ERASMUS UNIVERSITY ROTTERDAM
Erasmus School of Economics
MSc Economics & Business

Master Thesis

Welcome to foreigners

Does migrant's integration influence entrepreneurship at country level?

Author: Seidita Niccolò
Student number: 434892
Supervisor: Dr. Spiros Stavroupolos
Date of completion: 03-08-2016

Abstract

The integration of immigrants is one of the most challenging issue a government should manage nowadays. Supporting access to the labour market involves migrants to work in a new cultural and entrepreneurial contest.

In this paper, we investigate on the relationship between migrants' integration policies and self-employment rates at country level.

In previous literature there are not findings which suggest whether promoting integration of migrants could increase entrepreneurial rates in a country: in order to fill this gap, we conduct an empirical analysis, collecting data of entrepreneurship levels (provided by the Global Entrepreneurship Monitor) and policy measures of integration (provided by the Migrant Integration Policy Index).

We analyse the effect of integration policies on entrepreneurial activity of 38 countries from 2010 to 2014.

We find that the general effect of integration policies on entrepreneurship is positive. We notice that typology of policy promoted by governments is a variable that affect entrepreneurship in different ways: supporting education and family reunion influences positively entrepreneurship, but promoting anti-discrimination measures disincentives migrants to start businesses.

Keywords

Introduction

Syria's recent crisis and civil war are only a little example of how many conflicts are happening today. In order to categorise them, the Global Conflict Tracker (2016) has defined three different categories: conflicts with critical impact, significant impact or limited impact. Having conflicts causes local people to find luck in other countries, escaping from political persecution or simply from the war: motivations can be classified as economic, social or environmental. The economic migration encourages someone to move to find work opportunities or to follow a particular career path; a social migration incentivises people to move somewhere in order to pursue a better quality of life; an environmental migration is a cause of exodus when people threatened by natural disasters.

Since 2000, immigrants have represented 31% of the labour force in Canada, 21% in the United States and 14% in Europe (OECD, 2012).

These figures show the underlying importance of this topic and what kind of dimension immigration has reached along these years. Considering implications of immigration on economic aspects, the Organization for Economic Co-operation and Development (OECD) continues to research on how immigrants affect the economy.

However, it remains unclear whether promoting integration of migrants could foster entrepreneurial rates in a country.

The objective of this paper is to empirically examine how integration policies can affect entrepreneurship.

The existing literature has explored in depth the field of migrant entrepreneurship: Waldinger (1990), for instance, argued immigrants experience various restrictions during the process of integration and therefore lead them to develop strategies to go further on these issues: as a result, immigrants result more

likely to become entrepreneurs in different occupations and industries in comparison to local people. In addition, according to Sternberg (2004) opportunities to start a business are influenced by the status of industrialisation and technology of jobs, and thereby reflect the entrepreneurial regime of a state. More focus, by OECD, was dedicated to three main economic areas: labour market, taxation and the economic growth.

The number of migrants strongly contributed to an increase in workforce in foreign countries: 47% of the increase in the United States workforce and 70% in Europe over the past ten years was possible due to immigration flows (OECD, 2012). Migrant workers contribute greatly to the labour market in both high- and low-skilled occupations: some of them are motivated to migrate due to managed labour migration applied from host country (using different techniques able to attract well-educated people).

With respect to low-skilled occupations, immigrants represented a quarter of new entries into the less desired occupations in Europe (24%) and the United States (28%) (OECD, 2012).

Regarding taxation, Gott and Johnson (2002) who focus on the British market, find that "the overall contribution of migrants was positive, but that the impact varies with the characteristics of migrants." The estimation (regarding 1999 as fiscal year) was that the net fiscal contribution of migrants (the difference between the taxes and contributions immigrants provide to public finances and the costs of the public benefits and services they receive) was approximately GBP + 2.5 billion. Analysing immigration's effect on economic growth, the magnitude of the impact is strictly related to migrants' education level: according to Hunt (2010), there is some evidence from the United States that show how skilled immigrants grant to boosting research and development rates and innovation; the

positive effect of them on economic growth has a positive impact on firm's performance (Hunt, 2010).

However, migrants' prospects are strictly correlated to the level of integration the hosting country will guarantee to them: this degree influences the "economic role" they will achieve among their new society and the probability they will start a business.

Integration policies to migrants (measured in this paper through Migration integration policy index) and entrepreneurship rates will be key aspects of this paper: we will investigate on the possible positive relation between them.

In order to achieve the research objective, 38 countries will be analysed, considering the integration scores they achieved according to the Migrant integration policy index from 2010 to 2014. Once collected data, it will be possible to conduct an empirical analysis measuring the impact of integration policies adopted by governments on entrepreneurial rates registered during the same period.

This paper aims to provide further evidences on the importance of guaranteeing an high level of integration to immigrants, analysing how many benefits for the economy could be created. In particular, creating good life/work conditions for people could increase level of entrepreneurship of a country and, according to Kloosterman (2003), entrepreneurship positively affects economic growth and innovation of societies. Analysing each macro policies areas, and their impact on integration, it will be possible to draw a line of help for policy makers. In fact, this work is aimed at stimulating authorities to adopt specific policies able to facilitate foreigner's access to national society. Policymakers could use the insights provided by the present thesis to propose new policy changes that would better create equal opportunities and foster entrepreneurship. Interesting implications will be available also for corporations: policies able to increase level

of integration of immigrants by a country will raise up possibilities to hire employees from different cultural background: a positive effect of cultural diversity of workers on sales, productivity, and innovativeness was shown by Gupta (2013).

The outline of this research work reads as follows. First, existing research and studies about immigration, integration and entrepreneurship will be presented. Next, in the data and methods section, database used and description of MIPEX construction will be provided. To follow, the interpretation of the results will be illustrated. Lastly, a discussion section will be presented, with the objective to identify the main limitations to this study, describing further implications on policy adoption by governments and formulate suggestions for future research.

Theoretical framework

Entrepreneurship: definition

What is entrepreneurship? According to the European commission (2003, pp.25) Entrepreneurship is "the mindset and process to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organisation". Several studies in the past have described entrepreneurship: nowadays, three key elements discovered along the history are still taken in account:

1. Uncertainty
2. Innovation
3. Opportunity

The concept of economic uncertainty provided by Knight (1942) is related to outcomes that will occur with a probability that cannot even be estimated. This aspect will influence the entrepreneur, who will operate under "uncertainty" condition, thus facing a risk. In their research, Stewart and Roth (2001) claimed that entrepreneurs have a greater level of risk-propensity. Inclination to risk was also a consequence of a deep judgment of self-employed, able during the process to prevents them from taking not necessary risks (Mueller, Thomas, 2001). Moreover, according to Weber and Milliman (1997) the "fear of failure" is a fundamental aspect of the risk related to starting a new business: if this aspect is less perceived by individuals, the probability that they will start a business increases. Considering the second key element (innovation), according to Schumpeter's theory (1934) the activity of entrepreneurs is a process able to innovate existing market, through the "creative destruction", a "process of industrial mutation that incessantly revolutionizes the economic structure from

within, incessantly destroying the old one, incessantly creating a new one" (Schumpeter, 2014 pp.81). The innovation role of entrepreneurs is also described by Michelacci (2013): in his study, in fact, it is shown how entrepreneurs, working together with researchers, are able to transform inventions produced by scientists into innovations, spreading them on the market. Wong (2005) argued that entrepreneurship activity has an impact on a nation's innovation: indeed innovative business start-ups appear to enhance knowledge spillovers. The same effect was discovered also by Audretsch and Keilbach (2006), who argued that entrepreneurship is fundamental during the process of selecting innovations, considered the mechanism which facilitate the spillover of such knowledge across individuals. Opportunity recognition, the last element taken in consideration within this chapter, is an economic aspect that individuals perceive in different ways: according to Arenius and DeClercq (2005) individuals have a different perception of opportunities because of the differences between various environments in which they may live: looking at DeClercq empirical analysis, it was demonstrated that characteristics of residential area in which individuals live affect the perception of business opportunities (i.e Individuals who live in urban areas are more likely to perceive opportunities than individuals who live in the countryside). Access to information is also a key element to find opportunities: according to Shane (2000), access to appropriate information plays a key role in opportunity recognition. Moreover, it was also shown by Gilad (1989) that entrepreneurs (considering their activity) are more likely than managers to engage in active search: once started a business (or planning to do it), opportunities should be more easily perceived. Gilad (1989) also underlines that opportunities can sometimes be recognized by individuals who are not actively searching for them: the skill they should has is defined as "a unique preparedness to recognize opportunity": the concept was already explored by Kirzner (1989), who defined

that particular ability as "alertness to changed conditions or to overlooked possibilities."

Entrepreneurship: determinants

According to Parker (2009), the entrepreneur is someone who earns no regular wage or salary but derives his income by exercising his profession or business on his own account and at his own risk: exploring the determinants that incentive individuals to become self-employed is a necessary activity we should taking in account, considering that governments, for instance, could develop strategies of fostering entrepreneurship based on these findings. The determinants, according to Jansen, Spronsen & Willemsen (2003) are influenced from different perspectives (economical, psychological and demographical): the economical perspective will consider economic elements which affect the decision (i.e. how many entrepreneurial opportunities are available in a country or national corporate taxation level), the psychological one will take into account background and personal characteristics of the aspirant entrepreneur (i.e. the propension to risk) and demographic perspectives will consider the demographic composition of an area in which the individual is involved. The analysis of determinants, considering the three perspectives, is focused on different levels of investigation: Wennekers, Audretsch, & Thurik (2002) found two of them: micro-level and macro-level. At the micro-level, the most important goal is the understanding of why an individual, considering his micro-dimension, may be interested to become an entrepreneur rather than a salary worker. This decision-making process is efficiently described by occupational choice models which consider the "utility" as an individual attribute to each working activity. Normally, at this level, decisions are influenced by psychological perspectives of individuals. According to Levesque and Minniti (2008), one of this aspect is age; but many other variables could be taken in account, as education skills (Arenius & DeClerq,

2005), or religion. At the macro-level, economic and demographical perspectives are considered: General characteristics of the country, technologic level, GDP are all potential variables who can influence the decision-making process (Wennekers, Audretsch, & Thurik, 2002). Other variables were found also by Reynolds et al. (1994): in his framework, he identified macroeconomic elements which influence decisions, like small firm presence and government policies. In addition to this analysis, Parker (2009) creates a framework in which he describes determinants of entrepreneurship. In his study, he investigated the effects of variables (considering economical, demographical and psychological areas described before) on the probability of becoming self-employed. The following table describes some results he obtained, considering "+" as a positive effect on the probability of becoming self-employed, "-" as a negative on the probability of becoming self-employed and "0" as an insignificant effect.

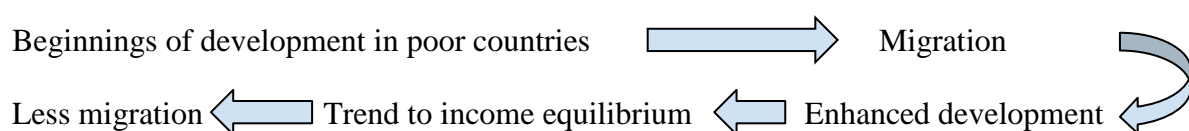TABLE 1: Determinants of entrepreneurship

Explanatory variable	No. +	No. −	No. 0
1. Income differential	8	2	4
2. Age	83	6	14
3. Experience	24	1	2
4. Education	69	21	27
5. Risk aversion	0	11	3
6. Married / working spouse	52	9	8
7. Number of children	16	2	3
8. Ill health / disability	5	4	6
9. Entrepreneur parent	40	2	2
10. Technological progress	4	4	2
11. Unemployment			
Cross-section	22	14	18
Time series	33	5	2
12. Urban location	7	7	4
13. Immigration[a]	5	1	0
14. Interest rates[b]	1	9	3
15. Personal wealth[c]	40	2	4
16. Personal income tax rates[d]	12	5	1

SOURCE: Parker, the economics of entrepreneurship (2009)

Migration: economic aspects

Migration, considered as the act of moving from home country to a new one, is a deep process that change perspectives of an individual and economic aspects of the hosting country. In this section, we want to illustrate the economic effects of migration and explore in more detail the concept of migrant entrepreneurship. Starting from the analysis of Neoclassical theory of migration, the phenomenon of migration was seen in relation with labour mobility: according to Castles (2009), it was shown a positive effect of migration on the labour market mobility: in effect, looking at a neoclassical competitive model of supply and demand (Borjas, 2010) immigration increases the total production of a country, considering the extra work force which will be added to the original one. According to the neoclassical model, economic differences among countries (i.e. disproportions) were the main causes of migrant flows. These flows, considering a long-term vision, should reassess an economic equilibrium among countries, regulating salaries and economic conditions. This model will generate the following scheme (Castles, 2009).

Figure 1: Economic virtuous cycle of migration

Beginnings of development in poor countries ⟹ Migration

Less migration ⟸ Trend to income equilibrium ⟸ Enhanced development ⟲

SOURCE: Castles, the economics of entrepreneurship (2009)

This virtuous cycle, however, was radically changed during 1980s: migration was interpreted as a cheap labour for capital. A more comprehensive 'world systems theory' developed in the 1970s and 1980s was focused on consider less-developed 'peripheral' regions as areas incorporated into a world economy controlled by 'core' capitalist nations (Castles, 2009).

The presence of corporations into underdeveloped economies hasten "rural change, leading to poverty, displacement of workers, rapid urbanization and the growth of informal economies" (Castles,2009), so the cycle was interpreted as follows:

Figure 2: Economic vicious cycle of migration

dependency of poor countries   →   Migration Increased

Third world labour freely available for rich economies   ⇐   income gap get worse

SOURCE: Castles, the economics of entrepreneurship (2009)

Nowadays, effects of migration on economy are widely explored: according to Zachary (2000) a country open to immigration is a country who will experiment an economic growth. Acosta (2007) argued that immigration raise living standards of those left behind. Stark and Wang (2002) stated that immigration contribute to a better return to human capital investments. In order to study the economic effects of migration, however, it is necessary to understand what kind of immigrants will enter in the new market: differentiation is focused on skill-level of immigrant and if the migrant will be complementary or substitute of the native workers (Borjas, 1995). Focusing on these aspects, it is possible to explore two economic areas in which migration has a significant effect: salaries and government finance. In the short-term, if immigrants and native workers are substitutes, the level of competition will increase and a higher competition will decrease wages (Borjas, 1995). Oppositely, if immigrants and native workers are

complementary, all workers experience increased productivity which can be expected to lead to a rise in the wages of existing workers (Borjas, 1995). Considering the long-term, the effect should be different, caused by adjustment processes, related to the flexibility of the market. In fact, according to the Migration Observatory (2015), immigration can be expected to lead to more investments, considering a long-term perspective. The natural result is an increase demand for labour and thus increased wages. When an emigrant will become part of a new country, some financial obligations (like investments, taxes) will be addressed to the hosting country. On the other hand, remittances allow them to transfer money to home country. The skill-level of migrants, considering public finance, is a key element: it is predictable that an high-skilled migrant could earn more than a lower-skilled one: receiving an higher wage will lead to an higher tax contribution to the hosting country, instead low-skilled migrant, contributing less, will be more dependent on the social welfare programs of the government. Indeed, according to Borjas (1995) countries with benevolent welfare systems attract more low skilled immigrants than high-skilled immigrants. Find a way to attract high skilled migrants, so, should be a target of governments: in his study, Bonin (2000) advise governments to adopt policies to attract high-skilled immigrants, caused by the positive impact of immigration on the tax charge of native. Regarding remittances, although according to (Bourdet and Falck, 2006), an increase of remittance will lead to a reduction of export competitiveness of a country, many positive effects could be attribute to stimulate remittances: they contribute, according to Acosta (2007) to reduce poverty in the home country, as well as to increase health services of the home country (Mansuri, 2007).

Moreover, De Haas (2005) argued that some of remittances received by households will be invested, stimulating entrepreneurship and economic growth.

Immigrant entrepreneurship and integration

Are migrants more involved in entrepreneurial activities than natives are? Considering available statistics, "migrant entrepreneurship, as measured by self-employment rates, is more common than non-migrant entrepreneurship in only 13 out of 25 countries in the OECD" (Baycant, 2007 pp.12). Moreover, a country level study conducted by the Global Entrepreneurship monitor in 2012 found no differences between early entrepreneurial rates of native and migrants. Previous literature explored this topic looking for migrant's determinants to become self-employed: factors like cultural behaviours and social dynamics of migrants could be potential explanations, according to Light (1984) but, compared this hypothesis with the following result (two studies of Armenians in Usa (Der-Martirosian et al., 1993) and Russia show that percentage of Armenians entrepreneurs in America was higher than percentage of Armenians self-employed in Russia, a country in which Armenians prefer to be workers), it seems clear the necessity to explore more in details determinants of immigrant entrepreneurship. A framework, developed by Waldinger (1990), try to figure out those aspects: opportunities offered by national market (promoting integration policies) cultural characteristics of home country of migrants and ethnic networks were identified. Integration, according to Haverig (2013) is a "successful development of a shared feeling of belonging amongst both the settled majority and migrant communities and the adherence to common values, moral principles and codes of behaviour". Focusing on the concept of immigrant integration, the Bilgili (2015) divided the areas related to it in three macro areas: economic (access to labour market, education), social (level of intolerance, segregation) and political (anti-discrimination frameworks, access to nationality and permanent residence). A country interested to promote integration is a country interested to stimulate cultural diversity: according to Fainstein (2005), cultural diversity encourage creativity, which lead to foster technological and scientific innovation. Considering the link between creativity and innovation, and that innovation is a

fundamental factor to stimulate level of entrepreneurship and growth in a country (Landry, 2000), measuring effect of migration integration policies on entrepreneurship could help us to clarify a potential link between integration offered to migrant and economic benefits of a country. Integration policies effects on migrants are measured by the Migrant Policy Index (MIPEX). Hence, in order to answer our research questions, we will refer to it. To sum up, there are many findings who explain determinants of entrepreneurship and immigrant entrepreneurship: all these determinants appear correlated to level of integration, cultural aspects and opportunities a country offer to his citizens. According to Cervan-Gil (2016, pp.3), who define integration as a process that allow "fair access to the labour market and productive employment of the migrants, ensures full utilization of their skills and enhances the human capital of migrants as they acquire new professional skills, learn the new work culture, and connect to peers and networks in their field of expertise", we could formulate our first hypothesis:

H1: *There is a positive relation between MIPEX (integration policies for migrants) and entrepreneurship at the country level.*

Considering that MIPEX score is made from 7 different sub-scores, and that each of them measure different policies category (education, labour market mobility, political participation, access to nationality, anti-discrimination, permit residence and family reunion), the existing literature provides information about positive or negative relations among entrepreneurship and topics of some sub-scores: according to many authors, the main factor who incentive migrants to become entrepreneurs is a social barrier: discrimination (Jansen et al., 2003). Bruder and Raethke-Doeppner (2008) divided discrimination in three categories: cultural discrimination, when the migrant is not selected by employer due to ethnic stereotypes or language barriers; structural discrimination, when some legal

documents, for instance, are not available in order to work (i.e Passport or VISA); statistical discrimination, when employer decide to not hire a migrant through use of statistics who show quality level of the "cluster" of migrants. Considering that, our hypothesis related to promote anti-discrimination policies for migrants can be formulated as:

H2.1 *There is a negative relation between anti-discrimination policies for migrants and entrepreneurship at the country level.*

Furthermore, considering the possibility for migrants to be closer to their family or, at least, to people originated from the same region, Mora and Davila (2006) found significant evidence that immigrants usually start businesses where there are high ethnic concentrations of people with the same nationality. This is clear, considering that they could benefit from having access to resources from their extended family or lenders from their communities: that is a preferable approach, compared to find resources or funds by banks. Mora and Davila (2006) also found that developing strong relations to both their family and ethnical community, gives entrepreneurs advantages in performance terms: in effect, according to Sanders & Nee (1996) community members and family components, in addition to provide cheap labour, they could help advancing the business through their bilateral commitments and trust from the solidarity feeling of closeness. Therefore our hypothesis related to promote family reunion policies for migrants is formulated:

H2.2 *There is a positive relation between family reunion policies for migrants and entrepreneurship at the country level.*

Mora and Dávila (2006) found also that job scarcity or lower wages pushed individuals to join self-employment activities. Adverse labour market conditions

and high level of unemployment are considered factors that activate latent entrepreneurial talent and incentive individuals into self-employment (Tervo 2006). Koosterman (2003) also claimed that if immigrants face barriers on the labour market and, hence, have a disproportionately high chance of becoming unemployed, they may opt for self-employment as long as it is at least slightly more rewarding than unemployment even though this offers not much promise of advancement. As a consequence, we could formulate our last hypothesis:

H2.3 *There is a negative relation between labour market policies for migrants and entrepreneurship at the country level.*

Methodology

In this research, we extract data from two databases: GEM and WDI. The GEM data contains information about entrepreneurship rates at a country level. The World Development Indicators (WDI) provides macroeconomics measures, such as GDP, percentage of people who is living in urban areas, which will be used as control variables for our analysis. In addition, we obtain the migration policies scores directly from the Migration Policy Index's website, which will be used to evaluate the integration policies adopted by each country. Considering migration policies scores (our main independent variables) were available from 2010 to 2014 and considering that it will be conducted a country-level analysis, we chose to create a panel data. In our dataset, observations of 38 countries are present: Australia, Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States.

Databases

The GEM is a global research project realized by a consortium of universities: started in 1999, his main intention is to analyse the level of entrepreneurship, compared to macroeconomic aspects, considering a pool of countries from different part of the world. (GEM, 2016). The data used, collected by GEM, come from two different surveys: the Adult Population Survey (APS) and the National Expert Survey (NES). In our analysis, only The APS will be taken in account. Each year, the GEM assembles the survey of 2000 adults from a country of interest into an annual report. According to Shorrock (2008), entrepreneurship measures provided by GEM are the most precise available.

The World Development indicators (WDI) is the most relevant World Bank collection of development indicators, realized by officially recognized international sources. It presents the most current and accurate global development data available, including national and global estimates (WDI, 2016). Data were registered since 1960.

Variables

Dependent variables

As there is no known unique measure commonly accepted as index of entrepreneurial activity in literature, we propose to use three measures for entrepreneurial activity: *ebo, TEA, and oppor. Their definitions are presented as follows:*

Established Businesses ownership rate (ebo): The percentage of 18-64 population who are currently owner-manager of an established business, i.e., owning and managing a running business that has paid salaries, wages, or any other payments to the owners for more than 42 months.

TEA Total (early) Entrepreneurial Activity (TEA): The percentage of adults (18-64 years old) involved in a nascent- or young firm or both.

Perceived Opportunities (oppor): The percentage of 18-64 population who see good opportunities to start a firm in the area where they live.

Main independent variables

In order to measure integration for migrants in our analysis, we will refer to an index called: Migrant Integration Policy Index (MIPEX). MIPEX is the most extensive, rigorous and cited index of integration policies comparing how policies promote equal rights and responsibilities for immigrants (Bilgili, 2015)

MIPEX is the result of the analysis of 167 policy indicators, which describes 7 policies areas: labour market mobility, family reunion, education, political participation, permanent residence, access to nationality and anti-discrimination (MIPEX, 2015).

TABLE 2: Definitions of the main independent variables

Migrant's integration policy index (over)	The score is an arithmetic average of the following MIPEX sub-scores
Migrant's labour market mobility policy index (lab)	The score measures if immigrants have equal rights and opportunities to access jobs and improve their skills
Migrant's family reunion policy index (fam)	The score measures how easily can immigrants reunite with family
Migrant's education integration policy index (ed)	The score measures how the education system is responsive to the needs of the children of immigrants

Migrant's political participation policy index (pol)	The score measures if immigrants have comparable rights and opportunities to participate in political life
Migrant's permanent residence policy index (perm)	The score measures how easily can immigrants become permanent residents
Migrant's access to nationality policy index (acc)	The score measures how easily can immigrants become citizens
Migrant's anti-discrimination policy index (discr)	The score measures if everyone is effectively protected from racial/ethnic, religious, and nationality discrimination in all areas of life

Within each of the seven policy areas, the indicator scores are averaged together to give one of four dimension scores which examine the same aspect of policy. The four dimension scores are then averaged together to give the policy area score for each of the seven policy areas per country. In order to make rankings and comparisons, the initial 1, 2, 3 scale is converted into a 0, 50, 100 scale for dimensions and policy areas, where 100% is the top score. (MIPEX methodology, 2015).

Control variables

We use different macroeconomics control variables in our model.

GNI growth , **GDP(lnGDP)** and **GDP growth**

These variables are selected because are found positively related to entrepreneurship: according to Ahmed, (2011) GDP and GNI increase with increase in established business ownership rate. GDP growth was quickly debated above and is known to strongly affect investment decisions worldwide. High GDP growth usually attracts the attention of investors and firms that desire to benefit from the growth. We have generated the logarithm of GDP, in order to reduce the magnitude of the variable.

urban

It was found that a higher incidence of self-employment positively and strongly correlates with business creation and innovation in urban areas, but not in rural areas. (Faggio, 2014)

Import and **trade**

Measures like levels of importation and trade dimension of countries are considered useful explanations of the "economic openness" of a country (David, 2007).

TABLE 3: Definitions of the control variables

Control variable	Definitions
GNI growth	Annual percentage growth rate of GNI
GDP	sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products.
GDP growth	Annual percentage growth rate of GDP
Urban	Percentage of people living in urban areas as defined by national statistical offices
import	Value of all goods and other market services received from the rest of the world (% of GDP). It includes the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services
Trade	Sum of exports and imports of goods and services measured as a share of gross domestic product

Methods of analysis

Considering the fact we are analysing a panel data, we know that the data might be measured using different models: prior to selecting the best fitted model, it is necessary consider the nature of our data. We selected data for 38 different countries, taking in account macroeconomic aspects of each of them. MIPEX scores and entrepreneurship rates are not only a consequence of the trend of the global economy, but also the consequence of national politics, entrepreneurial tradition, and examples of "unobserved" aspects that affect the propensity of people to become self-employed. Therefore, the emphasis of our research should taking in account the uniqueness of each country: the country effect (e.g. national culture or institutions) is "treated as a characteristic that cannot be transferred to another national context" (Bryan, 2013 pp.24). Hence, our assumption is that characteristics are unique to the countries and should not be correlated with other countries characteristics.

Looking for obtain more precise answers to our research questions, the "country effect" should be included as a control in our model, assuming that country's estimate has no particular meaning regarding another country. The best model to test it is using a Fixed Effects model estimator: a model able to estimate the within entity variation (time varying difference among explanatory variables and predictors).

Using FE, (assuming that something within the individual might bias our variables) we investigate on the correlation between entity's error term and variables, through the elimination of the effect of those time-invariant characteristics. In this way, we can assess the net effect of the predictors on the explanatory variables.

Fixed model effects estimator: equation

$$y_{it} = \beta_1 x_{it} + a_{it} + u_{it}$$

$- a_{it}$ (i=1….n) is the unknown intercept for each entity (n entity-specific intercepts).

$- y_{it}$ is the dependent variable (DV) where i = entity and t = time.

$- x_{it}$ represents one independent variable (IV),

$- \beta_1$ is the coefficient for that IV,

$- u_{it}$ is the error term

In order to test whether our best model hypothesis will be verified, a Hausman test will be run: the null hypothesis assumes no correlation between the different intercepts and the explanatory variables, which means that a random-effects model is the one assumed under the null hypothesis. A rejection of the null hypothesis justifies only the use of parallel tests with fixed-effects models (and, therefore, confirm our hypothesis about using a fixed effects model estimator).

Using the Random effect estimator, we expect the variation across entities is assumed to be random and uncorrelated with the independent variables included in the model: this is the main difference between FE and RE indeed, according to Greene (2008, p.183)

"…the crucial distinction between fixed and random effects is whether the unobserved individual effect embodies elements that are correlated with the regressors in the model"

If you have reason to believe that differences across entities have some influence on your dependent variable then you should use random effects.

An advantage of random effects is also the possibility to include time invariant variables (i.e. race), while in the fixed effects model these variables are absorbed by the intercept.

Random effect model estimator: equation

$$y_{it} = \beta x_{it} + a_{it} + u_{it} + \varepsilon_{it}$$

ε_{it} is within entity error

We will show also results using a POOLED OLS model, an approach that ignores the possibility of unobserved characteristics that could affect our model.

This approach is used when the groups to be pooled are relatively homogenous. If the model produces large standard errors, this could be a proof of not homogeneity of the groups : in this case, a more advanced approach (as we have seen before with FE and RE) could be more appropriate.

Pooled OLS model estimator: equation

$$y_{it} = \beta x_{it} + v$$

$v = u + c$

The error term v consists of two components, an "idiosyncratic" component u and an "unobserved heterogeneity" component c .

So, in order to test all the hypotheses and answer to our research questions, three kind of models are used: Fixed effect estimator, Random effect estimator and

Pooled OLS. We will run six different regressions (each one, using FE, RE and Pooled OLS): three regressions (Because our research is considering three different measures of entrepreneurship) will test whether it exists a correlation between Migration policy index on entrepreneurship: other three regression will test the impact of each MIPEX sub-scores on entrepreneurship, testing if our hypothesis about antidiscrimination policies will be confirmed. At the 10% significance level our variables will be considered statistically significant, namely when the P values of these variables will be lower than 10% ($\alpha=0.1$).

Results

In this chapter , results of our analysis are shown and discussed.

Our main target was to investigate on the relation between MIPEX and entrepreneurship at the country level. First of all, descriptive statistics are shown, in order to give a clearer idea of our dataset. In the second part, we have investigated on potential multicollinearity of our variables, running the Hausman test, in order to verify what model we should take in consideration for our results. In the last part, as we have explained in the methods section, we have performed regressions using different models: we will test our Hypothesis 1 and our Hypothesis 2.

Descriptive statistics

In the following table, we could see countries data available in our dataset. We have selected all countries for which MIPEX data were available.

TABLE 5: countries in our sample

Australia	Austria	Belgio	Bulgaria	Canada	Croatia	Cyprus
Czech Republic	Denmark	Estonia	Finlandia	France	Germany	Greece
Hungary	Iceland	Ireland	Italy	Japan	Latvia	Lithuania
Luxembourg	Malta	Netherlands	New Zealand	Norway	Poland	Portugal
Romania	Slovak Republic	Slovenia	South Korea	Spain	Sweden	Switzerland
Turkey	United Kingdom	United States				

TABLE 6: Description of variables (summarize)

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) Max
urban	190	75.40	12.16	49.70	97.82
ebo	141	6.865	2.474	1.995	15.79
TEA	144	7.618	2.741	2.350	14.26
over	186	52.80	13.52	23	80
lab	186	57.65	19.63	0	98
fam	186	60.94	14.00	0	90
ed	186	39.99	20.18	0	77
pol	186	43.02	24.72	0	88
perm	186	59.17	11.59	0	86
acc	186	47.20	18.53	0	86
discr	186	60.80	20.21	5	92
GDP_growth	189	1.421	2.468	-9.132	9.157
trade	187	106.1	59.56	28.18	374.1
import	187	54.44	32.50	12.38	203.3
GNI_growth	176	1.377	2.795	-9.731	9.561
Oppor	142	33.41	14.48	5.920	71.49
country	190	19.50	10.99	1	38
lnGDP	189	26.46	1.736	22.82	30.49

In Table 6 all the variables are shown. For each variable, the reported figures are: number of observations, mean, standard deviation and minimum and maximum value. The range of observation is from 141 to 190 and it is interesting see how

change the perception between minimum and maximum value of the third entrepreneurship variable (oppor). The gap between the minimum value and the maximum is 66 points, three times the gap of TEA and ebo (approximately 15 points): the perceived opportunity therefore shows a bigger dispersion within variable values.

TABLE 7: Correlation matrix

	year	urban	Ebo	TEA	Over	lab	fam	educ	Pol	perm	acc	discrim	GDP gr~h	trade	import	GNI growth	Opportyy	country	lnGDP
year	1																		1
urban	0.0135	1																	
ebo	-0.0235	0.139	1																
TEA	0.2501*	-0.1927*	0.2851*	1															
over	0.000600	0.3101*	-0.105	-0.1867*	1														
lab	0.0152	0.2499*	-0.0854	-0.2080*	0.8169*	1													
fam	-0.0141	-0.0465	-0.133	-0.0476	0.5586*	0.4572*	1												
educ	-0.0273	0.3429*	0.0596	0.00700	0.8737*	0.7481*	0.3533*	1											
pol	-0.0190	0.3990*	0.0161	-0.3300*	0.8053*	0.6239*	0.1842*	0.7321*	1										
perm	0.0106	0.1578*	-0.2765*	-0.2774*	0.6404*	0.6153*	0.6506*	0.4557*	0.3817*	1									
acc	0.0134	0.3522*	-0.0740	-0.1783*	0.8257*	0.5209*	0.3641*	0.6902*	0.7401*	0.3180*	1								
discrim	-0.0100	-0.0603	-0.1744*	0.0707	0.5997*	0.2999*	0.3428*	0.4066*	0.2452*	0.3368*	0.5154*	1							
GDP growth	-0.0719	0.0608	-0.0856	0.2620*	-0.0534	-0.0571	-0.0306	0.0575	-0.0322	-0.0991	-0.0840	-0.0992	1						
trade	0.0454	-0.0610	-0.104	0.115	-0.2482*	-0.3294*	-0.136	-0.2409*	-0.136	0.0594	-0.2529*	-0.1577*	0.1644*	1					
import	0.0517	-0.0370	-0.105	0.0925	-0.2237*	-0.3080*	-0.140	-0.2186*	-0.0961	0.0646	-0.2273*	-0.1609*	0.1625*	0.9974*	1				
GNI growth	-0.121	0.0666	-0.0766	0.2222*	-0.0006	-0.0112	-0.0142	0.0883	-0.00360	-0.0842	-0.0400	-0.0269	0.8826	0.123	0.124	1			
Oppor	0.141	0.3391*	-0.0431	0.145	0.3900*	0.3875*	-0.0362	0.4775*	0.3766*	0.2175*	0.2692*	0.1829*	0.2577*	0.00930	0.0309	0.2048*	1		
country	0	-0.130	0.1692*	0.108	0.00330	-0.0380	0.101	-0.0197	0.0165	-0.110	0.0789	-0.0258	0.1953*	-0.0861	-0.0764	0.1499*	-0.0610	1	
lnGDP	0.0325	0.2492*	0.0777	-0.2021*	0.3885*	0.3717*	0.144	0.3623*	0.3148*	0.0549	0.4519*	0.2652*	0.0435	-0.5410*	-0.5174*	0.0620	0.0362	0.2164*	1

Table 7 shows the correlation matrix results, useful to test the multicollinearity assumption. Below, the correlations that are statistically significant at five percent level and have a correlation above 0,750 or below -0,750 are discussed.

With respect to MIPEX sub-scores, many of them present high correlation with MIPEX overall: considering that MIPEX overall score is the arithmetic average of the seven sub-scores, it is clear why they show high levels of correlation. Because sub-scores are not used in the same regression that include the overall score as main explanatory variable, this will not cause problems to our estimates. Another high correlation can be seen looking at the variable trade, which has a correlation index of 0.9974 with Percentage of import. That is caused by the fact that trade does not only consider the export of a country but also the quantity of goods and services imported.

Robustness check

In order to validate whether the obtained coefficients of our regressions are plausible and precise, a robustness check is necessary. With this operation, according to White & Lu (2014), we are able to inspect how coefficients behave when some variables are removed or new variable are added.

In order to perform our analysis , looking for a structural validity of our results, all regressions are performed with the command robust in Stata.

As a robustness check, we run our model removing the Mipex overall index variable (**Over**) from the second round of regressions (see Table 11, 12 and 13). The results are confirmed to be robust because the results of the regressions with the variable **Over** and the regressions without the variable **over** show the same results.

Regressions

To find the best estimators, we apply our model to OLS, FE, RE. The same regressions are performed with three dependent variable TEA, ebo, oppor. Respective results are in table 4, 5, and 6.

TABLE 8: Regression 1, Effect of Mipex Overall on TEA

VARIABLES	(1) OLS	(2) Fixed Effects	(3) Random Effects
Over	-0.004	-0.004	-0.004
	(0.018)	(0.009)	(0.010)

GDP_growth	0.465***	0.477**	0.465**
	(0.171)	(0.139)	(0.207)
Trade	0.167***	0.161**	0.167***
	(0.055)	(0.050)	(0.041)
Import	-0.308***	-0.306**	-0.308***
	(0.099)	(0.097)	(0.087)
GNI_growth	-0.157	-0.092	-0.157
	(0.163)	(0.210)	(0.297)
lnGDP	-0.082	-0.170	-0.082
	(0.264)	(0.163)	(0.132)
Urban	-0.032	-0.025	-0.032***
	(0.024)	(0.013)	(0.011)
Constant	11.180	13.380**	11.180***
	(6.920)	(3.611)	(3.250)
N			
Observations	138	138	138
R-squared	0.208	0.252	
Number of year		5	5

Robust standard errors in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

TABLE 9: regression 2, effect of Mipex Overall on ebo

	(1)	(2)	(3)
VARIABLES	OLS	Fixed Effects	Random Effects
Over	0.033**	0.034*	0.033***
	(0.014)	(0.013)	(0.012)
GDP_growth	-0.016	-0.069	-0.016
	(0.241)	(0.212)	(0.172)

Trade	-0.026	-0.027	-0.026
	(0.051)	(0.037)	(0.037)
Import	0.051	0.054	0.051
	(0.093)	(0.066)	(0.066)
GNI_growth	-0.075	-0.045	-0.075
	(0.178)	(0.230)	(0.216)
lnGDP	-0.052	-0.043	-0.052
	(0.197)	(0.134)	(0.137)
Urban	0.046**	0.044*	0.046**
	(0.021)	(0.018)	(0.018)
Constant	6.898	6.782	6.898*
	(5.598)	(3.544)	(3.650)
Observations	135	135	135
R-squared	0.064	0.066	
Number of year		5	5

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 10: regression 3: Effect of Mipex Overall on oppor

	(1)	(2)	(3)
VARIABLES	OLS	Fixed Effects	Random Effects
Over	0.401***	0.394***	0.401***
	(0.098)	(0.061)	(0.047)
GDP_growth	4.163***	4.070***	4.163***
	(0.815)	(0.673)	(0.640)
Trade	0.905***	0.893**	0.905***

	(0.234)	(0.279)	(0.245)
Import	1.599***	1.561**	1.599***
	(0.420)	(0.468)	(0.403)
GNI_growth	2.178***	1.961***	2.178***
	(0.735)	(0.423)	(0.591)
lnGDP	-4.044***	-4.179**	-4.044***
	(0.898)	(1.228)	(1.173)
Urban	0.390***	0.404***	0.390***
	(0.095)	(0.070)	(0.073)
Constant	97.450***	101.000**	97.450***
	(22.990)	(28.510)	(26.860)
Observations	136	136	136
R-squared	0.419	0.415	
Number of year		5	5

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

In order to select the best model for our dataset, the Hausman test was performed: the results from the Hausman test show that we reject the null hypothesis (differences in the coefficients between the Random Effects model and the Fixed Effects model are not systematic). Therefore, we select the Fixed Effects estimator because it is the only one consistent. The significance of the Hausman test means that our hypothesis related to the usage of a Fixed Effects estimator (illustrated in methodology section) is confirmed. Therefore, we use Fixed Effects estimator with standard errors clustered on the country level in column 2 to draw our conclusions.

Significance level for our results will be fixed at 10%.

From previous tables it can be observed that adopting integration policies for migrants has a statistically significant positive effect on two of the measures for entrepreneurship (TEA and oppor). The effect of adopting integration policies for

migrants on ebo, instead, is not significant at 10%. This implies that there is significant evidence for H1: 'There is a positive relation between adopting migrants integration policies and entrepreneurship at the country level.

Looking at our control variables:

GDP_growth, GNI-growth and trade have a significant positive effect on entrepreneurship in our first and third regression model.

These figures seem to confirm our literature findings: in fact, according to Klapper (2010) business entry and entrepreneurial rates are significantly associated to country- level indicators, like economic development and growth. Dynamic markets and economic growth are elements that are positively associated with the rates of new businesses in a country (Klapper, 2010).

lnGDP shows a significant negative effect on entrepreneurship in our first and third regression. The empirical literature, in effect, has found a negative relationship between the GDP level and self-employment rate: richest countries generally are less involved on self-employment activities: the framework of Lucas (1978), for instance, infers a decrease in returns to self-employment relative to wages, as economies tend to be more capital-intensive.

Secondly, we have run the same regression seen previously, including our sub-scores:

TABLE 11: Regression 4: Effects of Mipex sub-scores on TEA

VARIABLES	(1) OLS	(2) Fixed Effects	(3) Random Effects
lab	0.001	-0.002	0.001
	(0.020)	(0.012)	(0.011)
fam	0.011	0.014	0.011
	(0.018)	(0.007)	(0.007)
ed	0.103***	0.093**	0.103***

	(0.021)	(0.004)	(0.007)
pol	-0.070***	-0.057**	-0.070***
	(0.017)	(0.016)	(0.014)
perm	-0.115***	-0.120***	-0.115***
	(0.028)	(0.014)	(0.010)
acc	-0.004	-0.009	-0.004
	(0.020)	(0.018)	(0.016)
discr	-0.014	-0.020**	-0.014*
	(0.015)	(0.005)	(0.007)
GDP_growth	0.339**	0.337*	0.339*
	(0.145)	(0.150)	(0.200)
trade	0.025	0.034	0.025
	(0.059)	(0.060)	(0.066)
import	-0.034	-0.061	-0.034
	(0.109)	(0.114)	(0.130)
GNI_growth	-0.174	-0.098	-0.174
	(0.131)	(0.221)	(0.286)
lnGDP	-0.338	-0.452	-0.338
	(0.219)	(0.222)	(0.217)
urban	-0.011	0.001	-0.011
	(0.025)	(0.018)	(0.015)
Constant	20.930***	23.660***	20.930***
	(5.799)	(5.022)	(5.053)
Observations	138	138	138
R-squared	0.462	0.507	
Number of year		5	5

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

TABLE 12: Regression 5: Effects of Mipex sub-scores on ebo

VARIABLES	(1) OLS	(2) Fixed Effects	(3) Random Effects
lab	-0.034**	-0.033*	-0.034**
	(0.016)	(0.014)	(0.014)
fam	0.052***	0.052**	0.052***
	(0.015)	(0.011)	(0.011)
ed	0.072***	0.074**	0.073***
	(0.021)	(0.019)	(0.019)
pol	0.004	0.003	0.004
	(0.016)	(0.008)	(0.008)
perm	-0.132***	-0.134***	-0.132***
	(0.028)	(0.025)	(0.024)
acc	-0.010	-0.011	-0.010
	(0.020)	(0.014)	(0.012)
discr	-0.033**	-0.034**	-0.033**
	(0.016)	(0.016)	(0.015)
GDP_growth	-0.098	-0.185	-0.098
	(0.194)	(0.238)	(0.202)
trade	-0.013	-0.010	-0.013
	(0.054)	(0.044)	(0.044)
import	0.043	0.039	0.042
	(0.101)	(0.079)	(0.081)
GNI_growth	-0.136	-0.082	-0.136
	(0.143)	(0.186)	(0.170)
lnGDP	-0.124	-0.103	-0.124
	(0.190)	(0.182)	(0.177)
urban	0.050**	0.049*	0.050**
	(0.020)	(0.019)	(0.019)

Constant	12.180**	11.830*	12.180***
	(5.549)	(4.701)	(4.613)
Observations	135	135	135
R-squared	0.313	0.318	
Number of year		5	5

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

TABLE 13: Regression 6: Effect of Mipex sub-scores on opportyy

	(1)	(2)	(3)
VARIABLES	OLS	Fixed Effects	Random Effects
lab	0.150**	0.138*	0.150***
	(0.071)	(0.052)	(0.051)
fam	0.197**	0.185**	0.197***
	(0.088)	(0.046)	(0.045)
ed	0.193*	0.182	0.193
	(0.098)	(0.153)	(0.149)
pol	-0.092	-0.068	-0.092*
	(0.074)	(0.067)	(0.054)
perm	-0.012	-0.033	-0.012
	(0.150)	(0.172)	(0.187)
acc	0.098	0.087**	0.098***
	(0.111)	(0.028)	(0.019)
discr	0.126	0.133	0.126
	(0.071)	(0.089)	(0.080)
GDP_growth	3.899***	3.817***	3.899***
	(0.871)	(0.515)	(0.560)

Trade	-1.025***	-0.991*	-1.025***
	(0.284)	(0.456)	(0.389)
import	1.802***	1.721*	1.802***
	(0.517)	(0.783)	(0.660)
GNI_growth	2.034**	1.833**	2.034***
	(0.806)	(0.437)	(0.554)
lnGDP	-4.865***	-5.060*	-4.865***
	(1.100)	(1.918)	(1.804)
Urban	0.371***	0.394**	0.371***
	(0.120)	(0.113)	(0.110)
Constant	131.800***	136.700*	131.800***
	(28.100)	(51.720)	(49.030)
Observations	136	136	136
R-squared	0.483	0.479	
Number of year		5	5

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Looking at our seven sub-scores, we can say that:

None of policies is significant for all measures; five of seven policies are significant for two measures of entrepreneurship (perm, lab, fam, ed, discr); two of seven policies are significant for only one measure of entrepreneurship (pol and acc) and none of policies are not significant for all measures of entrepreneurship.

Observing our investigated policies, **adopting anti-discrimination policies for migrants** has a statistically significant negative effect on two of the measures for entrepreneurship (TEA and ebo). On the contrary, the effect of adopting anti-discrimination policies for migrants on oppor, is not significant at 10%. This

implies that there is significant evidence for H2.1: "There is a negative relation between adopting anti-discrimination policies for migrants and entrepreneurship at the country level".

Looking at **adopting family reunion policies for migrants**, we can observe a statistically significant positive effect on two of the measures for entrepreneurship (oppor and ebo). The effect of adopting family reunion policies for migrants on TEA, instead, is not significant at 10%. This implies that there is significant evidence for H2.2: "There is a positive relation between adopting family policies for migrants and entrepreneurship at the country level".

Looking at our last investigated policies 'effect, **adopting labour market mobility policies for migrants** has a statistically significant effect on two of the measures for entrepreneurship (ebo and oppor). In the first case, the effect is negative on entrepreneurship, but in the second case, the effect is positive. This implies that there is not significant evidence for H2.3: "There is a positive relation between adopting family policies for migrants and entrepreneurship at the country level". In addition, we can observe that:

- **adopting access to nationality policies for migrants** has a statistically significant positive effect only on one measure for entrepreneurship (oppor)

- **adopting education integration policy for migrants** has a statistically significant positive effect on two of the measures for entrepreneurship (TEA and ebo)

- **adopting permanent residence policies for migrants** has a statistically significant effect on two of the measures for entrepreneurship (TEA and ebo). In both cases, the effect is negative on entrepreneurship

- **adopting political participation policies for migrants** has a statistically significant negative effect only on one measure for entrepreneurship (TEA).

The table 14 summarizes our previous results

TABLE 14: effects of migrant integration policies on entrepreneurship

Policy\entrepr. rate	TEA	ebo	Oppor
Overall	+	…	+
Labour market mobility	…	-	+
Family reunion	…	+	+
Anti-discrimination	-	-	…
Education	+	+	…
Permanent residence	…	-	…
Political participation	-	…	…
Access to nationality	…	…	+

+ = significant positive effect
=   significant negative effect
… = not significant effect

Looking at our control variables, we do not notice any different impact on entrepreneurship, compared to our first three regressions.

Discussion and conclusion

In this final chapter we start our discussion, looking at policy implications. After that, limitations of this study are examined. In conclusion some suggestions are made for future research.

Discussion

Principal findings

In our research we have used three measures for entrepreneurship and we have executed a regression for each of them: two of the regression results had coefficients for migration policies that were statistically positive significant on entrepreneurship, allowing us to conclude that the effect of stimulate countries to adopt politics of integration addressed to migrants affects positively the entrepreneurship-level of a country. This result is consistent with the previous literature: indeed, offering better conditions to migrants, in order to allow them to be part of the hosting society, appears as a necessary condition to stimulate migrants' willingness to be involved in entrepreneurship. A number of case studies, at country-level, have shown, according to Kloosterman (2003) that modifying policy context has influenced rates of immigrant-owned enterprises, hence we understand why the general entrepreneurial rate of a country increases. Policies of integration, indeed, allow migrants to have better access to financial resources (like loans or mechanism useful to sustain businesses), which are fundamental aspects useful to set a business. Although, according to Levie and Autio (2008), financing is considered as the most important factor that regulate general entrepreneurial initiatives, considering migrants' point of view, we have seen that discrimination seems to be the main cause of self-employment: our results concerning anti-discrimination policies promotion show that this category

of policies for migrants impacts negatively the entrepreneurship rates of countries.

It is not a surprise to understand why: promoting anti-discrimination policies is equivalent to figure out a way to reduce discrimination: and discrimination is considered the main factor which incentive migrants to start businesses.

In fact, when a migrant come to a new country, if there are no other options, in order to survive, he will start a business, as unique possible solution. This concept is defined as necessity entrepreneurship, an act which reflect the necessity to be involved in self-employment activities when there is an absence of employment opportunities (Reynolds et. al., 1994)

Discrimination, as the main drive which push migrants to explore self-employment, is strictly related to the labour market discrimination: many studies have tried to measure the effect of labour market discrimination on the occupational choices of migrants:

Liu (2010) estimated that if there would be no discrimination against migrants in China, the number of migrant entrepreneurs would decrease by 16%. This evidence justifies our result about finding a negative relation between promoting labour market mobility for migrants and one measure of entrepreneurship (TEA). Thus, when migrants have the possibility to choose, they might often prefer wage employment to being self-employed. This insight is available also in some empirical patterns of migrant self-employment in the OECD (OECD, 2012): nevertheless, the impact of labour market mobility promotion for migrants has a positive effect on the perception opportunity rate (oppor) in our analysis: in this case, it is useful to recall, again, the concept of discrimination: Teixeira (2002) argues that "Racism has been noted as a major barrier against visible minorities in obtaining consistent financing to run their businesses".

Considering financing difficulties as a big barrier to the creation of new businesses, implementing policies which facilitate migrants to have access to financial aids (such as promoting integration to the labour market) will lead them to "see" the opportunity to start a business: indeed, issues as oppressive regulation, rigidity of labour market and high taxes decrease the business creation process (Choo and Wong, 2006) and disincentive migrants to start businesses.

The last research question investigated was the impact of family reunion policies on self-employment: our results show that family reunion policies have a significant positive effect on entrepreneurship at country-level: consistently with our findings, being close to own family incentive migrants to start businesses, having the possibility to receive help by components of their family. Being married and having children, according to the theory of entrepreneurship of Parker (2009) are positive determinants for entrepreneurship. Hence family is considered a human capital factor which, recalling the neoclassic economic models, has a tremendous positive influence on the start-up and development of migrant entrepreneurship (Fairlie, 2008).

Extra findings

Looking at other policies, the only one which has a significant impact on entrepreneurship (two measures out of three), not included among our research questions, is education.

Borjas (1986) found that educated ethnic individuals (so, migrants) are more likely to start their businesses compared to individuals with less education. Moreover, the role of structural and education support was investigated by Gelard and Saleh (2011): the result of the analysis was the positive impact of education on the development of entrepreneurial intentions.

A possible explanation for these evidences is considering education as a human capital (as family) which is able to provide tools and knowledgeable instruments to migrants in order to manage their own business with more confidence and security. Promote integration policies related to education means also allow to migrants to learn better the host country's primary language. Indeed, according to Borjas (1986), knowledge of the host country's language and culture is necessary for achieve commercial success, considering how important is communication in business activities.

All these findings, integrated by the insight that migrant's knowledge of English is significantly correlated with the probability of becoming entrepreneur in the United States (Stevens & Chen, 1984), explain our results concerning the positive relationship between promoting education policies to migrants and entrepreneurship at country-level.

Limitations

This research is a raw study focused on investigating the association of adopting integration policies for migrants and entrepreneurship and not all the specific details could be taken into account. The used database is relative small, taking in consideration that MIPEX scores are available only for 38 countries.

Besides the technical limitations to our study, a rather important limitation is the lack of existing literature on our topic: the literature provide us information about integration and immigrant entrepreneurship, but there are no studies which investigate on the relation between integration policies for migrants and entrepreneurship.

Performing a country-level analysis, it was impossible to investigate on some interesting information, which could be available only through an individual level analysis: knowing how many years each individual live in the hosting country, or

how does the immigrant detect information to recognize entrepreneurial opportunities are information that could be relevant for future studies on immigrant entrepreneurship.

Concerning MIPEX, scores are not able to represent completely the "integration profile" of each country: for instance, an high score achieved could not explain issues that affect the implementation of a law (i.e bureaucracy flow) or other real difficulties of adopting it. Moreover MIPEX focuses only on legal immigration: that it means that MIPEX cannot provide a full picture of the impact of laws on the unauthorized immigrant population.

Ruedin (2011) , in his study concerning reliability of MIPEX scores, found that the six dimensions of MIPEX are not as distinct as presented : a reduction of items taken in consideration is suggested in order to simplify the index.

According to Ruedin (2011), a better MIPEX instrument should be linked to the Mokken scales.

The Mokken scales entails that the implementation of a specific policy means that other policies at a lower level are believable to be adopted, too.

The missing analysis of network capability is also a limitation: Teixeira and Truelove (2002) have shown that ethnically concentrated areas works as social networking and social capital tools for migrants. These areas provide to potential entrepreneurs information on market opportunities or other resources such as "ethnic labour, credit, knowledge of consumer preferences, and the necessary consumer markets." Teixeira and Truelove (2002).

The importance of this topic is clear and a measure able to verify the impact of these structure should be a next challenge for future researches.

Conclusion and suggestions

Entrepreneurship contributes to the development of an economy, fostering the creation of new markets, implementation of new technologies, creation of new jobs and net increases in real productivity (Behave, 1994).

With this premise, governments, understanding how important is stimulate entrepreneurship for a country, should be concentrated on increasing market's efficiency and providing an economic environment that respond to motivated entrepreneurs. Entrepreneurship is an economic asset and immigrants have to be considered as potential resources, able to contribute to national economies of hosting countries, as much as local population. The heterogeneity of immigrants' experience and knowledge represent the real cultural diversity, which is a necessary condition for the development of a dynamic entrepreneurial context. A target to every countries should be guaranteeing to all his residents to choose a job which represent their willingness.

In order to guarantee it to migrants, recognising foreign educational accreditations could destroy existing labour barriers and, as a result, allow them to apply for jobs related to their previous working experience, or to their working ambitions. In this case, migrants will decide to become self-employed only if they really want to do it, and not as a necessity, reflection of a discrimination.

We have seen that language barrier is another issue to start a business activity: a suggestion to government is creating programs to teach migrants local language for free, incentivizing them to learn and, at the same time, improving integration of them through fostering a better level of communication with locals. Communication between government policies and migrants should be done through use of ethnic media, useful tools to create a more direct contact between the government and migrant communities, which often risk to be isolated from the national society.

Concerning the financing issues, a good strategy of government might be to investigate on why credit is not easily provided to migrants: is it discrimination the main factor or are there other technical motivations (for instance, lack of experience in a specific field or business models not fitted to the standards of the hosting country) that create this barrier?

Considering that countries will take benefit from the partnership between self-employed and financial institutions (entrepreneurship leads to economic prosperity and development, as we have deeply explored in this paper), promoting programs to assist immigrant during the business development process (like helping them during the creation of business plans and assisting them providing information about national legislation) could be a right politic to foster entrepreneurship in a good way: the migrant way!

References

Acosta, P. (2007). Entrepreneurship, labor markets, and international remittances: evidence from El Salvador. *International Migration, Economic Development and Policy, Özden and Schiff Eds*.

Acs, Z. 2006. How is entrepreneurship good for economic growth? *Innovations*, winter: 97–107

Ahmed, H., Khan, M., Mahmood, I. (2011), Entrepreneurship, unemployment and economic growth. *Business Management Review*, 1(18), 1-6.

Arenius, P., & De Clercq, D. (2005). A network-based approach on opportunity recognition. *Small Business Economics*, *24*(3), 249-265.

Audretsch, D., Keilbach, M., & Lehmann, E. (2006). Entrepreneurship and economic growth. *New York, Oxford University Press*.

Baycan-Levent, T., & Nijkamp, P. (2007). *Migrant entrepreneurship in a diverse Europe: in search of sustainable development*. Vrije Universiteit Amsterdam, Faculty of Economics and Business Administration.

Behave, M. P. (1994). A process model of entrepreneurial venture creation. *Journal of Business Venturing, 9*, 223-249.

Bilgili, Ö. (2015). Simultaneity in transnational migration research: links between migrants' host and home country orientation.

Bonin, H. Raffelhüschen, B. and Walliser, J. 2000. Can Immigration Alleviate the Demographic Burden? *FinanzArchiv*, Vol. 57.

Borjas, G. J. (1986). The self-employment experience of immigrants. *Journal of Human Resources,* 21(1): 485–506.

Borjas, G. J. (1995). *Immigration and the welfare state: Immigrant participation in means-tested entitlement programs* (No. w5372). National Bureau of Economic Research.

Borjas, G. J. (2010). *Labor Economics*. New York: Mc Graw-Hill Companies, Inc.

Bourdet, Y. and Falck, H. (2006). Emigrants' remittances and dutch disease in cape verde. *International Economic Journal*, 20(3): 267-284.

Bruder, J., & Räthke-Döppner, S. (2008). *Ethnic minority self-employment in Germany: geographical distribution and determinants of regional variation* (No. 100). University of Rostock, Institute of Economics, Germany.

Bryan, M. L., & Jenkins, S. P. (2013). Regression analysis of country effects using multilevel data: A cautionary tale. *ISER* 12(2), 13–14

Castles, S. (2009). Development and migration — migration and development: what comes first? *Asian and Pacific Migration Journal* 18(4), 441–469.

Cervan-Gil, D. (2016). Host Society Integration as a Development Vector A Literature Review. Knomad working paper 9 1(3), 3-7.

Choo, S., & Wong, M. (2006). Entrepreneurial intention: triggers and barriers to new venture creations in Singapore. *Singapore management review*, *28*(2), 47.

Commission of the European Communities. (2003). Green Paper: Entrepreneurship in Europe. In Enterprise, editor: *Enterprise Publications*

David, H.L. (2007). A Guide to Measures of Trade Openness and Policy, working paper, *Retrieved February*, *22*, 2013.

De Haas, H. (2009). The myth of invasion: The inconvenient realities of african migration to europe. *Third World Quarterly*, 29(7): 1305-1322.

Der-Martirosian, C., Sabagh, G., & Bozorgmehr, M. (1993). Subethnicity: Armenians in Los Angeles. *Immigration and Entrepreneurship. Culture, Capital and Ethnic Networks*, 243-258.

Faggio, G., & Silva, O. (2014). Self-employment and entrepreneurship in urban and rural labour markets. *Journal of Urban Economics*, *84*, 67-85.

Fainstein, S. (2005) Cities and diversity: Should we want it? Can we plan for it? Urban Affairs Review, 41(1)

Fairlie, R. W., & Robb, A. M. (2008). Race and entrepreneurial success: Black-, Asian-, and White-owned businesses in the United States. *MIT Press Books*, *1*.

GEM Global Entrepreneurship Monitor. (n.d.). Retrieved June 20, 2016, from http://www.gemconsortium.org/about/gem

Gelard, P., & Saleh, K. E. (2010). Impact of some contextual factors on entrepreneurial intention of university students. *African Journal of Business Management, 5*(26), 10707-10717.

Gilad, B. (1989). The role of organized competitive intelligence in corporate strategy. *Columbia Journal of World Business*, *24*(4), 29-36.

Global Conflict Tracker. (n.d.). Retrieved June 20, 2016, from http://www.cfr.org/global/global-conflict-tracker

Gott, C. and Johnston. K. (2002). The migrant population in the UK: Fiscal effects. *Development and Statistics Directorate Occasional Paper,* 77, 25-40.

Greene, W. H. (2008). The econometric approach to efficiency analysis. *The measurement of productive efficiency and productivity growth*, 92-250.

Gupta, R. (2013). Workforce diversity and organizational performance. *International Journal of Business and Management Invention*, 2, 36-41.

Haverig, A. (2013). Managing integration: German and British policy responses to the "threat from within" post-2001. *Journal of International Migration and Integration*, *14*(2), 345-362.

Hunt, J. (2010). Skilled immigrants' Contribution to innovation and entrepreneurship in the US. Open for Business: Migrant Entrepreneurship in the United States. *Open for Business*, 257.

Jansen, M., Spronsen, J., & Willemsen, S. (2003). Immigrant entrepreneurship in the Netherlands. *EIM, Zoetermeer*.

Kirzner, I. M. (1989). Discovery, capitalism, and distributive justice. *Oxford*, *16*, 3.

Klapper, L., Amit, R., & Guillén, M. F. (2010). Entrepreneurship and firm formation across countries. In *International differences in entrepreneurship* (pp. 129-158). University of Chicago Press.

Kloosterman, R. C. (2003). Creating opportunities. Policies aimed at increasing openings for immigrant entrepreneurs in the Netherlands. *Entrepreneurship & Regional Development*, *15*(2), 167-181.

Knight, F. H. (1942). Profit and entrepreneurial functions. *The Journal of Economic History*, *2*(1), 126-132.

Landry, C. H. (2000). The Creative City: A Toolkit for Urban Innovators, *Earthscan, London, 78, 123-126*

Levie, J., & Autio, E. (2008). A theoretical grounding and test of the GEM model. *Small business economics*, *31*(3), 235-263.

Light, I. (1984). Immigrant and ethnic enterprise in North America*. *Ethnic and racial studies*, *7*(2), 195-216.

Liu, Y. (2010). Urban villages under China's rapid urbanization: unregulated assets and transitional neighbourhoods. *Habitat International*, *34*(2), 135-144.

Lu, X., & White, H. (2014). Robustness checks and robustness tests in applied economics. *Journal of Econometrics*, *178*, 194-206.

Lucas Jr, R. E. (1978). On the size distribution of business firms. *The Bell Journal of Economics*, 508-523.

Mansuri, G. (2007). *Does Work Migration Spur Investment in Origin Communities? Entrepreneurship, Schooling, and Child Health in Rural Pakistan.* Washington, DC: Palgrave Macmillan for the World Bank

Michelacci, C., & Schivardi, F. (2013). Does Idiosyncratic Business Risk Matter for Growth? *Journal of the European Economic Association*, *11*(2), 343-368.

Migrant Integration Policy Index | MIPEX 2015. (n.d.). Retrieved June 18, 2016, from http://www.mipex.eu/

Migration | UNFPA - United Nations Population Fund. (n.d.). Retrieved April 24, 2016, from http://www.unfpa.org/migration

Minniti, M., & Lévesque, M. (2008). Recent developments in the economics of entrepreneurship. *Journal of Business venturing*, *23*(6), 603-612.

Mora, M. T., & Dávila, A. (2006). Mexican Immigrant Self-Employment along the US-Mexico Border: An analysis of 2000 census data. *Social Science Quarterly*, *87*(1), 91-109.

Mueller, S. L., & Thomas, A. S. (2001). Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of business venturing*, *16*(1), 51-75.

OECD (2012). Renewing the skills of ageing workforces: the role of migration. I*nternational Migration Outlook 2012*, OECD Publishing

Parker, S. (2009). The economics of entrepreneurship. *United States of America, New York: Cambridge University Press*.

Reynolds, A. (1994). Patho-flow diagramming: a strategy for critical thinking and clinical decision making. *Journal of Nursing Education*, *33*(7), 333-336.

Ruedin, D. (2011). The reliability of MIPEX indicators as Scales. SOM Working Paper 3, 1-19

Sanders, J. M., & Nee, V. (1996). Immigrant self-employment: The family as social capital and the value of human capital. *American sociological review*, 231-249.

Schumpeter, J. A. (1942). Creative destruction. *Capitalism, socialism and democracy*, 82-5.

Schumpeter, J. A. (1934). *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle* (Vol. 55). Transaction publishers.

Shane, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217-226.

Shorrock, A. (2008). *Opening address.* Presented at the United Nations University-WIDER Conference on Entrepreneurship and Economic Development, Helsinki, Finland.

Stark, O., & Wang, Y. (2002). Inducing human capital formation: migration as a substitute for subsidies. *Journal of Public Economics*, *86*(1), 29-46.

Sternberg, R. (2004). Educational framework conditions and entrepreneurial activities in Germany. *RWI-Mitteilungen,* 54, 195-215.

Stevens, R., & Chen, G. (1984). *Minority-owned business problems and opportunities: A 1983 update*. Minority Business Development Administration, U.S. Department of Commerce.

Stewart Jr, W. H., & Roth, P. L. (2001). Risk propensity differences between entrepreneurs and managers: a meta-analytic review. *Journal of applied psychology*, *86*(1), 145.

Teixeira, C., & Truelove, M. (2002). *Cultural resources, ethnic strategies, and immigrant entrepreneurship: A comparative study of five immigrant groups in the Toronto CMA*. Joint Centre of Excellence for Research on Immigration and Settlement.

Tervo, H. 2006. Regional unemployment, self-employment and family background. Applied Economics 38: 1055–1062.

The Labour Market Effects of Immigration. (n.d.). Retrieved July 14, 2016, from http://www.migrationobservatory.ox.ac.uk/briefings/labour-market-effects-immigration

Waldinger, R. (1990). Ethnicity and entrepreneurship.*Annual review of sociology*, 111-135.

Weber, E. U., & Milliman, R. A. (1997). Perceived risk attitudes: Relating risk perception to risky choice. *Management Science*, *43*(2), 123-144.

Wennekers, S., Audretsch, D., & Thurik, R. (2002). An eclectic theory of entrepreneurship: policies, institutions and culture. *Springer US*, 11-81.

Wong, P. K., Ho, Y. P., & Autio, E. (2005). Entrepreneurship, innovation and economic growth: Evidence from GEM data. *Small Business Economics*,*24*(3), 335-350.

World Development Indicators. (n.d.). Retrieved June 18, 2016, from http://data.worldbank.org/data-catalog/world-development-indicators

Zachary, P. (2000) The Global Me: New Cosmopolitans and the Competitive Edge: Picking Globalism's Winners