Survey

1 Introduction

Contemporary states recognize that although today's migrants are unlikely to return to their sending communities they can still advance state consolidation and national development from their new homes.

(Levitt, 2001, p. 204)

Migration has been an integral part of human history: people move to escape war or persecution, to follow opportunities of better education and work, to pursue love or reunite with family – essentially all in search of a better life. The World Bank (2009) estimates that 11 million people move annually to live and work in another country. The decision to migrate may be short-term or long-term and for some, a nomadic lifestyle of constantly being on the move has become an integrated part of their culture.

Regardless of the circumstances, migration seldom means cutting the ties to the home entirely. With today's technology, maintaining bonds with the home country is easier than ever before. Modern means of communication and transportation enable migrants to actively participate and keep in touch with their sending communities (Levitt, 2001).

“Diaspora” is the keyword on the migration and development agenda today. Estimates by the World Bank Migration and Remittances Unit (2011) indicate that the savings of the diasporas of developing countries may be in the range of 400 billion US dollars, implying that diasporas constitute a considerable source of untapped capital. With over 200 million people living outside of their country of birth, the migrant diaspora communities worldwide are becoming increasingly influential. Once a term used primarily for the dispersion of Jews, Greeks or Armenians expelled from their homelands, the use of the word diaspora today has significantly broadened to mean “almost any population on the move and no longer referring to the specific context of their existence” (Weinar, 2010, p. 75).¹

While the remittances sent home by migrants have long been recognised for their development impact, scholars and policymakers alike have recently started to look beyond remittances in their search for means of harnessing diasporas for development. Migrants, as a group, are in many ways an interesting target for states, businesses and corporations seeking investors. They have an information advantage with regards to the investment environment in their home country, they are more likely to invest for patriotic reasons and they are perceived as more long-term investors, with less concern for currency risk than foreign investors (Economist, 2011; Ratha et al., 2009). The presence of diasporas, furthermore, creates a point of contact and source of information for host country investors, facilitating cross-border transactions (see e.g. Leblang, 2011).

The literature on migration systems and migration linkages has evolved over the last 25 years and has repeatedly demonstrated that the study of migration entails far more than just a movement of people. Previous studies have demonstrated strong linkage effects of migration on both trade and investment (see e.g. Gould, 1994; Javorcik et al., 2011; Foad, 2011). These effects have mainly been attributed to factors

¹ This thesis employs a broad definition of the word diaspora to encompass foreign-born populations at large. For a further discussion on the definition of the word diaspora, see e.g. Demmers (2002), Levitt (2001), Weinar (2010), Brubaker (2005) and Safran (1991).

such as information advantages and migrant home country preferences, without going further into detail as to what characteristics drive diasporic engagement.

Migration is expected to increase over the next few decades (World Bank, 2006), warranting further study of the linkage effects of international migration. In light of the growing influence exerted by diaspora communities worldwide, there is scope for examining the relationship between transnational diaspora activism and flows of capital. In “The economics of transnational living”, Guarnizo writes that “the significance of the economic multiplier effects of migrants’ transnational living may very well put an old economic axiom on its head: capital mobility follows labor mobility” (2003, p. 688). He identifies an “analytical gap between the study of transnational labor migration and global capital expansion” (2003, p. 679), saying that the study of economic linkages generated by migration needs to take into account the synergies of diasporic engagement and migrants’ transnational ties. Levitt (2001) furthermore calls for more light to be shed on why and how the extent of “transnational activism” varies between countries, implying that all diasporas cannot be viewed as identical entities but have to be regarded as distinct groups with varying capabilities of influencing the communities they operate in.

1.1 Statement of purpose

Hitherto, few attempts have been made to incorporate underlying diaspora characteristics – other than the absolute size of the migrant stock – in economic models of migration linkages. We would like to advance the study of migration linkages in a way that accounts for variations in the level of diasporic involvement. We confine ourselves to the study of migration-investment linkages and propose three main determinants of diasporic influence on homeland investment: diaspora size in both absolute and relative terms, as well as the degree of patriotism and the extent of community participation that prevail in the homeland.

We analyse cross-sectional portfolio and direct investment data by building on existing gravity model specifications previously used in the study of economic linkages of migration. The model is augmented with measures designed to allow us to explore whether diasporas from countries with a widespread culture of patriotism and community participation have an enhanced capacity to generate investment to their home country.

This paper proceeds as follows: since the study of migration-linkages spans a wide number of topics and interrelated fields of literature, section 2 provides an overview of the relevant literature. Section 2.1 introduces the theory of migration systems and reviews earlier work on the economic linkages of migration, spanning the past 25 years. Section 2.2 reviews a more recent body of literature that places the diaspora at the centre of the migration and development debate, and moreover discusses the channels through which diasporas influence cross-border investment. In section 2.3 we draw on the earlier sections to identify our three key determinants of diasporic influence, leading up to our hypotheses regarding their effect on investment. The data set, the empirical model and the general methodology employed is described in section 3. In section 4, we present and discuss our results, followed by our conclusion and suggestions for future research in section 5.

2 Literature review

2.1 Migration linkages

In this section we introduce the theory of migration systems, which has provided a theoretical framework for subsequent studies of migration linkages. The economic linkages of migration have been studied by an extensive body of literature, and particularly the literature on migrant remittances has grown parallel to the steady increase in international remittance flows. To establish that a solid relationship exists also between migration and other forms of goods- and capital flows, we here focus on the linkages of migration with trade and investment. The study of trade-migration linkages was pioneered in the 1990s and has grown to encompass a significant body of literature. While the relationship between migration and investment has been less studied, recent years have seen a growing interest in this field, as economists seek to explain why certain countries succeed better than others in the global competition for capital.

2.1.1 Migration systems and migration linkages

The study of international migration saw a shift in the late 1970s and early 1980s, when scholars started to take into consideration that migration usually does not involve a complete severing of ties to the home country.

Neo-classical theories had focused heavily on push- and pull-factors such as wage differentials between sending and receiving countries, and relied on the assumption that the decision to migrate was taken on the level of a rational individual migrant who maximises his net return (Massey et al., 1993). The “new economics of labour migration” (NELM) arose to challenge some of the claims of neo-classical theory. NELM suggests that the decision to migrate is not necessarily an individual choice but rather a collective household decision (Stark and Bloom, 1985). Migration by one or more family members occurs to diversify the household’s income risk or to generate capital for investment purposes. Migrants do not cut the ties with the home country. Rather, the maintenance of ties in the form of remittances sent home is central in the NELM framework (Massey et al., 1993).

Around the same time, migration systems theory evolved, stressing that the movement of people between places always occurs within a context and is accompanied by non-people movements and exchanges on many levels (Massey et al., 1993). In order to accurately analyse the resulting effects and their interactions, it becomes necessary to place migration in the context of systemic processes (Patterson, 1987). Boyd defined migration systems as systems in which “places are linked by the flows and counter-flow of people, as well as by economic and political relations between countries or areas” and called for a refined study of such systems (1989, p. 641).

In response, Fawcett (1989) presented a conceptual framework for the “non-people linkages” of international migration, giving equal weight to the observable (e.g. commercial and financial) and conceptual (cultural, political and societal) aspects. Within this framework, trade and financial flows are defined as important tangible linkages on the state-to-state level. Meanwhile, family obligations and community solidarity become significant non-tangible linkages on the personal network level.

While these tangible and non-tangible linkages are distinctly categorised they should by no means be studied in isolation. Rather, Fawcett points out, an “important function of the framework is identifying interactions that may be critical to understanding the dynamics of migration flows” (1989, p. 679).

2.1.2 Trade-migration linkages

A main body of literature on migration linkages has looked at the relationship between migration and trade. Several studies have found evidence of a *trade migration nexus*, where externalities of migration exert a positive influence on trade flows (see e.g. Gould, 1994; White, 2007; Parsons, 2005). The finding of unaccounted externality effects has simultaneously implied a shift away from standard models based on factor endowments, towards models that allow for information asymmetries and transaction costs (Portes and Rey, 2005).

Gould's (1994) study is generally considered to be one of the seminal contributions to the field of trade-migration linkages. Gould broadly classifies the two channels through which migrants influence the flow of goods across country borders as: (i) a *preference hypothesis*, which holds that migrants bring with them preferences for home country goods; and (ii) an *information hypothesis*, which holds that migrants lower transaction costs by facilitating exchanges. Gould finds that immigrant links exert a strong positive effect on US trade and attests this mainly to the information effect, as trade barriers are lowered through migrants' information advantage regarding home country conditions and the increased interconnectivity derived from migrants' social bonds.

Other studies also provide evidence of a trade migration nexus, although the answer as to which channel is dominant depends on the specification used. Dunlevy and Hutchinson (1999) find a strong pro-trade link of US immigration, dating back as far as the late 19th century. Head and Ries (1998) note a positive relationship between migration and trade for Canada, but attribute the relatively larger effect on imports compared to exports to the preference channel. White (2007) refers to the two channels as "transplanted home bias" versus "network effects" and finds that both channels appear to be relevant for explaining the trade-migration link for the US.

2.1.3 Investment-migration linkages

The extensive literature on trade-migration linkages has established a strong relationship between migration and the cross-border flow of goods. In contrast, investment-migration linkages remain relatively under-researched. The relationship between capital and labour has often been modelled on classical theories of factor movements, which hold that labour and capital are subject to a high elasticity of substitution. Emigration reduces the work force in the country of origin, which increases the return to labour and implicitly decreases the return to capital, leading to a capital outflow. This, however, fails to take into account the spill-over effects associated with migration. More recent literature instead points to the role of migrants as facilitators of capital flows.

Analogous to the two channels described in trade-migration literature, migration is thought to influence investment through various information and preference effects. Investment differs from trade in that financial assets are "weightless" and do not incur storage and transportation costs. Nevertheless, several studies have demonstrated that the same models that are used to predict trade patterns can also be useful for explaining cross-border capital flows. Lueth and Ruiz-Arranz (2006) for example, find that most of the variation in bilateral remittance flows can be explained by the countries' economic mass, distance, language and common borders – the same variables that have been found to influence trade – indicating that even capital flows are subject to information asymmetries and transaction costs.

An overview of the theory covering investment-migration linkages is given in the two sections below, distinguishing between studies focusing on foreign direct investment and those focusing on portfolio investment.

Foreign direct investment

Several studies confirm the existence of an investment-migration nexus similar to the trade equivalent. Kugler and Rapoport (2007) find evidence of contemporaneous substitutability but dynamic complementarity between immigration to the US and foreign direct investment (FDI) in the migrants' country of origin, suggesting that labour mobility positively affects capital mobility in the long run.

Javorcik et al. (2011) confirm a link between migration and FDI, which they attribute to increased cross-border information flows and enhanced contract enforcement mechanisms following migration. Examining US data on FDI and foreign origin groups, Bhattacharya and Groznik (2008) control for various measures of familiarity and find evidence of a strong national origin bias amongst investors.

Nijkamp et al. (2011) conduct a meta-analysis on the relationship between migration and FDI. Using nine previous studies as a base, the authors conclude that the effect is strongly positive for high-skilled immigrants and negative for low-skilled immigrants, indicating that large inflows of low-skilled migrants act as a signal of the home country as an unattractive investment destination.

Portfolio investment

The relationship between migration and portfolio investment remains relatively unexplored. The existing research, however, points to linkage effects similar to the ones for trade and FDI. Returning to the study by Bhattacharya and Groznik (2008), they find a positive effect for portfolio investment, albeit smaller than the effect for FDI.

When exploring migration and portfolio investment linkages, scholars have often sought to explain paradoxical investment behaviour with the reasoning that cultural and emotional factors, such as familiarity, are weighed into the investment decision. The related field of behavioural finance, which examines investment patterns and investor decision-making, has long ago established that investors are not always perfectly rational. Common behavioural phenomena such as *overconfidence*, *herd behaviour* and *equity home bias* attest to that (see e.g. Barber and Odean, 2001; Scharfstein and Stein, 1990; French and Poterba, 1991).

In standard financial theory, the International Capital Asset Pricing Model (ICAPM) holds that in order to optimise the risk-return of an equity portfolio, the share of foreign equity should be equivalent to the respective country's share of global market capitalisation. In reality however, contrary to the predictions of the model, a majority of investors exhibit a strong degree of equity home bias (French and Poterba, 1991). This has been attributed to either (i) rational motives, such as information advantages and lower transaction costs, or (ii) behavioural motives, such as familiarity bias or cultural ties (see e.g. Portes and Rey, 2005; Coval and Moskowitz, 1999; Grinblatt and Keloharju, 2001).

Foad (2011) examines these two motives by analysing the relationship between migration and foreign equity holdings. Hypothesising that migrants increase international portfolio holdings, either through information effects or through preferences for domestic stock, he finds support for the latter theory, implying that foreign portfolio investment mainly increases through the inflow of migrants with preferences for home equity.

To our knowledge, the most comprehensive research on the linkages between migrant networks and cross-border portfolio investment has been conducted by David Leblang, in a number of working papers and articles (2008-2011). Pointing to the phenomenon of home bias in portfolio investment, he argues that institutional differences alone cannot explain the variation in the distribution of global capital flows. While his findings vary slightly depending on the specification used, migrant stock is shown to be a consistently significant predictor of investment flows, even after controlling for institutional and cultural

factors. Leblang (2010) argues that this is the result of reduced information asymmetries when migrant networks are in place and notes that this effect could also be the result of a familiarity-fostered preference for home country investment, similar to the preference effect in the trade of goods.

Leblang (2011, p. 94) concludes that:

Migrant networks—connections between immigrants and their homeland—play an important role in decreasing asymmetries and in promoting portfolio investment [...] by providing information about investment opportunities that exist across countries.

If the decision to invest is indeed influenced by the information advantages (real or perceived), network effects or behavioural motives mentioned in these theories of investment-migration linkages, we would expect that the by now well-known home bias follows the migrant to their country of destination and is extended to a form of “transplanted home bias”, similar to the trade counterpart as defined by White (2007). In contrast to what factor theory predicts, this implies that a level of complementarity exists between migration and investment.

2.2 Harnessing the diaspora

Members of diasporas can act as catalysts for the development of financial and capital markets in their countries of origin by diversifying the investor base [...], by introducing new financial products, and by providing a reliable source of funding.

(Plaza and Ratha, 2011, p. 13)

The literature outlined in section 2.1 establishes a solid relationship between migration and economic outcomes, showing migration linkages to influence trade, FDI and portfolio investment positively. In this section we focus on the role of the diaspora in channelling these linkage effects and examine different ways in which it can influence homeland investment.

The study of the economic linkages of migration has relied heavily on measures of migrant stocks in absolute numbers, keeping the individual migrant as the smallest unit of analysis. Today’s migration and development literature is increasingly viewing “the diaspora” as the unified entity at the centre of the agenda, asking not what the individual migrant can do for the homeland but what migrants can do *together*. Countries today view diasporas as resources for capital mobilisation well beyond merely as senders of remittances and are looking for different ways of keeping the diasporas engaged and attached to the home country (Levitt, 2001; Terrazas, 2010; Boccagni, 2011).

Levitt (2001) argues that transnational activism is facilitated by institutionalisation, suggesting that active and organised diaspora communities have the potential to enhance any given migrant-linkage effect considerably. For this reason, many migrant sending country governments are learning to actively encourage diaspora participation through initiatives such as hometown associations, government agencies protecting migrant interests abroad, the endowment of rights to continued political influence and possibilities of retaining dual citizenship.

The two main channels through which diasporas can have a positive effect on cross-border investment globally are either by investing in their home countries themselves or by indirectly influencing investors in the host country to invest in the home country to a greater extent than they would have otherwise.

2.2.1 Diasporas as investors

Migrants' savings represent significant untapped sources of funding for developing countries and migrants have become an increasingly attractive investor base. The emerging interest in diaspora investment can, according to Terrazas (2010), be traced back to two common assumptions: (i) diaspora investors possess particular information on home country investment; and (ii) diaspora investors hold patriotic sentiments that will lead them to accept below-market returns. Neither of these assumptions is self-evident and both merit critical scrutiny. Migration linkage studies on investment such as those conducted by Leblang (2010, 2011) address primarily the first assumption, leaving out a discussion of patriotism.

As more and more governments turn to diaspora capital for funding, patriotism as an investment motive becomes increasingly relevant. Bonds capitalising on investor patriotism have been in existence for a long time: war bonds were launched already during the American Civil War and "patriot bonds" have been sold since the terrorist attacks on September 11th 2001 (Morse and Shive, 2011). Israel and India have managed to raise in total over 35 billion US dollars by issuing so called diaspora bonds, financial instruments directly targeting their respective diasporas (Ketkar and Ratha, 2009). Kenya and Rwanda are only two of the most recent examples of countries issuing such instruments (World Bank, 2011; New Times, 2011).

These bonds are often sold at a *patriotic discount*: the difference between the interest rate that the market is willing to accept and what the diaspora investors accept for government debt (Terrazas, 2010). Despite lower expected returns, diaspora bonds have in many cases proven successful in mobilising investment, something Ketkar and Ratha (2009) attribute to diaspora patriotism and a desire to contribute to home country development. There is reason to believe that this should apply not only for government-issued debt but for corporate equity and debt as well.

From a study of four diaspora communities resident in the US, Gillespie et al. (1999) identify altruism and a perception of "ethnic advantage" as the two key psychological factors that lead diasporas to invest in their home country. Feelings of altruism and moral convictions have been shown to stimulate investment if it is perceived as ethical (Beal et al., 2005; Graff Zivin and Small, 2007). Nielsen and Riddle (2007, 2010) build on from these findings to create a conceptual model in which the migrant's decision to invest rests not only on financial returns, but also on expectations for social and emotional returns. Specifically, they posit that participating in "the diaspora experience" increases the importance of non-pecuniary investment motives for investors (2010, p. 437). In their model the *social embeddedness* and the *degree of community affect* of the investor is crucial; participation in a community, with close ties to other migrants, thus enhances the social returns of investment for the individual investor (2007, p. 6).

Although information advantages (real or perceived) play an important role in explaining the concept of diasporas as investors, it does not give the full picture. Behavioural motivations such as patriotism, loyalty and cultural ties seem to impact on investment decisions as well. Diaspora organisations can play a vital role in incentivising migrant investment, both as sources of information which may heighten the perception of "ethnic advantage" and as networks in which participation leads socially oriented and honourable deeds to go recognised and rewarded.

2.2.2 Diasporas as conduits of foreign capital

In addition to investing directly, diasporas also have an indirect role in channelling investment: by influencing non-diaspora investors in the host country to invest in the home country. Guarnizo (2003, p. 679-670) argues that by only examining the traditional channels through which migrants influence capital flows, one fails to account for important linkages resulting from migrants' "transnational relations".

He notes that migrants' desire to remain in contact with the home country and reproduce their culture in the host country affects businesses, markets and capital flows alike, generating unanticipated multiplier effects.

Being part of a diaspora community involves network ties that extend outside the migrant group itself – to the local host country community and transnationally. Nielsen and Riddle (2007, 2010) argue that through network linkages, diaspora organisations become relationship-brokers between the home and host country, bridging the divide between them. In existing migration linkage literature, this bridging effect is usually explained as a result of an increase in information flowing from home to host country, facilitated by migrants with connections in both countries (see e.g. Gould, 1994; Javorcik et al., 2011).

There is, additionally, a signalling effect to consider. Diaspora groups communicate an image of their home country as an investment destination to investors. Findings by Hwang (2011) reveal that how popular a country is among Americans affects American investors' demand for the securities from that country. Levitt notes that “courting the emigrant constituents”, holds a symbolic value amongst home country governments, since an active and united diaspora community sends the signal that the migrant-sending country is “sufficiently developed and powerful to protect their citizens living abroad” (2001, p. 204). This, in turn, is likely to improve the home country's popularity as an investment destination. Again, more participatory, committed diasporas are likely to be in a better position to influence investment decisions positively. It is important to remember, however, that signalling effects can swing both ways and that migrants can communicate both positive and negative images of the home country.

The literature on diaspora impact on investment thus suggests that there are characteristics associated with diaspora communities that separate them from ordinary investors. It is also clear that different diasporas have different abilities and inclinations to contribute to home country development (e.g. Plaza and Ratha, 2011). Previous studies on migration linkages have not considered how active versus non-active diaspora participation can influence investment. In the next section, we will therefore discuss factors affecting diasporic engagement and formulate hypotheses about how these might affect investment.

2.3 Determinants of diasporic influence

In section 2.1 we looked at some of the main economic linkages of migration and showed that studies tend to find a significant positive influence of migrant stocks on not only bilateral trade and direct investment but also on portfolio investment, shedding some light on migrants' roles in reducing information asymmetries and increasing familiarity. So far studies of this kind have measured migrant stocks in absolute numbers without attempting to further quantify diaspora influence or their level of engagement.

In section 2.2 we showed that in the international competition for capital, diasporas as unified entities become relevant actors both as investors and as conduits of investment for investors in the host country. The notion of the diaspora as a target group to be “harnessed” comes with the implication that different diaspora communities succeed better than others as conduits of capital flows, and that there are qualities inherent to the diaspora that enhance or dampen their capacity to generate investment. More active, institutionalised diasporas, it is argued, maintain stronger bonds with the home country. Engaging the diaspora has become a policy objective of more and more home-country governments. This is done through: (i) appeals to the *patriotic sentiments* of their expatriate communities, as with the issuing of diaspora bonds and other diaspora-targeted vehicles for investment (see e.g. Ketkar and Ratha, 2009); and (ii) attempts to extend social and political membership to migrants and the introduction of policies aimed at institutionalising migrants' *long-distance participation* (e.g. Levitt, 2001).

Previous studies on investment linkages of migration have focused on the *magnitude* of migration. Levitt (2001) argues that magnitude is important for diasporic involvement, but that an understanding of transnational relations also requires taking into account the *nature* of these relations.

In this chapter we proceed to, based on earlier research findings, propose three main determinants of diaspora influence on homeland investment:

- (i) absolute and relative diaspora population, as the magnitude of its presence in the host country;
- (ii) the prevalence of patriotic sentiments, as the emotional bond that binds the diaspora with the homeland; and
- (iii) the extent of community participation, as the operational vehicle that channels investment.

2.3.1 Absolute and relative diaspora population

Previous literature has already established a solid relationship between migration and portfolio investment as well as direct investment (e.g. Leblang, 2011; Javorcik et al., 2011). In most cases, these studies use the home country's total migrant stock in the investing country as the key explanatory variable. We expect the size of migrant stock to have a positive and significant effect on investment to the home country.

As noted in section 2.2, migrants can influence investment to the home country in other ways than as investors. Migrant communities act as information vessels and signallers, connecting with investors in their host country and thereby affecting investment flows to the home country. When measuring investment at the aggregate country level, the reach of information dispersal and signalling can be assumed to depend on the degree of influence the diaspora community commands in the host country.

Given our focus on diasporic influence on investment, we propose the size of the diaspora relative to the host country population as a more relevant measure of diaspora outreach. We hypothesise that a diaspora community has a higher potential to influence investment to the home country when it represents a larger proportion of the population in the society it exists in.

This leads us to our first set of hypotheses²:

Hypothesis 1a: The size of the migrant stock impacts positively on investment from the host country to the home country.

Hypothesis 1b: A large diaspora relative to the host country population impacts positively on investment from the host country to the home country.

2.3.2 Patriotic sentiments

We have already identified patriotism as a key motivational factor behind diaspora investment, such as in the form of diaspora bonds. Patriotism has further been associated with a stronger inclination to stay involved with homeland affairs. Boccagni (2011) showed that among Ecuadorian migrants in Italy, external election participation was driven not so much by an interest in home country politics as by

² Throughout this thesis, we let host country denote the migrant receiving, investing country and home country denote the migrant sending, investment receiving country.

feelings of patriotism and homesickness. Konrad and Qari (2011) link patriotism with a higher tax compliance of citizens.

Morse and Shive (2011) document a correlation between patriotism and investment behaviour that is separate from a mere familiarity effect. Having first controlled for transaction barriers, lack of attainable diversification benefits, information asymmetries and familiarity bias as the more common explanations for the equity home bias, they find that portfolios in more patriotic countries display more home bias.

There is thus considerable evidence that patriotism affects behavioural patterns and decision-making. If patriotic sentiments influence investment decisions, we expect to find that diasporas from more patriotic countries invest more in the home country – a consequence of the “transplanted home bias” as defined by White (2007) in the trade-migration literature. Building on the idea of networks and information dispersal effects, we further expect that a high level of patriotism among the diaspora will bias the information they transmit to host country investors in the home country’s favour, creating a more positive image of the country as an investment destination.

This leads to our next hypothesis:

Hypothesis 2a: The diaspora impact on investment to the home country is enhanced by patriotic sentiments.

Forms of patriotism

The literature we have covered so far has treated patriotism as a force to be nurtured and exploited for the best economic outcomes – higher remittances, more investment or enhanced trade linkages.

Turning to a body of literature that has attempted to actually quantify patriotism and its effects on political and economic outcomes reveals a need to nuance this picture. The definition of patriotism has varied and concepts of national identity, patriotism and nationalism have been used ambiguously, with no agreed upon method of measurement (Davidov, 2009). There is striking consensus, however, that patriotism has both desirable and undesirable consequences, and that a distinction needs to be made between its positive and negative aspects.

The most common distinctions drawn seem to be between constructive patriotism and nationalism (e.g. Davidov, 2009, 2010; Smith and Kim, 2006; Druckman, 1994; Qari et al., 2009) and constructive patriotism and blind patriotism (e.g. Schatz and Staub, 1997; Schatz et al., 1999).³

Constructive patriotism has been described as the reasonable, questioning patriotism (Davidov, 2009). Smith and Kim (2006) furthermore interpret it as a national affect contingent on country behaviour and specific accomplishments. Blind patriotism is defined as “uncritical support for national policies and practices” (Parker, 2010, p. 97) while nationalism has been associated with a fear of external influences and a tendency to exclude foreigners (Davidov, 2009).

In practice, while the different measures are positively correlated, studies indicate that they can and should be regarded as distinct concepts with distinct outcomes. Schatz et al. (1999) show that while constructive patriotism correlates positively with political engagement, no such relation is found for blind patriotism.

³ Davidov (2009, 2010) provides a thorough review of the patriotism literature, for further reading see references therein (e.g. Blank, 2003; Blank & Schmidt, 2003; Coenders & Scheepers, 1999, 2003; Rothi, Lyons, & Chrysoschoou, 2005; Smith & Kim, 2006).

Using the same distinctions, Kislioğlu (2010) finds that constructive patriotism leads to less free-riding in an experiment setting. For blind patriotism no significant link is found.

The differences between constructive patriotism and nationalism also affect the relationship to other groups in the society. Druckman notes that “nationalism encourages an orientation involving liking for one’s own group and disliking of certain other groups” (1994, p. 63-64). He further asserts that although those that display the more constructive sides of patriotism may well be willing to risk their lives for their country, those that display strong nationalistic sentiments are more inclined to go to war, seeing as their connection with their country is largely built on the concept of a common enemy.

At this point a refinement of Hypothesis 2a is called for. The above studies indicate that constructive patriotism fosters a spirit of cooperation that we believe is essential for diasporas to serve as efficient conduits of capital. Meanwhile, migrant integration into the host society is crucial “in order to be an effective ethnic lobby” (Fitzgerald, 2006, p. 97). Blind patriotism and nationalism risk creating secluded diaspora groups with limited ability to generate investment from investors in the host country at large.

Taking into account that there are various forms of patriotism, with different behavioural implications, we formulate the alternative hypothesis:

Hypothesis 2b: Alternatively, the diaspora impact on investment to the home country is enhanced by constructive patriotism but dampened by nationalism and blind patriotism.

2.3.3 Community participation

The literature suggests that migration-linkage effects are at their height when there is an active, committed diaspora community channelling important synergy effects. More institutionalised diasporas generate stronger bonds as political, religious and social institutions offer migrants ways to remain active, paving the way for what Levitt (2001) calls “transnational participation”. If patriotic sentiments are the emotional ties that can be exploited by home country governments to generate economic linkages, then active diaspora participation is an operational vehicle that embeds and institutionalises these ties.

Active participation in social groups elicits recognition-earning behaviour which can take the form of homeland investment. Participation in diaspora groups connects migrants both with each other and with individuals who still remain in the home country. This intensifies the migrants’ attachment to the community, thereby increasing the motivation to invest (Nielsen and Riddle, 2007).

The other channel through which the diaspora community channels investment is by interacting with local investors. Here a stronger, more participatory organisation is presumably better positioned to promote and spread information about the home country. Morse and Shive note that “individuals in societies conditioned to local group identity have an easier time identifying with groups at a more aggregate level” (2011, p. 413). An interpretation of this is that individuals who come from a culture of strong community participation have a greater likelihood of interacting well with the surrounding society at large.

From this discussion, we derive our final hypothesis:

Hypothesis 3: The diaspora impact on investment to the home country is enhanced when the migrants come from a culture of active community participation.

2.3.4 The persistence of national identity

Exile is the nursery of nationality

Lord Acton 1834-1902

(1967, p. 146, cited in Anderson, 1992, p. 2)

The testing of the above hypotheses will build on the assumption that the extent of patriotism and community participation in the migrant-sending country are reliable indicators of the degree of patriotism and community participation demonstrated also by its migrant communities abroad. This is clearly not universally the case. Demmers (2002) underlines that it is difficult to predict how feelings of nationalism from one country will play out in the new country. There is evidence of diasporic communities comprising both “cosmopolitan anti-nationalists and reactionary ethno-nationalists” (Demmers, 2002, p. 86). Some diaspora communities will even be characterised by expressions of counter-nationalism or separatism, as Demmers notes could be seen with minority groups from Aceh, Northern Ireland, the Basque Country or the Congo.

Studies attempting to explore what happens to national identity during globalisation and migration reach inconsistent results (Ariely, 2012; Fitzgerald, 2004; Brown, 2004). What is clear is that the increasing speed of communications and the higher mobility of people mean that transnational communities are in increasingly good positions to maintain social relations with the home countries. Through an increased ability to stay involved with the homeland, “people remain loyal to a national homeland they no longer inhabit” (Demmers, 2002, p. 93). Long-distance nationalism can be viewed as a natural consequence of transnationalism and we have no reason to believe that the assumption that characteristics of the home country are reflected by their diasporas abroad will bias our results in any particular direction.

Better data availability would have allowed us to explore within-country, regional, religious or ethnic identity groups. It is likely that for many migrants identification with a distant hometown or region would have been more relevant than identification with a nation (Fitzgerald, 2004). As it is, we have to restrict ourselves to a country-level analysis with “nationality” as the common ground that community loyalties are built on.

2.3.5 Hypotheses

For ease of reading, we here restate our hypotheses. We proceed to test these hypotheses on both portfolio and foreign direct investment.

Hypothesis 1a: The size of the migrant stock impacts positively on investment from the host country to the home country.

Hypothesis 1b: A large diaspora relative to the host country population impacts positively on investment from the host country to the home country.

Hypothesis 2a: The diaspora impact on investment to the home country is enhanced by patriotic sentiments.

Hypothesis 2b: Alternatively, the diaspora impact on investment to the home country is enhanced by constructive patriotism but dampened by nationalism and blind patriotism.

Hypothesis 3: The diaspora impact on investment to the home country is enhanced when the migrants come from a culture of active community participation.

3 Methodology

3.1 Empirical model

Following existing literature on migration-linkages with goods and capital flows (see e.g. Gould, 1994; Parsons, 2005; Leuth and Ruiz-Arranz, 2006; Portes et al., 2001; Leblang, 2010), we employ a gravity model specification to analyse the relationship between migration and cross-border investment. The gravity model, initially used by Tinbergen in 1962, is based on the Newtonian principle of gravitation, and models the flow of goods or assets as a positive function of *economic mass* (typically proxied by GDP) and a negative function of *distance*, assuming that transaction costs increase with distance.

Extending this specification to cross-border investment flows has also been shown to fit empirical findings well, especially when the gravity model is augmented to include measures such as common language, common currency or quality of institutions (Leblang, 2011). Despite the “weightless” nature of capital flows, such transactions are – arguably to the same extent as trade in physical goods – subject to barriers as distance increases. Non-physical barriers created by differences in culture, language and institutions reduce investment by introducing information asymmetries and transaction costs. As distance can be assumed to proxy for these information costs, the gravity model becomes suitable for examining cross-border investment (Portes and Rey, 2005).

To examine investment flows, we use Leblang’s (2008, 2010, 2011) augmented gravity model, with the inclusion of bilateral migrant stocks, as our point of departure. We alter and build on his specification in two ways:

- (i) by introducing an alternative measure of migrant stock relative to receiving country population, which we believe captures the extent of diasporic influence in the host country; and
- (ii) through the incorporation of various measures of patriotism and community participation. These measures are interacted with our alternative migrant stock measure to see what, if any, enhancing or dampening effect they have on diaspora capacity to serve as conduits of capital.

The variables used are detailed in the following section.

3.2 Data and variables

3.2.1 Investment

Our dependent variables on bilateral investment are obtained from International Monetary Fund (IMF) surveys on portfolio and direct investment respectively (2010). The Coordinated Portfolio Investment Survey (CPIS) is conducted annually and contains data on bilateral portfolio investment from 73 source countries to 221 destination countries. The data comprises year-end holdings of both equity and debt securities, in millions of US dollars, by issuing country. We use CPIS data from 2010 for our first dependent variable, measuring portfolio investment flowing from country i to country j , i.e. from the migrants’ host country to their home country.

Our second dependent variable is direct investment from country i to country j . The data on FDI is obtained from the IMF Coordinated Direct Investment Survey (CDIS) for 2010 and comprises year-end

values of outstanding equity and debt positions, in millions of US dollars, for investments which imply a significant degree of control over the management in a foreign enterprise. We use reported data on outward direct investment, with observations from 56 source countries to 245 destination countries.

3.2.2 Migrant stock

Bilateral migrant stock estimates for 2010 are obtained from the World Bank bilateral migration matrix (World Bank, 2010a). Originally constructed by Ratha and Shaw (2007), the data is based on UN estimates of total migrant stocks in 2005 and weighted by bilateral migrant stocks obtained from 162 national population censuses and has since been updated with more recent statistics and additional countries.

Previous literature on investment-migration linkages has focused on the size effect of the migrant stock in absolute terms. We propose an alternative measure of diaspora influence that allows for the possibility that larger diasporas relative to the population of the host country have a greater chance of influencing investment decisions. To proxy for the extent of diaspora influence we divide the migrant stock from country j in country i by the population size of country i , obtained from the United Nations Population Division (UNPD, 2010).

$$Diaspora_{ji} = \frac{Migrant\ stock_{ji}}{Population_i}$$

3.2.3 Patriotism and social participation

Our main measures of patriotism and community participation are obtained from the World Values Survey (WVS). The WVS has been conducted in several waves since the 1980s and documents values pertaining to, among other things, national identity in over 80 countries.⁴ For the hypotheses regarding alternative forms of patriotism we turn to the International Social Survey Programme's (ISSP) survey National Identity II from 2003.⁵

This thesis argues that the extent of diaspora influence on investment varies according to characteristics inherent to the diaspora, such as the strength of cultural ties to the homeland and the level of diasporic engagement. We lack data that specifically measures diasporic patriotism and community participation. Instead, using data from the WVS and the ISSP, we obtain country averages of patriotism and organisational participation for the home country population (under the assumption that these on average accurately reflect the attitude and behaviour of the migrant diaspora) and interact these with our measures for diaspora population to proxy for the level of diasporic patriotism and community participation in the host country. Our chosen measures are described below.

Patriotism

Following Morse and Shive (2011), our main measure of *patriotism* is based on the survey responses to the WVS survey question: “*How proud are you to be [nationality]?*” The responses are coded from 1 (not at all proud) to 4 (very proud), and we obtain the mean country scores.⁶

⁴ More information on WVS survey methodology can be found in Appendix A.

⁵ More information on ISSP survey methodology can be found in Appendix B.

⁶ Mean values are most appropriate here, since the discrete survey responses imply that the median will be 3 for most countries.

To maximise the number of migrant sending countries, we use data from the two most recent waves of surveys, carried out during 1999-2004 and 2005-2008. Morse and Shive demonstrate that “patriotism is relatively stable over time” (2011, p. 414) but that within-country scores move on average five per cent – up or down – between survey waves. They find no overall change in mean scores across countries over time.

The survey covers over 80 countries and the minimum number of responses per country is 1000.⁷

Alternative measures of patriotism

As shown, previous attempts to quantify the effect of patriotism on economic and political outcomes have illustrated a need to distinguish between different forms of “positive” and “negative” patriotism. Our hypotheses are formulated around the ideas of (i) constructive patriotism; (ii) blind patriotism; and (iii) nationalism.

Smith and Kim (2006) point to *general national pride* and *domain-specific pride* as the two “batteries” of national pride identifiable in the ISSP surveys. Domain-specific national pride is presented as the more constructive form of pride, given that it is based on actual national achievements rather than an unfounded notion of national superiority. Unlike general national pride, the authors show this measure to be uncorrelated with opposition to multilateralism or globalisation. We adopt their *domain-specific pride* measure from the 2003 survey as our measure of *constructive patriotism*. It is computed as the mean number of areas between zero and ten for which ISSP respondents from a given country have claimed to be “very proud” of their country. Such areas include the country’s political influence, economic achievements, history, achievements in sports etc.⁸

For *blind patriotism* we employ the mean national response to the ISSP 2003 statement “*People should support their country even if the country is in the wrong*,” coded between 1 (strongly disagree) and 5 (strongly agree). This is the measure closest to Parker’s (2010) definition of blind patriotism that we have available, as agreement with the statement implies a form of patriotism non-contingent on country behaviour and achievements. As an alternative measure for robustness, we follow Morse and Shive (2011) and use the WVS 2005-2008 percentage of respondents in each country stating that they are willing to fight for their country. While a willingness to fight may well be contingent on country behaviour, fighting for one’s country will normally imply “taking the good with the bad” and standing up for country values whether one agrees with them or not.

For *nationalism* our main measure is the ISSP 2003 statement “*Increased exposure to foreign films, music, and books is damaging our national and local cultures*”, scored 1-5 as above. We again include an alternative measure from the WVS 2005-2008 for robustness: the percentage of respondents in each country agreeing that nationals should get priority for jobs, following Morse and Shive (2011).

Social participation

Our main measure of social participation is similarly obtained from the WVS and is derived from a question for which respondents are asked to state whether or not they belong to each of 14 different types of voluntary organisations.⁹ For each country, we pool the mean percentage participation rate for all 14 types of organisations so as to obtain an average participation rate (in percentages).

⁷ See Appendix A.

⁸ See Appendix B.

⁹ See Appendix A.

Because the phrasing and coding of this question varies between the last two survey waves, we only use the 1999-2004 wave for consistency. The reason that we do not take the most recent wave is that this would involve a reduction in sample size, the 1999-2004 survey being the most comprehensive wave carried out by the WVS to date. In order to account for potential within-country variation over time, as well as to check the robustness of the WVS-findings, we later include an alternative measure from the ISSP 2007 survey on Leisure and Sports.¹⁰

3.2.4 Augmented gravity model variables

The standard gravity variables are obtained following Leblang (2010, 2011). For each country pair, we compute the economic mass of the pair by multiplying their GDPs¹¹, based on the latest Penn World Table (PWT) data from 2009 (Heston et al., 2011). Our measure of bilateral distances between countries is obtained from the geodesic data set of CEPII or Centre d'Etudes Prospectives et d'Informations Internationales (Mayer and Zignago, 2011). We use a data set which measures the distance (in kilometres) between the biggest cities in country i and country j , weighed by share of city in overall population and adjusted by the sensitivity of trade flows to bilateral distance.

Following earlier literature on trade-migration linkages, we include a number of control variables in our specification to limit the risk of omitted variable bias. From the CEPII geodesic data set, we obtain a dummy variable for if country i and j share a common language, spoken by at least 9 per cent of the population in both countries, to control for familiarity effects. The PWT provides a dummy for if the countries share the same currency, to control for the effect of currency risk on investment. Furthermore, a measure of trade volume between the country pair, as defined by the sum of total exports and imports in 2010, is obtained from the United Nations Commodity Trade Statistics Database (UN COMTRADE) to control for the possibility that it is trade rather than migration that drives investment. Finally, we include *Rule of law*¹², a measure of institutional governance quality in country j , obtained from the World Bank's World Governance Indicators for 2010 (Kaufmann et al., 2011). Ranging from -2.5 to 2.5, a higher score indicates a stronger governance performance and we include this arguing that a higher level of trust in the institutions in country j will be conducive to investment while there is a chance that it correlates positively with patriotism. Additional control variables are discussed in section 4.3.2.

3.3 Sample

We have strived to maximise the sample size without imposing any selection criteria other than data availability. We make one important exception to this and exclude migrant stocks of fewer than 250 migrants. Our main unit of interest is the diaspora and while we employ a very broad definition of the term diaspora, the use of the term requires that there is, at the very least, an established presence of migrants from country j in country i .

For host countries the main limiting factor is the availability of data on bilateral investment from the CPIS and the CDIS. Due to confidentiality reasons, some countries do not report investment to specific destination countries, which limits the number of observations. This is particularly the case for direct

¹⁰ See Appendix B.

¹¹ Total PPP-converted GDP, Geary-Khamis method, at current prices.

¹² Measures "perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence".

investment, for which the number of respondent countries is smaller than for portfolio investment. We end up with a full set of 59 migrant-receiving, investment-sending countries for the portfolio investment sample and 45 countries for the FDI sample.¹³

For the migrant sending country we are, depending on the specification, additionally restricted to the countries where the World Values Surveys 1999-2008 and the ISSP survey 2003 were carried out, as these surveys provide us with our selected measures of patriotism and community participation. Appendices A and B specify which countries have taken part in which survey.

For our variables on patriotism and community participation, we strive as far as possible to back up measures from the WVS survey with alternative measures from the ISSP and vice versa, thereby dealing with several problems at the same time.

Davidov (2009) finds that the ISSP data demonstrate scalar invariance making them appropriate for cross-cultural studies. The concepts of patriotism are found to be distinct and consistently interpreted between countries: “In spite of cultural differences, people appear to understand the meaning given to nationalism and patriotism by their indicators in a similar manner” (2009, p. 79). He identifies some problems, however, in comparing the means of these measures across countries. By verifying our findings with comparable measures from the WVS we reduce the risk of bias.

Similarly, by including two large-scale, independently conducted surveys instead of one, we limit the risk of survey-specific sampling or measurement biases affecting our results. Both the ISSP and the WVS take far-reaching measures to ensure that surveys are professionally and consistently carried out across countries. As with any survey where participation is voluntary, however, they are both susceptible to a certain degree of self-selection bias.

Regarding the time-variance of our chosen measures, Davidov (2010) finds that both nationalism and constructive patriotism are concepts that undergo change over time, but that there is no general trend. Both Morse and Shive (2011) and Smith and Kim (2006) find patriotism to be relatively stable over time with only moderate changes occurring between survey rounds. For ISSP data, Smith and Kim find a rank order correlation of 0.93 for the rankings of countries on general national pride between 1995 and 2004 (2006, p. 130). Where our main variables do not represent the most recent alternative available, we use more recent variables for robustness.

Not unexpectedly, our sample displays a bias towards high- and upper middle-income countries, as data is generally more comprehensive for these countries. Data on investment tends to be more complete for developed countries, as their aggregate amount of investment is higher and better documented. This bias is also evident for our national identity measures, and in particular the ISSP data. The use of the WVS data allows us to incorporate a number of lower middle and lower income countries, but overall the data set includes very few lower income countries. A practical implication of this is that our set of migrant sending countries primarily consists of countries where financial markets are likely to be reasonably well developed. We attempt to reduce this bias by including control variables that in different ways capture the level of development in the destination country for investment. We are furthermore cautious about generalising our results to apply for a wider set of countries.

For descriptive summary statistics on our main variables, see Appendix D.

¹³ See Appendix C for a comprehensive country list.

3.4 Estimation strategy

Following standard procedure, we log-transform all variables that constitute large integer values (Wooldridge, 2006, p. 199), i.e. migrant stock, distance, GDP, trade volumes and the dependent variables portfolio investment and FDI.

Using our cross-sectional data, the following regression is estimated for portfolio investment and FDI using ordinary least squares (OLS):

$$\log(y_{ij}) = \alpha_i + \beta_1 x_{ji} + \beta_2 z_j + \beta_3 (z_j * x_{ji}) + \beta_4 v_j + \beta_5 (v_j * x_{ji}) + \Gamma X_{ij} + \delta Z_j + \varepsilon_{ij}$$

Where y_{ji} denotes investment from i to j , x_{ji} denotes the a measure of the diaspora population from j in i , z_j denotes a patriotism measure, v_j denotes a measure for community participation, X_{ij} is a vector of bilateral control variables and Z_j is a country j -specific control variable.

Our hypotheses hold that different characteristics of the diaspora (and particularly patriotism and community participation) can either dampen or enhance the presumed positive effect of the diaspora presence. We attempt to analyse this by introducing the interaction terms $(z_j * x_{ji})$ and $(v_j * x_{ji})$, which are constructed by multiplying the chosen country characteristic with the relevant measure for diaspora population. To illustrate: the interaction term $(patriotism_j * diaspora_{ji})$ captures whether the level of patriotism significantly modifies the influence that diaspora populations exert on investment, by either enhancing or dampening it. Likewise, $(participation_j * diaspora_{ji})$ is designed to capture any change in diaspora influence conditional on their level of community participation.

Note that we have refrained from formulating any hypotheses regarding how these measures affect investment *in themselves*. In terms of testing our hypotheses, they only become interesting in interaction with the diaspora population.

As our alternative measures are highly correlated with each other, only one of each category is introduced per estimation. That is, each estimation will contain one measure of (a) diaspora size; (b) patriotism; and (c) social participation, together with their interaction terms.

4 Results and discussion

In the following section we present and discuss our results. In section 4.1, we test our hypotheses that a larger diaspora presence in the host country influences the level of investment to the home country and that this effect is further enhanced when the diaspora comes from a more patriotic and community-oriented society. We then proceed to test our alternative patriotism hypothesis in section 4.2, where we distinguish between constructive, blind and nationalist patriotism. We address the question of robustness of the results in section 4.3, which is followed by a discussion of our findings in section 4.4.

4.1 Diaspora influence, patriotism and social participation

The regression results using our main measures of patriotism and community participation are presented in Table 1. Following previous literature, we first include the absolute size of the migrant stock, *Log(migrant stock)* as our measure of diaspora population. The results for portfolio investment and FDI are presented in columns (1)-(2). We then proceed to test the same specifications, replacing *Log(migrant stock)* with *Diaspora*, our measure of migrant stock as a relative share of the host country population. The results for portfolio investment and FDI are reported in columns (3)-(4).

The gravity specification appears to work well. Overall, the augmented gravity variables are significant at the one or five per cent level and consistently display the expected sign. Economic mass, as measured by the product of GDPs, has the expected positive sign and distance has the predicted negative coefficient. Distance falls just short of being significant at the ten per cent level in column (2) with FDI data, but overall displays the expected results. *Common currency* is positive and significant, as is *Rule of Law*, our variable measuring institutional quality. The *Common language* dummy displays the expected positive sign, although it does not enter significantly in the specifications with absolute size of the migrant stock as the measure of diaspora population. This is possibly the result of some degree of multicollinearity, as some of our control variables are highly correlated. In contrast to the findings of Leblang (2011), the coefficient on trade is found to be positive and significant, indicating that trade and capital flows exhibit complementary traits. Overall, the results found are consistent using both portfolio investment and FDI as the dependent variable.

The adjusted R-squared value is consistent across different specifications and indicates that the estimations explain around 40 per cent of the variation in cross-border bilateral investment. This is somewhat lower than in Leblang's specification, and a likely consequence of using a smaller sample which limits the number of control variables suitable to include. The constant is significant and constitutes a large negative value, similar to Leblang's results.

Both *Log(migrant stock)* and *Diaspora* are positive and strongly significant at the one per cent level for all specifications. This confirms the investment-migration linkage effects found in previous literature and establishes our adjusted population variable *Diaspora* as equally useful for the purpose of measuring the magnitude of migrant presence.

Patriotism is found to be positive and significant on its own. The expected effect of *Patriotism* and *Social participation* as independent variables is ambiguous, since they measure home country attitudes that would only be expected to influence investment indirectly by capturing other, unobserved effects. The interaction term, on the other hand, is more interesting as it lets us observe how homeland patriotism modifies the diaspora investment impact. Here, the interaction term for patriotism is consistently negative,

but becomes significant only for the portfolio investment sample, using *Diaspora* as our migrant population measure.

Table 1. Effect of diaspora size, patriotism and social participation on cross-border investment

	(1)	(2)	(3)	(4)
	Portfolio	FDI	Portfolio	FDI
Log(migrant stock)	0.304*** (0.061)	0.368*** (0.056)		
Diaspora (% of population)			0.527*** (0.147)	0.401*** (0.136)
Patriotism	2.540* (1.404)	2.775** (1.286)	1.522*** (0.332)	1.910*** (0.321)
Patriotism*Log(migrant stock)	-0.138 (0.144)	-0.105 (0.126)		
Patriotism*Diaspora			-0.829*** (0.314)	-0.628 (0.456)
Social participation	-0.114 (0.092)	-0.206** (0.098)	0.015 (0.019)	-0.045** (0.020)
Social*Log(migrant stock)	0.017* (0.010)	0.020** (0.010)		
Social*Diaspora			0.110*** (0.035)	0.093*** (0.031)
Log(distance)	-0.335*** (0.101)	-0.203 (0.132)	-0.433*** (0.098)	-0.332** (0.134)
Log(GDP _i *GDP _j)	0.413*** (0.068)	0.240*** (0.076)	0.532*** (0.062)	0.370*** (0.078)
Log(trade)	0.219*** (0.067)	0.477*** (0.088)	0.289*** (0.067)	0.577*** (0.087)
Common language	0.192 (0.252)	0.054 (0.241)	0.434* (0.247)	0.549** (0.247)
Common currency	2.498*** (0.187)	0.679*** (0.247)	2.392*** (0.183)	0.549** (0.256)
Rule of Law	1.069*** (0.096)	0.593*** (0.095)	0.984*** (0.095)	0.434*** (0.094)
Constant	-29.385*** (4.787)	-25.566*** (4.329)	-31.427*** (2.297)	-29.718*** (2.448)
Observations	1167	873	1167	873
Adjusted R-squared	0.424	0.422	0.416	0.396

White heteroskedasticity-robust standard errors are reported in parentheses.

** Significant at 10%; ** Significant at 5%; *** Significant at 1%*

Social participation on its own is negative when significant. The interaction term is consistently positive and significant, indicating that community participation does indeed enhance the effect of diasporic influence on investment. Overall, in comparing the results, it seems that the specification using *Diaspora* yields more conclusive results than the one using *Log(migrant stock)*. We return to this in the discussion.

4.2 Constructive patriotism, blind patriotism and nationalism

In the next step, we replace the variable *Patriotism* and its interaction term with measures designed to capture more nuanced forms of patriotism. We introduce variables that separate the effects of constructive, blind and nationalist patriotism. For the purpose of brevity, having concluded that our *Diaspora* variable captures the interaction effects of diaspora influence better than *Log(migrant stock)*, we here only include the results for *Diaspora*. The results are presented in Table 2.

Column (5)-(6) contain the results for *Domain-specific pride*, our variable for constructive patriotism, and its interaction term. In column (7)-(8) we present the results with *Support country at all times*, proxying for blind patriotism and in column (9)-(10) with *Foreign exposure harmful*, proxying for nationalism.

Since our new variables are obtained from the more limited ISSP data set, the sample size is reduced to around 750 observations for portfolio investment and around 550 observations for FDI. It is possible that this may result in less precise estimates. The adjusted R-squared is marginally reduced, but is still in a range of 35 to 40 per cent.

The gravity and control variables behave similarly to before, with the expected signs and significance. The exceptions are *Common language* and *Rule of Law*, which fail to reach significance for the FDI sample, conceivably a result of the reduced sample size. The overall effect of the *Diaspora* variable remains positive and displays strong significance at the one per cent level in all specifications.

Examining the results for our new patriotism measures, *Domain-specific pride* is found to be positive and significant for both portfolio investment and FDI. This is unsurprising given that the variable measures citizen pride of actual country attributes such as economic system, political influence and scientific achievements – characteristics likely to attract more investment. The interaction term is positive and significant for portfolio investment, supporting the notion that constructive patriotism influences investment positively, but does not become significant for FDI.

Our variables for blind patriotism and nationalism behave almost identically, indicating that they capture the same type of effect. Both variables are positive but overall insignificant on their own. In contrast, the interaction terms for both blind and nationalist patriotism are negative and strongly significant at between one and five per cent. This negative interaction effect stands in stark contrast to the positive interaction effect for constructive patriotism, implying that different forms of patriotism influence the diaspora investment impact differently.

In contrast with the results in Table 1, *Social participation* now has a positive and significant coefficient in four of the specifications. The interaction effect appears to be reliably positive and significant for both portfolio investment and FDI, supporting the idea that an engaged, community-oriented diaspora can influence investment to a greater extent.

Table 2. Effect of constructive patriotism, blind patriotism and nationalism on cross-border investment

	Constructive patriotism		Blind patriotism		Nationalism	
	(5)	(6)	(7)	(8)	(9)	(10)
	Portfolio	FDI	Portfolio	FDI	Portfolio	FDI
Diaspora (% of population)	0.944*** (0.203)	0.810*** (0.210)	3.041*** (0.649)	2.027*** (0.582)	3.000*** (0.652)	1.852*** (0.555)
Domain-specific pride	0.466*** (0.162)	0.586*** (0.181)				
Domain-specific*Diaspora	0.344* (0.187)	0.181 (0.183)				
Support country at all times			0.227 (0.271)	0.605* (0.326)		
Support*Diaspora			-0.753*** (0.228)	-0.458*** (0.191)		
Foreign exposure harmful					0.286 (0.388)	0.602 (0.445)
Foreign exposure*Diaspora					-0.677*** (0.208)	-0.376** (0.171)
Social participation	0.007 (0.024)	-0.042 (0.028)	0.041** (0.018)	0.044* (0.023)	0.055** (0.022)	0.057** (0.026)
Social*Diaspora	0.146*** (0.044)	0.150*** (0.046)	0.110*** (0.042)	0.103** (0.041)	0.097** (0.043)	0.096** (0.044)
Log(distance)	-0.518*** (0.129)	-0.478*** (0.175)	-0.483*** (0.121)	-0.365** (0.167)	-0.460*** (0.121)	-0.390** (0.163)
Log(GDP _i *GDP _j)	0.572*** (0.092)	0.487*** (0.113)	0.578*** (0.090)	0.490*** (0.111)	0.598*** (0.089)	0.510*** (0.106)
Log(trade)	0.296*** (0.097)	0.483*** (0.127)	0.280*** (0.096)	0.489*** (0.125)	0.283*** (0.093)	0.476*** (0.120)
Common language	0.291 (0.302)	0.438 (0.294)	0.548** (0.279)	0.483 (0.295)	0.492* (0.286)	0.503* (0.288)
Common currency	2.176*** (0.212)	0.509* (0.281)	2.127*** (0.210)	0.856*** (0.276)	2.176*** (0.206)	0.767*** (0.276)
Rule of Law	0.706*** (0.130)	0.123 (0.121)	0.563*** (0.151)	0.199 (0.148)	0.637*** (0.185)	0.184 (0.181)
Constant	-28.362*** (3.023)	-27.379*** (3.337)	-28.548*** (3.067)	-30.033*** (3.406)	-30.324*** (3.526)	-30.735*** (3.771)
Observations	742	541	754	547	776	567
Adjusted R-squared	0.401	0.356	0.394	0.358	0.409	0.356

White heteroskedasticity-robust standard errors are reported in parentheses.

** Significant at 10%; ** Significant at 5%; *** Significant at 1%*

4.3 Robustness

4.3.1 Tests with alternative measures of patriotism and social participation

As described in section 3.3, a means of increasing our confidence that our results are valid is to bring in alternative measures from an independently conducted survey. This safeguards against survey-specific measurement errors, and to a limited extent also allows us to avoid the problem of sample bias and bias arising from within-country variation over time and across surveys.

Our main measure of community participation comes from the WVS 1999-2004 wave. In Table 3 we instead apply a corresponding measure from the ISSP 2007 survey on Leisure and Sports¹⁴. We also introduce alternative measures for blind patriotism and nationalism from the WVS 2005-2008 wave, as described in section 3.2.3. Unfortunately, we are not able to obtain an alternative measure for constructive patriotism, as there is no directly corresponding variable for the WVS which captures the same effect as domain-specific national pride.

As we are reluctant to change more than one variable at the time, we report our alternative patriotism measures with the main measure of community participation and vice versa in Table 3.

Our findings from before are largely replicated. The alternative participation measure from the ISSP behaves very similar to the social participation measure used in previous specifications. A high country score for participation in social organisations enhances the consistently positive effect of relative diaspora size on homeland investment.

The alternative nationalism measure – the percentage of respondents in a country agreeing that nationals should be given priority to jobs – confirms the dampening effect of negative patriotism on diaspora-generated investment. The alternative measure on blind patriotism – the percentage of respondents willing to fight for the home country – also retains a significantly negative interaction effect on portfolio investment. For FDI this interaction term falls somewhat short of being statistically significant but retains a negative sign.

As before, relatively larger diaspora communities are associated with more investment from the host country to the home country for both FDI and portfolio investment. The control variables demonstrate the expected signs throughout and the adjusted R-squared are in the same range as previously. Overall, changing the survey input seems to bring about no large difference in results even though the surveys have been conducted a few years apart and in different countries. This reflects positively on the validity of our findings although, as discussed previously, the two surveys are both likely to be subject to a degree of self-selection bias.

¹⁴ See Appendix B.

Table 3. Alternative measures

	Alt. Community participation		Alt. nationalism		Alt. Blind patriotism	
	(11) Portfolio	(12) FDI	(13) Portfolio	(14) FDI	(15) Portfolio	(16) FDI
Diaspora (% of population)	0.519*** (0.152)	0.375*** (0.102)	0.530*** (0.120)	0.369*** (0.091)	0.727*** (0.172)	0.494*** (0.172)
Patriotism	2.022*** (0.437)	2.803*** (0.493)				
Patriotism*Diaspora	-0.983** (0.454)	-1.696** (0.845)				
Participation	-0.375 (0.363)	-0.993** (0.431)				
Participation*Diaspora	2.043*** (0.597)	1.958*** (0.503)				
National job priority			0.013** (0.005)	0.006 (0.006)		
National*Diaspora			-0.020*** (0.006)	-0.015*** (0.004)		
Fight for country					0.006 (0.007)	-0.002 (0.007)
Fight*Diaspora					-0.023*** (0.006)	-0.008 (0.006)
Social participation			0.045*** (0.016)	0.015 (0.016)	0.044** (0.018)	0.036* (0.021)
Social*Diaspora			0.067*** (0.025)	0.047*** (0.018)	0.084** (0.039)	0.077** (0.036)
Log(distance)	-0.401*** (0.105)	-0.224 (0.147)	-0.316*** (0.090)	-0.298** (0.124)	-0.289** (0.125)	-0.507*** (0.167)
Log(GDP _i *GDP _i)	0.566*** (0.077)	0.425*** (0.100)	0.521*** (0.060)	0.403*** (0.076)	0.466*** (0.087)	0.526*** (0.115)
Log(trade)	0.434*** (0.082)	0.543*** (0.110)	0.283*** (0.062)	0.567*** (0.085)	0.397*** (0.087)	0.506*** (0.125)
Common language	0.306 (0.251)	0.412 (0.278)	0.573*** (0.219)	0.674*** (0.223)	0.341 (0.287)	0.411 (0.326)
Common currency	1.729*** (0.203)	0.548 (0.334)	2.426*** (0.172)	0.733*** (0.240)	2.147*** (0.239)	0.137 (0.328)
Rule of Law	0.956*** (0.115)	0.288** (0.117)	0.960*** (0.096)	0.384*** (0.097)	0.755*** (0.130)	0.077 (0.134)
Constant	-37.349*** (3.145)	-34.45*** (3.804)	-27.665*** (2.179)	-25.991*** (2.33)	-26.669*** (3.176)	-29.125*** (3.405)
Observations	825	590	1324	997	843	645
Adjusted R-squared	0.427	0.339	0.421	0.399	0.390	0.408

White heteroskedasticity-robust standard errors are reported in parentheses.
** Significant at 10%; ** Significant at 5%; *** Significant at 1%*

4.3.2 Additional control variables and region fixed effects

Apart from the control variables reported in the main specifications above, we control for a number of additional institutional, governance and human capital variables, drawing mainly on Leblang (2011).

The inclusion of a measure on the mean years of schooling (UNDP, 2011), the Polity measure of democracy (Marshall et al., 2011), the number of internet users per 100 inhabitants (World Bank, 2010b) and the World Bank's strength of legal rights index (World Bank, 2010c) does not alter our overall findings. The sign and significance of our key variables of interest (migrant stock, relative diaspora size and the interaction terms of our various patriotism and community participation measures) remain unaltered. As these additional variables are highly correlated with e.g. our *Rule of Law* measure and as the coefficients are unstable and often insignificant, they have been dropped from the above specifications to save space.

Additionally, we re-estimate the models controlling for region fixed effects, applying the World Bank geographic region classification for low- and middle income-countries¹⁵. High income-countries are grouped as EU-members, OECD members not in the EU, and non-EU, non-OECD members. With some very minor alterations, our results are robust to the inclusion of region fixed effects and do not change any of our main findings.

For demonstration, Appendix E contains the re-estimated columns (1)-(4) from Table 1 using additional control variables and region fixed effects.

We use region fixed effects as the use of country fixed effects would not allow us to explore variation in home country characteristics. We have thus controlled for factors that could be correlated with patriotism and community participation on a regional level, but there remains a possibility that country-specific factors correlated with these variables may yet impact on investment.

4.4 Discussion

Overall, the application of the gravity model seems appropriate. Like earlier studies we find that distance has a negative impact also on trade in “weightless” assets, and we adopt Portes and Rey's (2005) interpretation that distance captures informational and cultural distance as well as geographic distance, raising transaction costs and aggravating information asymmetries.

Like previous studies (Leblang, 2011; Javorcik et al., 2011; Kugler and Rapoport, 2007) we find a seemingly robust positive relationship between migrant stocks and cross-border investment from the host country to the home country, lending support to hypothesis 1a. Since this finding has been discussed and extensively tested for robustness by others we will not go further into it, although it might be worth noting that unlike Leblang (2011) we do not find any significant difference in the coefficients of migrant stock between the portfolio and FDI-estimations, seemingly suggesting that migration in our more condensed data set affects both types of investment to roughly the same extent.

The measure we believe better captures the magnitude of diaspora influence – diaspora size relative to host country population – is positive and significant at the one per cent level in all specifications where it

¹⁵ The World Bank classifies low- and middle income countries into the following regions: East Asia and the Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, South Asia, and Sub-Saharan Africa. For more info, see: <http://data.worldbank.org/about/country-classifications/country-and-lending-groups>.

is included. This provides evidence strongly in favour of the investment-migration link found in previous studies and indicates that the relative size of a diaspora community in the host country is a reliable indicator of its capacity to generate investment to the home country, supporting hypothesis 1b.

The fact that both our patriotism and our community participation variables perform more strongly in interaction with relative diaspora size than with migrant stocks in absolute terms is not surprising. We expect these variables to impact on investment primarily in interaction with a diaspora able to connect with investors in the host country. A diaspora community can be ever so patriotic and involved, but in order for this to have additional impact on investment on the aggregate country level, the diaspora needs to command a certain influence. To illustrate: it is not unexpected that group characteristics of the Philippine diaspora become more relevant when it concerns investment to the Philippines from Bahrain, with a population of about 1.2 million, than from South Korea, with a population of about 49 million, even though the Philippines have an almost identical migrant stock in both countries.

Overall, our interaction terms have a more pronounced effect on portfolio investment than on FDI. As they are capturing non-tangible linkage effects involving emotional and social ties, this is perhaps not surprising. Portfolio investment decisions in general are more impulsive than the decisions to invest directly. As FDI involves considerably more risk and often larger investment, it is possible that it is to a greater extent driven by concrete economic factors, reducing the room for sentimental or loyal investment.

In contrast with hypothesis 2a, our general measure of patriotism does not seem to enhance the diaspora effect on investment at all. Rather, the opposite appears to be true. The general patriotism measure (a measure of national pride) behaves similarly to our measures of blind patriotism and nationalism, suggesting that the negative aspects of patriotism dominate in the interaction with diaspora populations. The findings in Table 2 confirm that a distinction between different types of patriotism needs to be made: we obtain positive (though only partially significant) coefficients on our measure of constructive patriotism in interaction with diaspora size, whereas for blind patriotism and nationalism the interaction coefficients are negative and strongly significant. It appears that only when we specifically target a form of national pride that is founded on actual country achievements can we observe an enhanced diasporic investment impact. In contrast, non-constructive forms of patriotism appear to have a significantly dampening effect on diaspora influence. This supports hypothesis 2b, although the constructive patriotism effect is arguably quite weak.

We have up until now concerned ourselves with patriotism only to the extent that it affects investment in interaction with the diaspora, without paying much attention to the effect it has in isolation. It is unlikely that investors consider the average level of patriotism and community participation of a country in their investment decision. We have already attributed the fact that these variables occasionally turn up significant even on their own in the estimations to the possibility that they are capturing unobserved country effects.

The patriotism measures generally display positive coefficients on their own; an indication that more patriotic countries attract more investment. This seems to hold regardless of which aspect of patriotism is considered, although most clearly for domain-specific pride. Given that a higher score on domain-specific pride is likely to be correlated with other factors affecting the country's ability to attract investment, this is not surprising. The coefficients on our measures of nationalist and blind patriotism are less evident in their interpretation. A likely explanation is that these measures reflect an economic nationalism commonly associated with protectionism and import substitution. We would expect more nationalistic countries to erect higher trade barriers, through the introduction of local content regulation and other protectionist measures. Investment would then be a way of circumventing these barriers, leading investment to increase

as trade is diverted. While our results overall point to a robust complementarity between trade and investment, it is conceivable that the nationalism and blind patriotism coefficients capture a substitution effect arising from protectionism.

It is not evident that this biases our interaction terms. It is not intuitively clear how a “protectionist bias” would play out in interaction with diaspora populations. To the extent that a positive bias exists, it is not enough to offset the overall dampening effect of blind patriotism or nationalism on diaspora-generated investment. The fact that our interaction terms often carry a sign different from the main effect of the characteristic in question, seems to suggest that whatever unobserved factors are captured by the main effect are either not captured at all or are significantly modified in interaction with diaspora populations.

A high score on community participation consistently produces a positive interaction effect with diaspora population, both for portfolio investment and FDI, supporting hypothesis 3. The interchangeably positive and negative coefficient on social participation on its own is puzzling, however. A plausible explanation for a negative coefficient is that involvement in social organisations increases in countries regularly struck by hardship or natural disasters, events that cause investment inflows to drop. It is also conceivable that higher community participation substitutes for official institutions in countries where such are lacking. The fact that the interaction effect is still positive when this is the case indicates that the behavioural motives behind diaspora-led investment differ from those of the average foreign investor. It could be that diasporas either see opportunities where other investors would shy away or that they invest for reasons of loyalty or altruism.

This negative effect is not observed in Table 2, possibly because estimations there are made on a smaller data set more biased towards high- and upper middle-income countries where institutions are better and the development agenda less urgent. Overall we can only say that the social participation measure by itself is very inconsistent both with regards to sign and significance. As the interaction effect of social participation with diaspora size remains positive and significant throughout, we do not believe that this detracts from the support we have garnered for hypothesis 3. If a culture of active community participation in the home country is transferred to diaspora communities abroad, this is likely to enhance diaspora influence. An engaged and committed diaspora is in a better position to coordinate its information and promotion efforts to generate investment from the host country. Since we cannot distinguish between diaspora and home country characteristics we must also consider that the interaction effect captures the degree of community participation in the home country rather than that of the diaspora itself. A possibility then is that community participation in the home country leads diasporas to feel more secure in investing there, thinking that the prevailing spirit of cooperation will ensure that money invested does not go to waste. Like patriotism, community participation is a broad measure and to really understand what it captures, more light would need to be shed on how different forms of community participation affect diasporas and their impact on investment.

Seeing as we have only had limited possibilities to control for endogeneity we are reluctant to draw any far-reaching conclusions on causality. We do however find evidence of significant interaction effects, showing that home country characteristics are captured by diasporas abroad and impact on their ability to serve as conduits of capital both positively and negatively. Governments and policy makers need to be aware that what goes on in the home country has implications well outside country borders, and that while migration overall is associated with increased capital flows home, diasporas can serve as conveyors of both positive and negative images of the home country as an investment destination. The diasporas’ role in bridging the home and host countries is significant and needs to be regarded as such.

It is not possible based on our results to say that governments should actively promote or discourage patriotism and nationalistic sentiments. We confirm earlier findings that these are complex measures that

need to be treated with care to avoid misleading generalisations. What does seem to be the case, however, is that more open, inclusive and participatory societies get more out of their diaspora communities. We have already considered that diasporas from societies more characterised by nationalism or blind patriotism are less likely to integrate well in their host country. The converse scenario is likely to be equally true: in countries where integration is difficult to achieve or where the host country population displays strong nationalistic sentiments, diaspora groups are likely to be more marginalised. Regardless, if the level of integration with the host community is low, diasporas become more secluded, reducing the potential for linkage effects.

Given that there are many factors determining the outcome of diaspora transnational activism, it is difficult to formulate concrete advice on how governments of large migrant-sending countries best mobilise their diasporas abroad. Due to the bias towards higher income-countries in our sample, we are cautious about generalising our results. Our findings do, however, indicate that important linkage effects can be enhanced by increasing diaspora participation. More sending countries might benefit from targeting diasporas and the maintenance of transnational ties through, for example, diaspora outreach programs, reduced hurdles for dual citizenship and improved institutions for ensuring migrants' welfare. Host countries would do well to be supportive of local diasporic initiatives, as the benefits of linkage effects via information dispersal and extended network ties are likely to extend to the host country.

5 Conclusion

This thesis sets out to advance the study of investment-migration linkages in a way that accounts for variations in the level of diasporic involvement. Remarking that earlier studies rarely look beyond the size of migrant stocks in their attempts to quantify the impact of migration on investment, and finding that this insufficiently explains why some diasporas succeed better than others as conduits of foreign capital, we propose three main determinants of diasporic influence on investment to the homeland.

First, taking our cue from previous studies, we propose absolute and relative diaspora size as relevant measures of diasporic presence in the host country. Our results confirm the existence of a migration and investment nexus, and suggest that relatively larger diasporas exert a stronger influence in the host country and generate more investment to the home country.

Second, we suggest that a prevalence of patriotic sentiments should enhance the diaspora investment impact, by creating a stronger bond between the diaspora and its homeland. Our findings indicate that patriotism is a complex concept with both positive and negative components whose economic and socio-political outcomes cannot be usefully understood without further distinctions. The results are more in line with our alternative hypothesis, stating that the diaspora investment impact is enhanced only when diasporas come from societies characterised by constructive patriotism. Nationalistic and blind patriotism, meanwhile, seemingly inhibit diasporas' ability to generate investment.

Third, we argue that diasporic influence on investment is enhanced when a high level of community participation prevails in the migrants' home country. The results consistently support a positive relationship between the degree of community participation and the diaspora investment impact. We attribute this to the fact that more active communities foster stronger ties amongst their members and, additionally, are in a better position to coordinate its information and promotion efforts to generate investment from investors in the host country at large.

This thesis demonstrates that tangible and non-tangible linkages jointly influence outcomes within migration systems. As non-tangible linkages such as patriotic bonds and community ties are not easily quantifiable we are cautious about formulating concrete policy implications based on our results. Both patriotism and community participation are measures that would benefit from refined scrutiny. Our findings do suggest, however, that analysing migration linkages by only looking at the number of migrants in a country will fail to take into account a number of important interaction effects that determine how successfully diasporas serve as conduits of capital. Migrants often maintain strong transnational ties, and through these ties, serve as a bridging force between the home and the host country. A general picture emerges that more open, inclusive and participatory societies are better placed to reap the benefits of migration linkages.

Having shed some light on how diaspora investment impact is determined by characteristics specific to the home country, a logical next step would be to look at the other side of the coin: how do inclusionary versus exclusionary attitudes and behaviours in the host country affect the migrant communities' capacity to generate homeland investment? It is likely that migrant communities in countries where xenophobia and nationalist sentiments are prevalent will find their role as facilitators of investment to the home country greatly obstructed. As this shifts the focus from the underlying question of how diasporas contribute to home country advancement it is, however, the subject of another thesis.

We have demonstrated that, under the right circumstances, significant linkage effects can be captured by mobilising diasporic engagement. It is up to future research to examine through which channels this is

best done. With more comprehensive data, diasporic engagement could be analysed on a more detailed level to see how different forms of diaspora activism affect investment. Are different types of diaspora organisations more conducive to homeland investment than others? Through which kinds of diaspora activity are information dispersal effects most likely to arise? Are religious organisations more likely to sustain migrants' transnational ties and foster cooperation, or are migrant commercial forums where diasporas are best harnessed?

With better micro data availability, focus could also be moved from the aggregate national level to the regional or local level, as migrants are just as likely to identify with a distant home town as with the homeland at large. In a rapidly globalising world where diasporas are becoming increasingly influential, the ties that connect migrants with their sending communities need to be better understood in order to capture the synergies of migration locally, nationally and transnationally.

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Appendix A: The World Values Survey

The World Values Survey is an ongoing global research project, carried out by a worldwide network of social scientists at leading universities. Since 1981, the World Values Survey has been carried out in over 80 countries on six continents and given rise to over 400 publications. The survey measures socio-cultural and political values and beliefs. Five waves of surveys have been completed to date and a sixth is ongoing. As of 2012, the organisation is headquartered at the Institute of Future Studies in Stockholm.

Respondents are randomly selected to obtain representative samples. Face-to-face interviews are carried out with at least 1,000 people in each participating country. Interviews follow a fixed script and for each country and wave there is a principal investigator responsible for the translation of the script and for guiding the interview process. The questionnaire consists of approximately 250 questions on topics concerning perceptions of life, work, the environment, family, politics and society, religion and morale and national identity.

Details regarding participating countries for the last two waves of surveys as well as the questions we apply can be found on the following page.

Further info: www.worldvaluessurvey.org

Main patriotism measure:

G006. How proud are you to be [Nationality]?

- 1 Very proud
- 2 Quite proud
- 3 Not very proud
- 4 Not at all proud

Main community participation measure:

A064. Please look carefully at the following list of voluntary organisations and activities and say which, if any, do you belong to?

- ❖ Belong to social welfare service for elderly(A064)
- ❖ Belong to religious organization(A065)
- ❖ Belong to education, arts, music or cultural activities(A066)
- ❖ Belong to labour unions(A067)
- ❖ Belong to political parties(A068)
- ❖ Belong to local political actions(A069)
- ❖ Belong to human rights(A070)
- ❖ Belong to conservation, the environment, ecology, animal rights(A071)
- ❖ Belong to conservation, the environment, ecology(A071B)
- ❖ Belong to animal rights(A071C)
- ❖ Belong to professional associations(A072)
- ❖ Belong to youth work(A073)
- ❖ Belong to sports or recreation(A074)
- ❖ Belong to women's group(A075)
- ❖ Belong to peace movement(A076)
- ❖ Belong to organization concerned with health(A077)
- ❖ Belong: consumer groups(A078)

0 Not mentioned

1 Belong

Alternative blind patriotism measure:

V75. Of course, we all hope that there will not be another war, but if it were to come to that, would you be willing to fight for your country?

0 No

1 Yes

Alternative nationalism measure:

V45. Do you agree or disagree with the following statements? When jobs are scarce, employers should give priority to [NATION] people over immigrants.

1 Agree

3 Disagree

2 Neither

Table 4. List of WVS participating countries

World Values Survey countries	
4 th Wave (1999-2004)	5 th Wave (2005-2008)
Albania	Argentina
Algeria	Australia
Argentina	Brazil
Austria	Bulgaria
Bangladesh	Burkina Faso
Belarus	Canada
Belgium	Colombia
Bosnia and Herzegovina	Cyprus
Bulgaria	Chile
Canada	China
Croatia	Egypt
Czech Republic	Ethiopia
Chile	Finland
China	France
Denmark	Georgia
Egypt	Germany
Estonia	Ghana
Finland	Great Britain
France	Guatemala
Germany East	Hong Kong
Germany West	India
Great Britain	Indonesia
Greece	Iran
Hungary	Iraq
Iceland	Italy
India	Japan
Indonesia	Jordan
Iran	Korea (South)
Iraq	Malaysia
Ireland	Mali
Israel	Mexico
Italy	Moldova
Japan	Morocco
Jordan	Netherlands
Korea (South)	New Zealand
Kyrgyzstan	Norway
Latvia	Peru
Lithuania	Poland
Luxembourg	Romania
Macedonia	Russia
Malta	Rwanda
Mexico	Serbia
Moldova	Slovenia
Montenegro	South Africa
Morocco	Spain
Netherlands	Sweden
Nigeria	Switzerland
Northern Ireland	Taiwan
Pakistan	Thailand
Peru	Trinidad & Tobago
Philippines	Turkey
Poland	Ukraine
Portugal	United States of America
Puerto Rico	Uruguay
Romania	Vietnam
Russia	Zambia
Serbia	
Singapore	
Slovakia	
Slovenia	
South Africa	
Spain	
Sweden	
Tanzania	
Turkey	
Uganda	
Ukraine	
United States of America	
Venezuela	
Vietnam	
Zimbabwe	

Appendix B: ISSP 2003 and 2007

The International Social Survey Programme is a programme of cross-national surveys on topics that have spanned family relations, social networks, inequality, national identity and religion. Surveys have been carried out since 1983 and the module topic changes every year. Module topics are repeated at agreed intervals in order to be able to compare responses over time. To date, two rounds of surveys on national identity have been carried out and we utilise the second, National Identity II, from 2003. We also employ a measure from the survey on Leisure and Sports from 2007.

Questionnaires are generally about 15 minutes long and composed of around 60 questions. Samples are nationally representative random samples of adult populations, with a target of 1,400 responses for each country. The questionnaires are designed to be relevant to all countries and meaningfully translatable to all participating country languages. The ISSP today has 48 participating countries. The surveys we use have 35 participating countries; questions and participating countries are detailed on the following page.

Further info: www.issp.org

Constructive patriotism measure (2003):

Q.5 How proud are you of [COUNTRY] in each of the following?

- ❖ The way democracy works
- ❖ Its political influence in the world
- ❖ (Country's) economic achievement
- ❖ Its social security system
- ❖ Its scientific and technological achievements
- ❖ Its achievements in sports
- ❖ its achievement in the arts and literature
- ❖ (Country's) armed forces
- ❖ Its history
- ❖ Its fair and equal treatment of all groups in society

- 1 Very proud
- 2 Somewhat proud
- 3 Not very proud
- 4 Not proud at all
- 8 Can't choose
- 9 No answer, refused

*Following Smith and Kim (2006), we calculate this measure as the mean of the number of areas for which ISSP respondents have claimed to be "very proud" of their country.

Main blind patriotism measure (2003):

Q.4e People should support their country even if the country is in the wrong

- 1 Agree strongly
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Disagree strongly
- 8 Can't choose
- 9 No answer, refused

in Bulgaria (BG):

- 0 Not asked (because of technical reasons)

Main nationalism measure (2003):

Q.7e Increased exposure to foreign films, music and books is damaging our national and local cultures

- 1 Agree strongly
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Disagree strongly
- 8 Can't choose
- 9 No answer, refused

in New Zealand (NZ):

- 0 Not available/ Not asked

Alternative measure on community participation (2007):

Q.13 In the last 12 months, how often have you participated in the activities of one of the following associations or groups?

- ❖ Q13a Participation: A sports association/group
- ❖ Q13b Participation: A cultural association/group
- ❖ Q13c Participation: A church or religious organisation
- ❖ Q13d Participation: A community-service or civic association/group
- ❖ Q13e Participation: A political party or organization

- 1 At least once a week
- 2 At least once a month
- 3 Several times
- 4 Once or twice
- 5 Never
- 8 Can't choose

Table 5. List of ISSP participating countries

ISSP Participating countries

Australia
Austria
Bulgaria
Canada
Chile
Czech
Denmark
Finland
France
Germany East
Germany West
Hungary
Ireland
Israel
Japan
Korea, Rep
Latvia
New Zealand
Norway
Philippines
Poland
Portugal
Russia
Slovakia
Slovenia
South Africa
Spain
Sweden
Switzerland
Taiwan
United Kingdom
United States
Uruguay
Venezuela

Appendix C: Country Sets

Table 6. List of countries included in the portfolio investment and FDI samples

Portfolio investment sample		FDI sample	
Country <i>i</i>	Country <i>j</i>	Country <i>i</i>	Country <i>j</i>
Argentina	Albania	Armenia	Albania
Australia	Algeria	Australia	Algeria
Austria	Argentina	Austria	Argentina
Bahamas	Austria	Azerbaijan	Austria
Bahrain	Bangladesh	Belarus	Bangladesh
Barbados	Belarus	Belgium	Belarus
Belgium	Belgium	Brazil	Belgium
Brazil	Bosnia and Herzegovina	Canada	Bosnia and Herzegovina
Bulgaria	Bulgaria	Cyprus	Bulgaria
Canada	Canada	Denmark	Canada
Chile	Chile	Estonia	Chile
Colombia	China	Finland	China
Cyprus	Croatia	France	Croatia
Czech Republic	Czech Republic	Germany	Czech Republic
Denmark	Denmark	Greece	Denmark
Estonia	Estonia	Hungary	Estonia
Finland	Finland	Iceland	Finland
France	France	India	France
Germany	Germany	Ireland	Germany
Greece	Greece	Italy	Greece
Hungary	Hungary	Japan	Hungary
Iceland	Iceland	Kazakhstan	Iceland
India	India	Korea, Republic of	India
Indonesia	Ireland	Kyrgyzstan	Ireland
Ireland	Italy	Latvia	Italy
Israel	Japan	Lithuania	Japan
Italy	Korea, Republic of	Luxembourg	Korea, Republic of
Japan	Kyrgyzstan	Malaysia	Kyrgyzstan
Kazakhstan	Latvia	Mexico	Latvia
Korea, Republic of	Lithuania	Netherlands	Lithuania
Latvia	Luxembourg	New Zealand	Luxembourg
Lithuania	Macedonia, FYR	Philippines	Macedonia, FYR
Luxembourg	Malta	Poland	Malta
Malaysia	Mexico	Portugal	Mexico
Malta	Moldova	Russia	Moldova
Mauritius	Morocco	Slovakia	Morocco
Mexico	Netherlands	Slovenia	Netherlands
Netherlands	Peru	South Africa	Peru
New Zealand	Philippines	Spain	Philippines
Norway	Poland	Sweden	Poland
Panama	Portugal	Switzerland	Portugal
Philippines	Romania	Thailand	Romania
Poland	Russia	Turkey	Russia
Portugal	Singapore	United Kingdom	Singapore
Romania	Slovakia	United States	Slovakia
Russia	Slovenia		Slovenia
Singapore	South Africa		South Africa
Slovakia	Spain		Spain
Slovenia	Sweden		Sweden
South Africa	Tanzania		Tanzania
Spain	Turkey		Turkey
Sweden	Uganda		Uganda
Switzerland	Ukraine		Ukraine
Thailand	United Kingdom		United Kingdom
Turkey	United States		United States
Ukraine	Venezuela		Venezuela
United Kingdom	Vietnam		Vietnam
United States	Zimbabwe		Zimbabwe
Venezuela			
Total	59	45	58

Appendix D: Descriptive statistics

Table 7. Descriptive statistics for portfolio investment sample

Variable	Obs	Mean	Std dev	Min	Max
Portfolio (millions USD)	1324	19 521	72 718	0	1 138 244
Log(Portfolio)	1324	6.19	3.48	-9.66	13.95
Migrant stock	1324	67 763	389 302	251	11 600 000
Log(Migrant stock)	1324	8.88	2.01	5.52	16.27
Diaspora (% of population)	1324	0.27	0.97	0.00	13.89
Patriotism (score 1 - 4)	1167	3.35	0.30	2.69	3.91
Social participation (%)	1324	7.78	5.77	0.76	24.82
Domain-specific pride (score 0 - 10)	742	1.88	0.82	1	4
Support country at all times (score 1 - 5)	754	2.87	0.44	2.31	3.77
Foreign exposure harmful (score 1 - 5)	776	2.97	0.47	2.36	3.99
Distance (km)	1324	4 975	4 417	135	19 138
Log(Distance)	1324	7.99	1.14	4.90	9.86
GDP _i (billions USD)	1324	1 680	3 060	2	14 000
GDP _j (billions USD)	1324	1 440	2 750	7	14 000
GDP _i *GDP _j (billions USD)	1324	2.E+15	7.E+15	4.E+10	2.E+17
Log(GDP _i *GDP _j)	1324	53.85	2.11	45.23	60.28
Trade (millions USD)	1324	7 230	22 500	0.34	384 000
Log(Trade)	1324	21.01	2.03	12.73	26.67
Common language	1324	0.13	0.34	0	1
Common currency	1324	0.12	0.33	0	1
Rule of Law (score -2.5 - 2.5)	1324	0.69	0.99	-1.80	1.97

Table 8. Descriptive statistics for FDI sample

Variable	Obs	Mean	Std dev	Min	Max
FDI (millions USD)	997	14 551	48 687	0	542 215
Log(FDI)	997	6.59	3.11	-6.01	13.20
Migrant stock	997	87 098	444 462	256	11 600 000
Log(Migrant stock)	997	9.18	2.05	5.54	16.27
Diaspora (% of population)	997	0.26	0.86	0	13.89
Patriotism (score 1 - 4)	873	3.34	0.30	2.69	3.91
Social participation (%)	997	7.72	5.88	0.76	24.82
Domain-specific pride (score 0 - 10)	541	1.88	0.82	1	4
Support country at all times (score 1 - 5)	547	2.86	0.44	2.31	3.77
Foreign exposure harmful (score 1 - 5)	567	2.98	0.48	2.36	3.99
Distance (km)	997	4 471	4 071	141	18 523
Log(Distance)	997	7.88	1.12	4.95	9.83
GDP _i (billions USD)	997	1 650	3 040	2	14 000
GDP _j (billions USD)	997	1 690	2 980	12	14 000
GDP _i *GDP _j (billions USD)	997	2.E+15	8.E+15	4.E+11	2.E+17
Log(GDP _i *GDP _j)	997	54.07	2.13	47.52	60.28
Trade (millions USD)	997	8 440	24 500	1	384 000
Log(Trade)	997	21.34	1.83	13.60	26.67
Common language	997	0.12	0.32	0	1
Common currency	997	0.14	0.34	0	1
Rule of Law (score -2.5 - 2.5)	997	0.63	1.00	-1.80	1.97

Appendix E: Fixed effects estimation with additional controls

Table 9. Estimation of fixed effects for robustness

	(1) Portfolio	(2) FDI	(3) Portfolio	(4) FDI
Log(migrant stock)	0.372*** (0.057)	0.346*** (0.053)		
Diaspora (% of population)			0.605*** (0.139)	0.489** (0.165)
Patriotism	2.419* (1.325)	0.636 (1.214)	1.638*** (0.445)	2.044*** (0.414)
Patriotism*Log(migrant stock)	-0.097 (0.144)	0.083 (0.129)		
Patriotism*Diaspora			-0.830* (0.444)	-0.432 (0.590)
Social participation	-0.186** (0.082)	-0.180** (0.080)	-0.015 (0.022)	-0.052** (0.021)
Social*Log(migrant stock)	0.021** (0.009)	0.018** (0.009)		
Social*Diaspora			0.121*** (0.035)	0.104*** (0.037)
Log(distance)	-0.346*** (0.114)	-0.634*** (0.101)	-0.452*** (0.114)	-0.461*** (0.128)
Log(GDP _i *GDP _j)	0.419*** (0.072)	0.340*** (0.067)	0.577*** (0.070)	0.526*** (0.077)
Log(trade)	0.199*** (0.068)	0.202*** (0.062)	0.286*** (0.066)	0.525*** (0.079)
Common language	-0.031 (0.263)	0.062 (0.232)	0.295 (0.258)	0.362 (0.282)
Common currency	2.418*** (0.294)	0.997*** (0.254)	2.349*** (0.297)	0.522* (0.298)
Rule of Law	0.753*** (0.230)	0.741*** (0.220)	0.674*** (0.232)	0.417 (0.255)
Education Index	0.037** (0.018)	0.043*** (0.016)	0.026 (0.018)	0.028 (0.017)
Strength of legal rights	0.011 (0.050)	0.069 (0.042)	0.037 (0.051)	0.115** (0.051)
Internet usage	0.015 (0.012)	-0.004 (0.011)	0.011 (0.012)	0.005* (0.013)
Polity score	-0.082* (0.044)	-0.154*** (0.042)	-0.059 (0.044)	-0.080 (0.052)
Constant	-31.940*** (5.244)	-17.915*** (4.653)	-36.164*** (3.713)	-39.186*** (3.585)
Region Fixed effect	Yes	Yes	Yes	Yes
Observations	1119	984	1119	830
Adj. R-squared	0.423	0.404	0.404	0.413

White heteroskedasticity-robust standard errors are reported in parentheses.
** Significant at 10%; ** Significant at 5%; *** Significant at 1%*