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Abstract

Second generation immigrants starting businesses in non-traditional immigrant industries have inspired a new line of research on migrant entrepreneurship. New entrepreneurs are expected to profit from better economic prospects due to their relatively high levels of human capital and their better integration into society compared to their colleagues of their parent's generation. So far it is unclear whether these expectations have been met due to lack of reliable data on immigrants in general and immigrant entrepreneurs in particular. This paper uses newly available data from Statistics Netherlands (1999 – 2004) to compare the differences between business success of second generation and first generation immigrant entrepreneurs. The data allow a comparison of these intergenerational differences for each of the five major non-Western groups of immigrants in the Netherlands and contrast them with developments among native entrepreneurs both in inter-temporal and longitudinal perspective. Contrary to what is usually expected, higher levels of socio-cultural integration of second generation immigrants do not lead uniformly to better business prospects. The differences between the major ethnic groups of immigrants are noteworthy as are the differences with non-immigrant entrepreneurs. While high levels of human capital and social integration foster entrepreneurial success, they are no guarantee for good business prospects.

Keywords: Immigrant entrepreneurship, intergenerational differences, business performance, migrant integration, non-Western migrants
JEL codes: R23, J11, J15

1. Introduction

Over the past decades, most Western countries including the Netherlands have seen a notable increase of immigrant business ownership, especially for migrants originating from non-Western countries (ITS 2007; CBS Statline 2009). This development seems promising in light of ongoing disadvantages of the latter groups in the labour market. Participation rates are low and there is a substantial earnings gap to natives and immigrants originating from Western countries. While immigrant entrepreneurship can be a promising alley enabling individuals to gain economic mobility and social recognition (Van den Tillaart 2001; Choenni 1997; Kontos 2003; Ram and Smallbone 2003), it is commonly discredited on the grounds of being low value-added, little innovative, and marginally profitable (Light and Rosenstein 1995; Waldinger 1996).[1]

Explorative studies by Van den Tillaart (2001), EIM (2004) and Rusinovic (2006), however, suggest that the traditionally gloomy image of migrant entrepreneurship needs to be reassessed as a "new" group of migrant entrepreneurs - namely the children of migrants or the so-called second generation – has started businesses in more promising sectors of the economy. Therefore, the first objective of this paper is to investigate the claim that 2nd generation migrant entrepreneurs hold substantially better economic positions with promising future prospects compared to their parent's generation. More specifically, we offer a systematic account of 1st and 2nd generation migrant entrepreneurs in the Netherlands based on administrative data from different sources. From a theoretical perspective the paper contributes to the field in two ways. First, while much of the current literature on migrant entrepreneurship has emphasized human and social capital as important determinants to enter self-employment (see e.g. Fairlie 1999; Clark & Drinkwater 2000; Ram et al. 2000; Levent et al. 2003; Arenius and De Clercq 2005; Wilson et al. 2007; Andersson and Hammarstedt 2010), we address success of migrant ventures and focus more on firm and firm location characteristics. In our view addressing business success is an essential missing piece, as many self-employed in general and specifically migrant self-employed operate marginal businesses in fragmented industries. Thus, only looking at the self-employment decision does not capture the heterogeneity of self-employment ranging from self-employed generating incomes close to social security benefits to wealthy and community wide respected businessmen (Collins 2003; Collins and Low 2010). Second, we illustrate the heterogeneity across different migrant

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[1] In this discourse, migrant entrepreneurship refers to businesses operated by migrants originating from non-Western or less developed countries.

groups and develop hypotheses relating to entrepreneurial success of non-Western migrant entrepreneurs in the Netherlands.

The paper is structured in six sections. Following the introduction, Section 2 provides a general overview of migrant entrepreneurship in the Netherlands with special focus on the recent developments for the non-Western group. Section 3 discusses prior literature on migrant integration trajectories and entrepreneurship to develop the research hypotheses of the study. Sections 4 to 6 present the research methodology, study findings and their discussion. Section 7 concludes.

2. Migrant entrepreneurship in the Netherlands

Table 1 depicts the self-employment figures of different population groups in the Netherlands between 1999 and 2004. Overall self-employment has remained relatively constant, while self-employment among non-Western migrants has strongly and consistently increased absolutely from 32,700 to 45,300 and relatively from 4.3 percent to 5.9 percent between 1999 and 2004. Similar growth trends of non-Western entrepreneurship are found in many other European countries such as the UK (Thompson et al. 2010; Ram et al. 2006), Germany (Wilpert 2003) or France (Ma Mung and Lacroix 2003; Baycan-Levent and Nijkamp 2009). The non-Western group of entrepreneurs is further decomposed in first generation and second generation entrepreneurs to show that the former group accounts for the lion's share (more than 85 percent) of business activities as most second generation migrations are still at schooling age. Nevertheless, over the period 1999-2004 the second generation has increasingly entered self-employment with annual growth rates averaging at more than 10 percent.

Table 1 here

As the population of non-Western migrant entrepreneurs is rather heterogeneous, we select the five largest groups originating from Turkey, Morocco, Suriname, the Dutch Antilles/Aruba and China, which together account for more than half of non-Western entrepreneurship. Among these five parties, the Turkish group is by far the largest (7,700 to 11,500), followed by the Surinamese one (5,900 to 7,400), the Chinese one (3,400 to 4,700), the Moroccan one (2,700 to 4,700), and last but not least the Dutch Antillean/Aruban one (1,300 to 2,000).

Table 2 shows the self-employment propensities for different country-of-origin populations for the period 1999-2004 including the five main non-Western groups. Self-employment is still higher among the native population (11.5 percent) than among non-Western migrants (8.8 percent for the first generation and 4.5 percent for the second generation), but the gap is narrowing as non-Western migrant self-employment has increased by 20 percent over the six year period. Figures differ considerably between the five non-Western migrant groups investigated. Self-employment is more popular among Turkish and Chinese migrants than among migrants of the other three origin clusters.[2] Finally, over the six year period, self-employment propensities increased for first and second generations of the Turkish, Moroccan, Surinamese and Antillean groups, but decreased for the first generation Chinese and stayed about constant for the second generation Chinese. In summary, over the period 1999 to 2004, non-Western entrepreneurship has increased notably in scale, which can be largely attributed to the developments of five main groups.

Table 2 here

3. Integration trajectories and immigrant entrepreneurship

First to second generation changes in migrant entrepreneurship are closely related to migrant integration trajectories in their host societies as will be discussed in this section. Integration trajectories have been intensively studied to date (Portes and Zhou 1993; Alba and Nee 2004; Portes, Fernandez-Kelly and Haller 2008; Vermeulen and Penninx 1994, 2000; Crul 2000; Dagevos 2001), but surprisingly, the literature turns a blind eye at self-employment, although labour market positions are portrayed as an important outcome of integration. Alike in the labour market, it is expected that integration into the host society increases the chance to enter self-employment and raises the developmental prospects of the founded firms, because integration enhances migrants' abilities to access vital business information and to mobilise necessary resources (see also Constant and Zimmermann 2006; Evans 1989; Le 2000).

3.1. Intergenerational differences in host society integration

In this paper, we utilize the integration definition of Vermeulen and Penninx (1994, 2000) which distinguishes between two dimensions of integration, namely the socio-cultural and the

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[2] The first generation Chinese population is a unique case as self-employment is more popular than salaried employment. This pattern is explained by the large number of Chinese (mostly from Hong Kong) migrants that entered the Netherlands in the '60s and opened mostly Chinese restaurants.

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structural dimensions.[3] The socio-cultural dimension reflects interpersonal relations with the native Dutch population and the extent of cultural, attitudinal, and behavioural changes towards the host society (i.e. Dagevos, Gijsberts and Van Praag 2003; Dagevos 2001; Vermeulen and Penninx 2000; Veenman 1995; Rusinovic 2006). Structural integration refers to the participation of immigrants in core institutions of society and is usually measured by educational attainment, position in the labour market, and residential integration (Dagevos 2001; Rusinovic 2006).

Integration-related aspects of migrants and children of migrants have been widely studied for the case of the Netherlands (see e.g. Crul and Pásztor 2007; Pels and de Gruyter 2006; Crul 2000). The studies' findings generally support the segmented assimilation model (Portes and Zhou 1993), which proposes that different ethnic groups follow different assimilation pathways at different paces. Despite occasional concerns of intergenerational downward social mobility of disadvantaged immigrant groups, Alba and Nee (2004) point out that even in most disadvantaged groups, the dominant trend is still upward social mobility.

Using Vermeulen and Penninx (1994, 2000) integration terminology, the socio-cultural and structural integration of the five major migrant groups in the Netherlands is assessed in Table 3. In general, the second generation is more integrated along the socio-cultural and the structural dimension. The second generation has a better command of the Dutch language, upholds more interpersonal relations with native Dutch persons and demonstrates opinions, attitudes and behaviour, which closer resemble the ones of the native Dutch population (Dagevos, Gijsberts and Van Praag 2003; Beekhoven and Dagevos 2005; Rusinovic 2006). With regard to the structural dimension, the second generation generally appears to achieve higher levels of education and holds more favourable positions in the labour market than their parents. Nonetheless, migrant disadvantages as compared to natives persist in educational achievements for some groups and in the labour market for all groups (Vermeulen and Penninx 1994, 2000; Dagevos and Bierings 2005; Zorlu and Traag 2005; Rusinovic 2006).[4] Residential allocation, which indicates exposure to the host culture, has hardly changed between the first and second generation with the exception of the Dutch Antillean group. Thus the picture regarding integration on the structural dimension is mixed.

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[3] A thorough discussion of varying definitions of migrant integration is beyond the scope of this paper. Please refer to the studies by Dagevos (2001), Portes, Fernandez-Kelly and Haller (2008) for comprehensive overviews of going definitions.

[4] It should be noted that the comparison of the first and second generation on educational attainment and labour market position is problematic due to the age difference between the two groups and the fact that many second generation migrants, especially those with better prospects, are still in education. Thus the population segment at the lower end of the education span and labour market is overrepresented.

For the second generation, we observe a higher level of integration regarding education, but not regarding the labour market or residential choices.

Table 3 here

Table 3 also reveals that integration trajectories of the five migrant groups differ as segmented assimilation theory would predict. With regards to socio-cultural aspects, for example, gains in language skills are higher for the Turkish, Moroccan and Chinese than for Surinamese and Dutch Antillean migrants, certainly because Dutch is an official language in the two latter countries. While, consequently, social contacts to natives are also lower for the Turkish, Moroccan and Chinese migrants, a clear intergenerational catching up trend is visible for these groups. Turkish and Moroccan migrants also identify more strongly with their ethnic groups and are more likely to uphold traditional values. This may be explained, next to cultural and linguistic considerations, by the groups' relatively higher levels of self-sufficiency, as the size of their ethnic groups is large enough to form a viable sub-cluster within the host society.

With regards to structural integration, a clear convergence trend to natives is observed in first to second generation migrant educational achievements, whereby the Chinese, Antillean and Surinamese second generations are actually topping educational levels of the native group. The Turkish, Moroccan and Chinese groups show the largest gains between the generations. Despite great intergenerational improvements in educational attainment, labour market prospects of the second generation migrant groups lack consistently behind those of the natives even for the groups of the second generation that are better educated than the Dutch. Especially, Turkish, Moroccan and to a lesser extent Surinamese migrants are experiencing difficulties in the transition phase from education to the labour market (Dagevos 2001; Crul and Pásztor 2007). In the Antillean and Chinese cases, educational advances of the second generations seem to have translated to significant labour market improvements (Vogels et al. 1999; Dagevos 2001; Martens 1999). Regarding residential allocation, the final element of the structural dimension, we observe some differences between the five migrant groups but few changes between the first and second generations. While both generations of Turkish, Moroccan and Surinamese migrants reside in areas with a high migrant concentration, second generation Antilleans have moved to less concentrated areas. The Chinese migrants form a special group as both its first generation and even more so its second generation are highly dispersed across the country and consequently reside in low concentration neighbourhoods.

3.2. Mixed embeddedness framework and migrant entrepreneurship

The analysis above revealed that the second generation has achieved higher levels of socio-cultural and structural integration in society than their parents' generation for all five ethnic groups. But, how do these changes translate to dynamics in migrant entrepreneurship? The mixed embeddedness framework developed by Kloosterman, van der Leun and Rath (1999) offers a useful theoretical approach. The framework builds upon interaction theory (Aldrich et al. 1990; Light and Rosenstein 1995) and considerations regarding social embeddedness (Granovetter 1985). It departs from the notion that immigrant entrepreneurship depends on a multitude of contingencies determining the interplay of individual characteristics of the entrepreneur on the one side and characteristics of the wider social, economic and politico-institutional environment on the other side. The latter context, which Kloosterman et al. (1999) coined opportunity structures, describes the setting creating business opportunities for prospective and established entrepreneurs. Opportunity structures are shaped by economic factors both on the supply side, such as entrepreneurs' individual and cultural characteristics, as well as on the demand side, e.g. the presence of an accessible customer base. At the same time politico-institutional factors, namely existing national rules and legislations, institutions and laws enable or hamper businesses start-ups and development (Kloosterman 2010).

Socio-cultural and structural integration affect opportunity structures of prospective and established migrant entrepreneurs as they foster the main-stream market match between the supply side (products/services offerings) and the demand side (products/services demanded by customers). In other words, integration determines to what extent migrant entrepreneurs are able to identify and seize business opportunities in main-stream markets. In terms of the mixed embeddedness framework, the integration differences observed for first and second generation migrant entrepreneurs result in a divergence of opportunity structures relating to the socio-cultural and economic (and possible also politico-institutional) dimensions. Generally, we expect that integration in society fosters entrepreneurial prospects of migrants, because they have better opportunities to address a broader range of potential markets.

3.3. Hypothesis Development

Following up on the prior discussion on the relation between integration and migrant entrepreneurship, this section introduces the research hypotheses of the study. To recap, this study sets out to investigate the effects of the first and second generation on entrepreneurial outcomes of the five major non-western migrant groups in business. More specifically, it

presents possible explanations for the observed business performance and the intergenerational differences therein, which are partly attributed to differences in integration. As mentioned before, across all origin groups, the second generation has achieved higher levels of integration than the first generation, which is expected to enhance the prior groups' business prospects. Hypothesis 1, the main hypothesis of the study, states this more formally:

Hypothesis 1: Business prospects of the second generation groups of migrant entrepreneurs are more promising than for their first generation counterparts.

For the following hypotheses, we first link variables reflecting the opportunity structures to business performance. In a second step we introduce generation as a moderator and investigate whether the second generation profits more from certain opportunity structures than the first generation. In general, business prospects of entrepreneurs are better in more prosperous areas characterised by higher employment rates and wage levels, because the customer base in those areas has a stronger spending power. While this positive relationship will hold for all groups of entrepreneurs, the second generation entrepreneurs will profit relatively more from these market opportunities than the first generation. The second generation's higher socio-cultural integration allows it to seize these opportunities along the supply side.

Hypothesis 2a: Local employment rates and wage levels are positively related to migrant business performance.
Hypothesis 2b: Business prospects of migrant entrepreneurs are increasing with local employment rates and wage levels, but more so for the second generation than for the first generation.

Although the literature on migrant entrepreneurship stresses that the local presence of the co-ethnic community plays a role in the development of migrant businesses as entrepreneurs are socially embedded in their communities (Light 1979; Light et al. 1985; Portes and Bach 1985; Raijman and Tienda 1999; Renzulli, Aldrich and Moody 2000), the direction of the effect is ambiguous. On the one hand, the presence of the co-ethnic community is portrayed as an asset, which may create specific migrant business opportunities (co-ethnic markets), render a supportive customer base and/or offer business advantages through reduced recruitment and hiring costs. On the other hand, the presence of the co-ethnic community may also affect migrant business prospects negatively as the community places demands upon

entrepreneurs that are conflicting with business development or as entrepreneurs operating solely in co-ethnic markets reach growth limits in saturated markets. Irrespective of the direction, it is expected that the local presence of the co-ethnic community will have a larger effect on business prospects of first generation migrants than on the ones of second generation migrants as social relations and business relations of the former group are more centred on their local co-ethnic community. Moreover, as first generation migrant firms tend to cluster in the same industries, the local co-ethnic business presence is likely to have a stronger effect on business prospects of the first generation than on those of the second generation. This yields the following hypotheses, which focus on the local co-ethnic residential concentration and the local concentration of co-ethnic businesses:

Hypothesis 3a: Local co-ethnic residential and business concentrations are negatively related to migrant business performance.
Hypothesis 3b: The magnitude of the relationships between local co-ethnic concentrations and migrant business prospects is larger for first generation entrepreneurs than for second generation ones.

The lion's share of non-Western migrant business operations are situated in the four major cities of the Netherlands, namely Amsterdam, The Hague, Rotterdam and Utrecht, the economic heartland of the country (EIM 2004). These cities generaly offer more favourable business circumstances to migrant entrepreneurs than other parts of the country as mainstream and ethnic local markets are more prosperous and entrepreneurs have easier access to the extensive networks of national and international commercial actors. We furthermore argue that the second generation is benefitting relatively more from the commercial opportunities arising in these urban economies than the first generation as it is better integrated in essential commercial networks, is more informed about market developments and possesses higher professional skills.

Hypothesis 4a: Business performance of migrant firms in the four major Dutch cities is higher than elsewhere in the country.
Hypothesis 4b: The business setting in the four major Dutch cities is relatively more beneficial for business prospects of second generation entrepreneurs than for first generation entrepreneurs.

As mentioned before, first and second generation migrant entrepreneurs tend to operate in different industry sectors explaining the variations in business development patterns between the groups (Van den Tillaart 2001; EIM 2004; Rusinovic 2006). While the first generation is predominantly active in the low margin trade and hospitality sectors, the business activities of the second generation are more diverse including more promising sectors like business services. In addition, market opportunities of first and second generation entrepreneurs are not the same at the point of business establishment as an economic evolution from production to services has taken place over the past decades. Therefore, second generation entrepreneurs are more frequently found in the more promising services and especially business services sectors. On the contrary, the share of entrepreneurs operating in the hospitality sector has reduced. It is thus expected that the second generation is more successful in entrepreneurship than the first generation as it is operating in more promising sectors.

Hypothesis 5a: Migrant business performance is higher in the more promising sectors, i.e. the business services sector, than in the traditional migrant sectors, i.e. the trade and hospitality sectors.

Hypothesis 5b: While second generation migrant entrepreneurs operating in promising sectors are more successful than their first generation counterparts in these sectors, those operating in traditional sectors are less successful than their first generation counterparts.

4. Methodology

4.1. Data sources

The analysis is based on administrative data for the six-year period 1999-2004 collected by Statistics Netherlands and covers all Dutch residents (16 million people) including 800.000 self-employed. The self-employment data are taken from the SSB (Social Statistical Database), which complements the information from the administrative registers with demographic and socio-economic information. We match three datasets, namely the GBA (Gemeentelijke Basisadministratie – Base administrative register of the municipalities) providing demograhic information as well as place of residence and the SSB Zelfstandigen (Social Statistical Database of Self-employed) providing information on the firms, such as size (number of employees) and location, industry sector, annual profits, deductibles and tax contributions and the SSB Banenbestand (Social Statistical Database of Jobs) containing

information on all employment relationships in the Netherlands (about 10 Mio. records in 2004) from social insurance records and is complemented with information from tax records as well as data from a large scale employer survey (EWL).

These three datasets are merged on basis of personal identifiers (RIN numbers) of the entrepreneurs as well as the municipal location codes of the firms. The resulting panel dataset for the period 1999-2004 makes it possible to track entrepreneurs over time and space and conduct an in-depth business performance analysis of the various origin groups of entrepreneurs. The dataset is reduced to include six origin groups of entrepreneurs, namely native (991,308 individuals), Turkish (19,708 individuals), Moroccan (7,618 individuals), Surinamese (12,300 individuals), Dutch Antillean (3,298 individuals) and Chinese entrepreneurs (8,578 individuals). Furthermore, it is restricted to small and medium-sized firms with up to 100 employees and excludes agricultural firms.

4.2. Measurements

Table 4 depicts the variables used in the later analyses. Acknowledging that performance is a multi-dimensional concept, three distinct indicators are used to measure it, namely business profit, firm growth (increase in number of employees) and firm survival. The bivariate variable set 'first generation' and 'second generation' indicates the groups to which the entrepreneurs belong. In the later analyses, these variables will reveal the differences between native entrepreneurs and first generation respectively second generation migrants. Characteristics of the entrepreneur and the firm considered are age, marital status, gender and the sector the firm is active in. The demand side of the opportunity structure is captured by various variables describing the environment (municipality) surrounding entrepreneurial operations, namely the local employment level, the average wage level and the concentration of migrants and firms belonging to the same group as the entrepreneurs.

Table 4 here

5. Findings

5.1. Descriptive Analysis

This section presents the study's descriptive findings visualised in Table 5 and Figure 1. To start with, Table 5 provides an overview of the variables' descriptives per origin group separated for the first and second generation. While the study aim is to compare first and

second generation groups of entrepreneurs, the inclusion of the native Dutch group as reference category is essential to enable meaningful interpretation of some of the results. A distinction is made in the table between on the one side the entrepreneur and firm-based characteristics, which are defined on the individual level, and on the other side the firm location-based characteristics, which are a number of collective characteristics shared by entrepreneurs with the same business location.

With regards to the entrepreneur and firm-based characteristics, as expected, second generation entrepreneurs are younger and less likely to be married across all migrant groups. Moreover the second generation includes relatively more female entrepreneurs than the first generation. Migrant entrepreneurship is strongly concentrated in the country's four major cities for the first as well as the second generations. In particular 40 to 50 percent of the Turkish, Moroccan and Surinamese entrepreneurs locate in these four cities compared to just 30 percent for the Dutch Antillean and even 19 to 34 percent for first and second generation Chinese. Furthermore, it is striking to observe that, except for the Surinamese group, the migrant business concentration in the major four cities has not reduced from the first to the second generations. This suggests that the four major cities behave as magnets in attracting first and second generation migrant entrepreneurs alike.

Comparing firm-based performance indicators between the generations of the origin groups, three clusters emerge, namely the Turkish/Moroccan, the Surinamese/Dutch Antillean and the Chinese cluster. These three clusters reflect important differences in the migration histories of the groups to the Netherlands. Most of the first generation Turkish and Moroccan migrants entered the country as labour migrants in the 1960s when the Netherlands - like many other European countries – experienced a tremendous shortage of workers and the government implemented programs to attract them from abroad. In contrast, most first generation Surinamese and Dutch Antillean migrants originate from former Dutch colonies and repatriated to the Netherlands in great numbers from the 1970s onwards. Finally, most first generation Chinese migrants originate from Hong Kong and other Chinese coastal areas that historically upheld trade relations with the Netherlands and entered the country in the 1960s. A second, largely less numerous group of Chinese migrants settled in the Netherlands more recently as asylum seekers.

The intergenerational trends of the firm-based performance indicators differ across the three origin clusters introduced in the above paragraph. In the Turkish/Moroccan cluster, the second generation realizes lower profits, slower growth and has lower survival rates than its parents' generation. The already considerable performance gap between natives and the first generation has even widened for the second generation. This suggests that intergenerational

advances in the socio-economic position in society have not translated to better business prospects for Turkish and Moroccan migrants. In the Surinamese/Dutch Antillean cluster, there is no difference between the two generations, which implies that their performance gap to natives is sustained across generations. Finally, only the Chinese second generation entrepreneurs outperform their parents in profits, but not in terms of growth and survival. In terms of firm profitability they are even to par with natives and the second generation's survival rates do come fairly close to natives' survival rates. Of all five origin groups, the Chinese is the only one in which intergenerational advances in the socio-economic position seem to have tentatively translated to higher business performance of the second generation.

Table 5 here

The lower panel of Table 5 compares a number of firm location-based indicators between the generations of the origin groups. These are namely the local employment and wage levels as well as levels of co-ethnic local residential and business concentration.[5] While no significant intergenerational changes are observed with regard to the local employment and wage levels, a rather striking intergenerational change is visible for the concentration variables. Not only does the second generation Chinese group, as was expected[6], operate in areas of higher co-ethnic residential and business concentration than its first generation counterparts, a likewise pattern is found for the Turkish and Moroccan entrepreneurs. However, no intergenerational changes are observed for the origin cluster of Surinamese and Dutch Antilleans. Leaving the Chinese group aside, it is noticeable that the two origin clusters (Turkish/Moroccan, Surinamese/Dutch Antillean) with no intergenerational business performance improvements are also the ones that operate in environments with a high level of co-ethnic concentration.

Apart from Table 5, Figure 1 provides an important contribution to the paper's descriptive analysis as it shows the sector distributions of business activities of the various origin groups. The clustering of origin groups that was observed before is again prevalent. The Turkish/Moroccan cluster is traditionally more active in the trade and hospitality sectors, but the second generation turns from the hospitality to the business service sector. The Surinamese/Dutch Antillean cluster is more active in the services sectors, but also in trade

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[5] For natives, the levels of local ethnic residential and business concentration are defined as the average levels of local ethnic concentration of the five migrant groups (residential and business concentrations respectively).
[6] As the first generation operates by and large Chinese specialty restaurants spread all throughout the country.

(Surinamese) and manufacturing (Dutch Antillean), but intergenerational shifts are less pronounced. The Chinese first generation group is a special case as four-fifth of its business activities is found in the hospitality sector, i.e. the typical Chinese take-aways and low-budget restaurants that are found even in the smallest Dutch village. On the contrary, the Chinese second generation has turned away from the hospitality sector and towards business services.

Figure 1 here

The observed intergenerational sector shifts demand some further remarks. First, they document the change in market opportunities that took place from one generation to the next. This is perhaps most convincingly demonstrated by the Chinese case, in which first generation entrepreneurs exploit the Chinese restaurant niche market to saturation and thus requiring many second generation Chinese entrepreneurs to start-up in different sectors if not taking over the family business. Second, next to the trends that may be expected from market developments, it seems that the second generation groups of the first cluster (Turkish/Moroccan) seize the new opportunities of the services economy the least of all groups. Instead, these groups tend to keep to the trade sector in a similar fashion than their parents' generation did. The underrepresentation of these second generation groups in the services sectors (as compared to natives and the other migrant groups) may be explained by the groups' continued educational and labour market disadvantages, persistence of language and cultural barriers and lack of essential business information that trouble business start-ups in these sectors.

5.2. Testing of hypotheses

Econometric analyses are carried out to test the hypotheses. Our analysis strategy is as follows. For each migrant group we estimate annual profit, growth and survival separately by contrasting the respective migrant group with a random sample of natives taken from the whole Dutch population.[7] Each of these estimations is a sequence of three models starting with a base model that only includes the characteristics of entrepreneurs. The second and third model, base+ and base++ respectively, also include the business and business-location characteristics. The latter two models are identical with the exception of the variables local

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[7] Missing variable information of entrepreneurs in the dataset is imputed from information available for other years wherever possible and favouring temporal proximity. Nonetheless 3.1 million observations (around 50%) of the dataset remained with missing variable information with regards to firm location, size, country of origin information, industry sector, and annual profits. Given the relatively random nature of the distribution of missing observations across the relevant subpopulations of this study, and given the importance of the variables for the further analysis, it was decided to reduce the dataset to the observations with fully available information on all variables.

co-ethnic concentration and co-ethnic business concentration. As these two independent variables are highly correlated (r > .90) we do not include them in one model to mitigate problems of multicollinearity. Moreover, to test hypotheses two to five, we extend the prior models by first and second generation interaction terms with other relevant variables (citytop4, local co-ethnic residential concentration, local co-ethnic firm concentration, local employment and wage levels, and industry sector dummies) and analyse specific first and second generation effects in line with the formulated hypotheses. Robustness checks show that our results are stable.

As can be seen in Tables 6 to 8, as expected, the effects of the entrepreneur's characteristics on firm prospects are consistent across the models and outcome variables. Age has a positive impact on firm performance at a decreasing rate. Thus life and professional experience tend to result in more informed business decisions, but older entrepreneurs tends to be less agile to capitalize on market opportunities. Married entrepreneurs tend to perform better, which suggest that the support of a spouse either directly (assistance in business operations and/or financing) or indirectly (emotional and/or time-management support) contributes to the firm's success. Finally, female entrepreneurs have a lower performance than males.

Tables 6 to 9 depict the regression findings for testing the research hypotheses. The first three tables show the results of the general random effects regressions, which include the bivariate variables first respectively second generation migrant. On basis of these variables hypothesis 1 can be assessed. The other hypotheses are addressed in Table 9, which presents random effects regression findings of the interaction models. Moreover, to reduce output complexity, the table exclusively displays first and second generation composite coefficients (base plus interaction coefficients) of the variables relevant to assess hypotheses 2 to 5 as well as the corresponding test outcomes. Whenever the stated hypotheses 2a, 3a, 4a, 5a are supported by our findings, this is indicated by asterisks behind the composite coefficients. In a similar fashion, asterisks in the 'Welch (t)' columns indicate that the stated hypotheses 2b, 3b, 4b, 5b are supported by our findings. Finally, since multiple test outcomes need to be considered to assess the validity of the formulated research hypotheses per origin group, we apply the general rule that a hypothesis is confirmed by the data whenever at least half of the group's test results are supportive of the stated claim at the 10% significance level.

Hypothesis 1. The findings of the multivariate analyses support the earlier descriptive outcomes, which illustrated a high degree of diversity in intergenerational trends. As we compare the first and second generation coefficients in tables 6 to 8 and consider the groups' means comparison test outcomes in the final rows of the tables, we observe that, for annual

15

profits, the coefficients are larger for the second generation entrepreneurs in the Moroccan, Surinamese and Antillean cases, about the same for the Turkish and smaller for the Chinese group. Thus, regarding profits, three of the five groups are doing better than their parents. Looking at firm growth the picture changes considerably. None of the second generation groups of entrepreneurs grows more than their parents' generation, while the second generation Moroccan and Surinamese groups actually tend to grow less. With respect to firm survival, second generation Turkish and Antillean entrepreneurs show higher survival rates than their parents' generation, while intergenerational differences of the Moroccan and Surinamese groups are insignificant at the 10% level and the Chinese second generation actually tends to have lower survival rates. Overall, the findings show that the intergenerational developments differ considerably between the origin groups, an outcome which supports the segmented assimilation theory. Reflecting on the prior findings in light of Hypothesis 1, we come to the conclusion that the hypothesis, which suggests that the second generation would outperform the first generation, is not generally supported despite some indications of higher profitability and survival rates in the labour migrant (Turkish/Moroccan) and colonial migrant (Surinamese/Antillean) clusters. These regression findings thus contrast with the prior descriptive findings on business performance (refer to Table 5), which suggested especially promising intergenerational developments for the Chinese group and little promising developments for the labour migrant (Turkish/Moroccan) cluster. On the same note, two observations from the regression findings are particularly noteworthy. First, within the colonial migrant cluster we detect different intergenerational trends for the Antillean and Surinamese groups. Whereby the second generation Antillean entrepreneurs tends to outperform its parent's generation, the second generation Surinamese does not. This difference between the two origin groups may be explained by the noted difficulties of the second generation Surinamese group in the (transition to the) labour market (refer to Table 3), which are not shared with the Antillean second generation. This gloomy scenario in the regular labour market likely triggers subsistence self-employment among the Surinamese second generation given these entrepreneurs' generally unfavourable start-up conditions. Second, in contrast with the descriptive findings, the regression findings for the Chinese group clearly point towards an intergenerational reduction in business performance. This perhaps surprising outcome – given the group's substantial intergenerational advances in education and labour market achievements - may be explained by one or a combination of the following factors: First, a negative selection effect into self-employment and/or second, a change in market opportunities from the first to the second generation. First, as the Chinese second generation is greatly more successful in the labour market than its parent's generation, it is

16

possible that self-employment for the second generation Chinese becomes a fall-back strategy attracting relatively more individuals who do not manage to find employment in the regular labour market. Second, another explanation may be that the second generation is facing less promising market conditions than the first generation, which over the past decades has effectively established and maintained a unique competitive edge in the profitable and low risk Chinese restaurant niche market. However, as this niche is saturated at the point at which the second generation enters self-employment, the latter group of entrepreneurs is consequentially left to compete in more risky and competitive main-stream markets that may offer promising rewards to some, but clearly not all entrepreneurs.

Hypothesis 2a and 2b argue that economic prosperity in the municipality (indicated by high employment and average wage levels) enhances the success chances of migrant entrepreneurs and that second generation entrepreneurs are better equipped to seize opportunities in these more prosperous markets. The composite coefficients of first and second generation migrants and their corresponding test outcomes in Table 9 reveal that higher employment and wage levels generally do have the expected positive effects on firm profitability (except for wage level effects in the Turkish and Surinamese cases), but their effects on firm growth and survival rates are less clear. While higher local wage levels tend to positively impact migrant firm growth, the effects of higher employment rates on growth are not significant. In the firm survival models, higher local employment rates are associated with higher survival rates, but increased wage levels actually tend to reduce migrant firm survival. Thus, the excess money available in prosperous municipalities improves profitability, but not growth and survival and therefore hypothesis 2a is only supported in the profit model. This suggests that migrant entrepreneurs utilize the prosperity of their markets to increase their profit, but they seem to be reluctant to invest those profits in further growth and seem to suffer from higher failure risk due to higher competition.

When comparing the first and the second generation composite coefficients in Table 9 and considering the corresponding test results in the 'Welch(t)' columns, we come to the conclusion that hypothesis 2b is generally rejected. Despite their better education, the second generation is not able to reap the benefits of economic prosperous regions better than their parents. A rather select number of intergenerational differences appear supportive of hypothesis 2b at the 10% significance level and no clear pattern is observable among these differences except perhaps for the Moroccan origin group. In the Moroccan case, the second generation benefits more from higher wage levels in terms of profits and growth rates, but less in terms of survival rates than their first generation counterparts. However, these findings are hardly interpretable as the intergenerational comparison of the employment rate effects on

firm performance yields either insignificant or less beneficial outcomes for the second generation vis-a-vis the first generation.

Tables 6, 7 and 8 here

Hypotheses 3a and 3b argue that local co-ethnic residential and business concentrations negatively affect migrant business performance and that these relationships are stronger in magnitude for first generation entrepreneurs than for second generation ones. As depicted in Table 9, local co-ethnic residential and business concentration tend to negatively impact on firm profitability and survival rates of migrant entrepreneurs, but their effects on firm growth are insignificant to even positive except for the Moroccan group of entrepreneurs. Thus, hypothesis 3a is supported in the profit and survival models, but not in the growth one. This suggests that, while on the one hand migrant entrepreneurs benefit from the local presence of the co-ethnic community through facilitated labour recruitment, on the other hand they lose as concentration triggers local business rivalry and/or co-ethnic business claims that hinder business development.

Hypothesis 3b argues that business prospects of the first generation are more affected by the local presence of the co-ethnic community than those of the second generation as the prior groups are more involved with their local co-ethnic communities. The Welch t-test findings in Table 9 however demonstrate that the concentration effects on business prospects of first and second generation migrant entrepreneurs show no significant differences supportive of the hypothesis. Hypothesis 3b is therefore generally not confirmed by our data.

Hypotheses 4a and 4b focus on the four major Dutch cities, Amsterdam, Rotterdam, The Hague and Utrecht forming the economic heart of the Netherlands. Specifically, the hypotheses claim that migrant business performance in these four cities is higher than elsewhere in the country and that their special business settings are relatively more beneficial for the second vis-a-vis the first generation groups of entrepreneurs. As becomes evident by looking at the migrant composite coefficients as well as their corresponding test results in Table 9, migrant firms located in the four major cities generally report higher profitability and survival figures than firms located elsewhere, but growth rates are comparable or even smaller (except for the Turkish first generation). Thus, although business prospects in these cities seem indeed more promising, entrepreneurs are reluctant to hire given the general scarcity of suitable business spaces there. The Chinese group is an exceptional case as firms in the four major cities actually show lower profitability and survival rates (the latter only for the first generation) than those elsewhere, a trend that is likely driven by the entrepreneurs in the

Chinese restaurant niche, who face fiercer levels of competition there than elsewhere in the country. Overall, taking the Chinese group aside, Hypothesis 4a is supported in the profit and survival models but not in the growth model.

Comparisons between the two generations (see Table 9) reveal that intergenerational differences in the effect of the four major cities are not systematic and therefore hypothesis 4b is rejected. The only intergenerational finding supportive of the hypothesis is that second generation Chinese firms show higher survival rates than their parents' generation in the major four cities. This difference can be attributed to the fact that the second generation is less active in the Chinese restaurant niche, which – as was just explained - offers relatively lower business rewards in the four cities as compared to elsewhere in the country.

Table 9 here

Hypotheses 5a and 5b focus on performance implications of the intergenerational distribution differences of business activities across industry sectors, as observed in Figure 1. The figure generally points out that the second generation is operating to a greater extent in the more promising sectors, such as business services, while the first generation prefers more traditional sectors, such as trade and hospitality. More specifically, Hypothesis 5a claims that migrant business prospects in the former industry sectors are higher than in the latter ones. Hypothesis 5b in turn argues that, while second generation entrepreneurs are outperforming first generation entrepreneurs in the more promising sectors, the reverse is expected in the traditional sectors. Focusing our analysis on the three sectors trade, hospitality and business services, the findings in Table 9 suggest different patterns for the three origin clusters in relation with Hypothesis 5a. In the labour migrant (Turkish/Moroccan) cluster, Hypothesis 5a is supported for the firm profitability and perhaps growth models but not in the survival model. In other words, Turkish and Moroccan entrepreneurs operating in the business services sector tend to have higher profits and growth rates but not higher survival rates than those operating in the trade and hospitality sectors. For the colonial migrant (Surinamese/Antillean) cluster the evidence in light of Hypothesis 5a is mixed. The hypothesis is generally supported in the profit model, but not in the firm growth and survival models. This indicates that the same size firms (in terms of employees) generate higher financial returns in the business services sector than in traditional migrant sectors, but may also face higher risk of business failure especially in the start-up phase. Finally, in the Chinese case, Hypothesis 5a is overall not supported as firms in the hospitality sector are reporting higher profits as well as firm survival rates than those active in business services and firms in the trade sector show the

19

highest growth rates. Strikingly, for the Chinese group of entrepreneurs the traditional commercial activities centred on specialty restaurants and international trade thus seem to offer the most favourable business prospects for both generations.

The analyses depicted in Table 9 reveal little systematic evidence that the first generation is doing better in the traditional sectors and the second generation is doing better in the rising sectors. Thus hypothesis 5b is generally rejected. Apart from this general trend, a few additional observations are made on the origin clusters of labour migrant and Chinese entrepreneurs, which are however rather fragmented and thus hard to interpret. In the case of the labour migrant cluster, the second generation is less profitable in the traditional sectors, but not more profitable in the business services sector than their first generation counterparts. Moreover, it reports higher survival rates in the business servives sector, but not lower ones in the traditional sectors. In the case of the Chinese origin group, the second generation reports lower firm growth rates in traditional sectors, but not higher ones in the business services sector. Also, it shows higher firm survival rates in the business services sector, but not lower ones in the traditional sectors vis-a-vis the first generation. Overall, we recapitulate that hypothesis 5b is clearly rejected. Combining the insight from the regression analyses with our descriptive findings from before enables us to add some further remarks. As the second generation operates businesses in the rising sectors and at least partly turns away from the traditional sectors, this indicates that the second generation apparently has understood that the rising sectors offer more opportunities, but it does not manage to seize them more successfully than its parents' generation. Thus, improvements in the economic status of the second generation are rather due to pure selection effects – the second generation is more likely to start a business in promising sectors than its parents' generation was – but they are not due to better capabilities or a better integration, as we do not observe differences between the generations within a sector.

6. Discussion of the results

From the 1960s onwards, many Western European countries changed from emigration countries to immigration countries. Today, migrants form a substantial part of their populations. For example, in the case of the Netherlands, nearly one out of five residents has migration background, of which the so-called second generation is rapidly increasing in size and economic importance. The presence of this latter group is also ever more visible in the self-employment landscape, but these new entrepreneurs are largely neglected in the literature. As a consequence, while migrant entrepreneurship in general has already been studies extensively (Light 1979; Light et al. 1985; Portes and Bach 1985; Raijman and Tienda 1999; Renzulli, Aldrich and Moody 2000;

Kloosterman et. al. 1999), little is known about the inter-generational dynamics of migrant entrepreneurship. In particular, studies based on representative longitudinal samples are missing. This study sets a first step in the direction of closing this gap in the migrant entrepreneurship literature.

6.1. Intergroup differences

One of our most striking findings is that the five migrant origin groups investigated roughly divide into three clusters with notable differences in their history of migration to the Netherlands. The clusters identified in this paper were coined 'labour migrant entrepreneurs' originating from Turkey and Morocco, 'colonial migrant entrepreneurs' originating from the former Dutch colonies of Suriname and the Dutch Antilles and the Chinese entrepreneurs, who came from China and Southeast Asia to the Netherlands to escape economic hardship and political persecution. It is thus remarkable to find that migrant entrepreneurship patterns seem to reflect the differences in migration histories of the groups to the Netherlands.

The differences between the ethnic clusters manifest themselves in the nature of the business start-ups (see also Rusinovic 2006; Van den Tillaart 2001; EIM 2004) as well as the business success of the ethnic groups, whereby notably the labour migrant entrepreneurs are less represented in more promising business sectors and are generally less successful than colonial migrant entrepreneurs and Chinese entrepreneurs. But what would explain these differences between the clusters?

In the last decades the Dutch economy has evolved from its agricultural/manufacturing tradition to a service economy. The changing market demands have compelled new and established entrepreneurs to adopt a new business orientation in order to seize business opportunities in the promising services sectors and remain competitive therein. To materialise on these new business chances, entrepreneurs however need to possess higher levels of human capital, business-specific and country-specific cultural skills than were required in the traditional migrant sectors. In this regard, migrant integration in society becomes essential to foster the match between supply and demand, which explains why some groups of migrants characterized by lower integration levels, i.e. the labour migrants, are less represented in the services sectors than other groups, i.e. the colonial and Chinese migrants, and also appear less successful in business.

More specifically, a number of notable integration-related differences were observed between the migrant origin clusters, which concerned the following aspects: First, the degree of cultural distance to the receiving society, second, the degree of co-ethnic group

identification, orientation and self-sufficiency, and third, the mean educational and labour market outcomes.

First, the origin groups differ in their degree of cultural distance to the receiving society, which affects the ability of entrepreneurs to access and service mainstream markets. Among the migrant origin groups, the cultural distance to the receiving society is larger for the clusters of labour and Chinese migrants than for colonial ones. Migrants of the latter group were exposed much longer to the Dutch culture and language, which was one of the official languages in their sending countries. Suriname was ruled by the Dutch from 1667 to 1975 and the Dutch Antilles are still attached to the Kingdom of the Netherlands but partially independent by now. Although the Surinamese and Dutch Antillean cultures differ from the Dutch one, in the long course of a joint history the Dutch culture has put its stamp on the former colonies, which results in notable proximity between the Dutch, Surinamese and Dutch Antillean cultures today.

Second, the origin clusters differ in their degree of co-ethnic group identification, orientation and self-sufficiency. To start with, the labour migrant cluster is known for its strong own-group identification and orientation that is partly vested in shared religious norms. Moreover, as labour immigrants, members of these groups usually maintained rather strong bonds with family and friends who remained in the home country, many of them spend a couple of weeks in their home countries every year. Furthermore, as the close-knit Turkish and Moroccan communities are rather large and centred around the major cities, they have acquired a higher level of local self-sufficiency than other origin groups. This reflects in the great number of Turkish and Moroccan cultural associations, but also in the local business landscapes of urban migrant neighbourhoods, which accommodate many firms serving specific needs of these co-ethnic communities. The firms of labour migrant entrepreneurs tend to be located in areas of higher local co-ethnic concentration than is the case for the other origin clusters, which may have negative implications for firm development prospects. As our findings on Hypothesis 3a have indicated, increased local presence of the co-ethnic community negatively affects firm profitability and survival rates of migrant businesses. The Chinese community is also known for its strong own-group identification and orientation, but is less self-sufficient as explained by its smaller group size and greater residential spread across the country. Also, the own-group orientation has notably decreased from the first to the second generation as the latter possesses near-native language skills and upholds vivid social relations with the Dutch. Finally, in the case of colonial migrants, the co-ethnic group identification and orientation is rather low as compared to the prior origin groups. This can be

22

explained by the groups' cultural and linguistic proximity to natives, which facilitates social interactions and results in a blurring of inter-group boundaries.

Third, the three clusters also differ with respect to their mean educational achievements and labour market outcomes. It is notable, that the labour migrant cluster, which experiences the largest educational and labour market disadvantages vis-a-vis natives, also turns out to be generally least successful in business and is most confined to traditional low-skill migrant sectors. In the case of the colonial origin cluster, migrants' educational achievements are similar to the ones of natives, but despite this, the groups' labour market disadvantages persevere and likewise business success of entrepreneurs is lower. Thus, the findings for both origin clusters indicate that self-employment is not a route for upward social mobility by escaping interdependencies typical for the paid labour market. Finally, the Chinese migrants are an exceptional case. When the first generation came to the Netherlands, most of its members became self-employed (see Table 2) and their children did exceptionally well in the education system (see also Vogels et al. 1999). The second generation tops even natives educational and labour market outcomes and also reports business success to par with natives. Strikingly, business success for Chinese entrepreneurs in the group's traditional commercial activities (specialty restaurants, international trade) remains higher than in the generally more promising services sectors. This indicates that the group is effectively maintaining its competitive position in its well-established and highly profitable niche markets. At the same time, many members of the second generation successfully start up businesses in the services sectors enabled by their high levels of education and training.

6.2. First and second generation differences

Given that overall the second generation is much better integrated in the host society, we do not find clear evidence that the second generation uses their higher integration to become more successful in business. This paper rather suggests quite different paths of intergenerational evolution in line with the segmented assimilation theory that seem promising for the Chinese and possibly colonial migrant groups, but less so for the labour migrant groups. The standard neoclassical assumption that higher levels of human capital lead to higher earnings does thus not hold across the panel, neither are higher levels of socio-cultural and structural integration a proven success factor towards achieving greater economic success for immigrant entrepreneurs.

The prior literature on self-employment determinants of migrants might provide a possible explanation for this puzzling finding. Clark and Drinkwater (2010) found a negative correlation between educational attainment and self-employment propensities of migrants in the UK, which suggests that for higher educated groups of migrants, self-employment becomes less attractive as

compared to salaried employment, whereby the former becomes a fall-back strategy attracting relatively more individuals who do not manage to find suitable jobs. This group compositional difference between first and second generation migrant entrepreneurs might explain why, despite higher levels of human capital and host-country specific skills, the second generation is not more successful in business than the first generation. At the same time, some migrant groups as for instance the Chinese are known for their entrepreneurial tradition, which seems to be handled down through the generations. Given this, it is plausible that the second generation Chinese group of entrepreneurs includes relatively many highly educated people, who have chosen to become entrepreneurs to seize business opportunities in promising markets in line with the argumentation by Wilson et al. (2007) and Arenius and De Clercq (2005).

A promising intergenerational trend is visible, namely that the second generation generally tends to operate in more promising industry sectors. However, these sectors are also more dynamic, which exposes entrepreneurs to higher vulnerability for business failure, especially those possessing lower levels of business and cultural skills.

The divergent intergenerational trends between the origin clusters are best illustrated by the stark contrast between the groups of labour migrant and Chinese entrepreneurs. The second generation labour migrants – more so than other second generation groups - are following in the footsteps of their parents establishing businesses in the same industries and in the same areas. Their higher integration enabled them to setup businesses with better survival prospects, but not higher growth or profitability. This suggests that in practise, entrepreneurship turns out to be a minimum income generation or unemployment avoidance strategy rather than a path to gain socio-economic mobility. On the contrary, the integration achievement of the second generation Chinese migrants allowed them to go beyond their parents' careers as owners of small and low-budget Chinese restaurants (see also Van den Tillaart 2001; EIM 2004). Many second generation entrepreneurs have managed to setup businesses in other sectors including business services and seem to have done so successfully. Given the fact that the Chinese second generation is younger than its counterparts from other ethnicities and many of its members pursue university education, we might have even underestimated their entrepreneurial success, as their time to become entrepreneurs still needs to come.

A somewhat puzzling finding of this study is that, against our expectations, the second generation groups of entrepreneurs show lower rates of firm growth than the first generations. However, after further reflection, it seems that this is likely the outcome from more formalised recruitment practises of the second generation groups of entrepreneurs (i.e.

Rusinovic 2006), which increases costs and complexity of hiring procedures and thus reduces incentives of entrepreneurs to take on more staff.

The question remaining is: "Why is the second generation not universally more successful than the first generation given their better integration?" Two possibilities are firm age and selection effects. Our sample covers the years 1999 to 2004. Thus most of the firms from first generation migrants are probably larger well established firms, while the second generation firms include relatively many start-ups. Unfortunately, we could not include a control variable for firm age as such a variable correlates in a panel model highly with the entrepreneur's age.

We know that the different ethnic groups have large differences in average education durations. While Chinese migrants often obtain a university degree, Turkish and Moroccan migrants are more commonly among the early school leavers. The former second generation entrepreneurs in the sample have much better start-up conditions (educational qualifications) than the second generation groups of Turkish and Moroccan origin, who started into self-employment at younger age and with lower education.

Yet another reason explaining the many insignificant intergenerational findings relates to the large variation of entrepreneurial outcomes within the second generation groups of entrepreneurs, which is substantially larger than for the first generation. It is likely that the large diversity among the former groups is caused by integration-related factors at the entrepreneur level, which could not be captured in this study. Future research should therefore aim to further explore this intra-group variation by identifying relevant integration-related (or other) aspects causing this trend and conducting thorough comparisons between resulting subgroups of entrepreneurs.

Finally, differences in entrepreneur motivations may also explain that we do not find success differences between the first and the second generation. Performance measures may not adequately manage to compare entrepreneurship across the generations as second generation entrepreneurs are likely to have a more long-term business orientation while first generation ones are more short term 'profit' oriented. This can be explained by the groups' age differences and their situation in the business cycle. Since first generation entrepreneurs are considerably older, they tend to be less inclined to invest in the sustainability of their firms. On the contrary, for second generation entrepreneurs the payoffs of longer term investments would be greater and thus the groups' motivations differ. However, in the second group's case, the sacrificing of short term profits in exchange for longer-term benefits cannot be captured adequately in the outcome figures due to the relative young age of the firms.

6.3. Limitations

Before we continue with the concluding discussion in section 7, we would like to mention some of the study's limitations. First, despite the many advantages of the government data used for our study, naturally it also has its limits. To obtain the base dataset for our analyses, several administrative records are merged, which results in the loss of many observations as individuals are not found across all data sources. In this context, particularly the self-employment data source contains much missing variable information with regards to the variables firm location, size, industry sector and annual profits. While this missing information is imputed from records of other years whenever possible, unfortunately it still results in the exclusion of almost 50 percent of the observations due to missing data. Fortunately, given the relatively random nature of the distribution of missing observations across the relevant subpopulations of this study it is plausible to reduce the dataset to the observations with fully available information on all variables without risking the representativeness of the data.

Another issue of concern relates to the face validity of our variables. The variables describing the environment (i.e. average wage, migrant concentration) are defined at the municipal level. It is, however, questionable whether for large municipalities the whole city is the relevant social environment. Especially for larger cities the relevant social environment is probably rather the district. Furthermore, given that districts within larger cities are rather heterogeneous, the used variables at the municipal level provide rough indications of the local business environments at best. With respect to our dependent variable, the three performance indicators chosen are a widely used set of indicators, but they focus on financial aspects of performance and neglect non-financial aspects such as motivation and satisfaction. Thus, dissimilarities between first and second generation entrepreneurship could also be caused by different priorities of older and younger entrepreneurs. It is thus possible that the second generation may strive for a divergent set of business targets than the first generation, being – as some evidence has suggested – for instance more long-term oriented and thus willing to sacrifice current profits for future growth prospects.

In our analysis we were also not able to open the black box between integration and business success. Further analysis is needed to gain a more thorough understanding of the underlying processes and conditionality mediating the relation between integration and economic business success.

7. Conclusion

Our study documents the importance of integration for successful migrant entrepreneurship. It shows that entrepreneurship is therefore not an independent route towards gaining socio-

economic mobility bypassing formal requirements of the regular labour market: Opportunities in the salaried labour market are important determinants not only of self-employment decisions (i.e. Barrett et al. 1996; Clark and Drinkwater 2000; Constant and Zimmermann 2006; Thompson et al. 2010) but also of business success of migrants. While for some migrants, self-employment may be a strategy to avoid unemployment, discrimination and/or blocked mobility in the regular labour market, for others it is a lucrative endeavour to capitalize on unique human and/or social capital endowments (Kloosterman 2003). Thus, integration has an essential moderating role in matching the supply and demand side within the opportunity structure of entrepreneurs, as suggested by the mixed embeddedness framework. Moreover, it seems that integration facilitates entrepreneurial success only once a minimum threshold of integration is surpassed, which tends to increase over time in line with higher demands regarding occupational qualifications in the labour market. In this respect, (relative) migrant-to-native differences appear more important than (absolute) first to second generation changes indicating the presence of a market-driven mechanism.

While integration – within the context of the mixed embeddedness framework - is an important determinant of migrant business success, it also is highly path dependent as integration varies greatly by migration motive. In this paper we have established a connection between these migration motives and entrepreneurial success for three distinct migrant business profiles, which we coined 'labour migrant entrepreneurs', 'colonial migrant entrepreneurs', and Chinese entrepreneurs. These profiles reflect the heterogeneity across different migrant groups and may provide fertile grounds for future research aimed at better understanding the phenomenon of migration entrepreneurship.

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Figure 1. Distribution of native and non-Western migrant entrepreneurs across sectors (as % of group total) for the first and second generation.
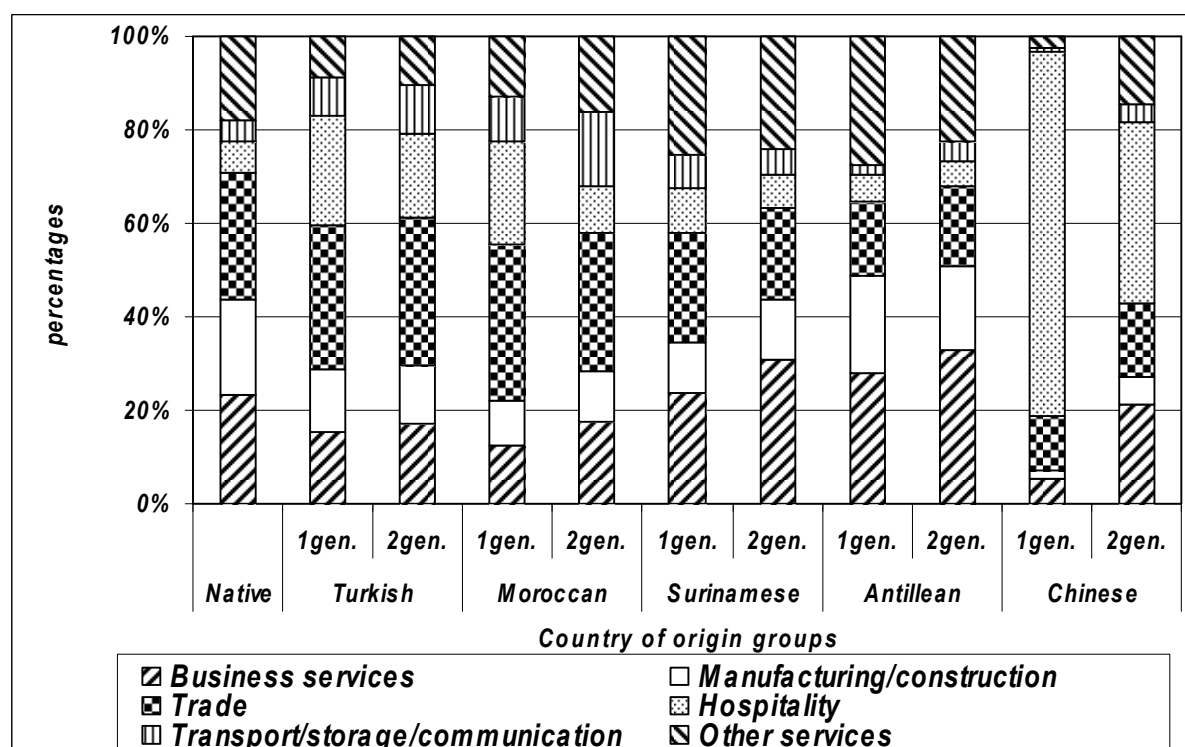
Note: Agricultural sector is excluded as it contains too few cases for some migrant groups and migrant firms in this sector are not comparable to the ones of natives. First and second generation migrants defined as in Table 1 according to definition of Netherlands Statistics Bureau.

Table 1. Entrepreneurship in the Netherlands 1999-2004.

Year	All		Native	Western	Non-western			
							%	%
	count	%	%		count	%	1gen.	2gen.
1999	764,200	87.75	7.97		32,700	4.29	3.78	0.47
2000	787,300	87.41	7.95		36,500	4.64	4.14	0.55
2001	803,700	86.78	8.01		41,800	5.20	4.58	0.64
2002	795,500	86.61	8.02		42,700	5.38	4.69	0.68
2003	788,700	86.16	8.08		45,400	5.76	4.96	0.75
2004	768,200	86.10	8.00		45,300	5.91	5.01	0.83

Source: CBS Statline, 2009.

Note: Entrepreneurs defined as persons reporting income from self-employment ('eigen bedrijfsvoering) (excludes free-lancers, director main shareholders ('directeur-grootaandeelhouders). Definitions Western and non-Western, first and second generation migrants according to Netherlands Statistics Bureau, whereby non-Western migrants are individuals born themselves (or at least one of their parents) in a non-Western country of Asia (excluding Japan and Indonesia), Africa, Latin America and Turkey. Western migrants are individuals born themselves (or at least one of their parents) in other countries outside the Netherlands. First generation migrants were born abroad and second generation migrants are children with at least one parent born abroad.

Table 2. Self-employment propensities per groups (in percent).

Year	Native	Western	Non-western		Turkish		Moroccan		Surinamese		Antillean		Chinese	
			1gen.	2gen.	1gen.	2gen.	1gen.	2gen.	1gen.	2gen.	1gen.	2gen.	1gen.	2gen.
1999	11.8	10.7	7.8	4.1	9.7	3.7	4.2	1.6	4.6	4.1	2.9	4.8	61.2	11.4
2000	11.9	10.7	8.2	4.3	10.5	4.2	4.7	1.9	5.0	4.3	3.0	4.8	60.5	10.7
2001	11.9	10.8	8.9	4.6	12.2	4.9	5.4	2.3	5.4	4.4	3.2	5.2	57.9	11.4
2002	11.7	10.7	8.8	4.5	12.6	5.2	5.5	2.3	5.3	4.3	3.1	5.3	53.5	10.9
2003	11.6	10.8	9.4	4.8	13.1	5.8	6.2	2.5	5.4	4.5	3.4	5.4	52.4	11.1
2004	11.4	10.6	9.5	5.0	13.3	6.1	6.5	2.9	5.4	4.4	3.3	5.5	53.1	10.9

Source: CBS Statline, 2009.

Note: Defined as population aged 15-65 with income from self-employment (excluding freelancers, director main shareholders) as share of population with employment income as of last Friday in September of respective years. Definitions Western and non-Western as well as first and second generation migrants as in Table 1 based on definitions of Netherlands Statistics Bureau.

Table 3. Socio-cultural and structural integration for five groups of non-Western migrants in the Netherlands.

dimensions of integration	Natives	Turkish		Moroccan		Surinamese		Antillean		Chinese	
		1gen.	2gen.	1gen.	2gen.	1gen.	2gen.	1gen.	2gen.	1gen.	2gen.
SOCIO-CULTURAL											
Dutch language proficiency (1-low;2-medium;3-high)****	n.a.	1.7	2.4	1.8	2.7	2.8	2.9	2.5	2.9	1.7	2.8
never receives visit by native friends (%) ****,°	n.a.	40	30	50	18	33	14	25	6	33	18
often contacts with natives in free time (%) ****,°,°°	n.a.	21	47	29	58	50	70	61	92	12	42
identification with own group (%) ****	n.a.	99	93	97	89	90	68	83	31	no info.	
modern values (gender roles, family relations, emancipation, religious liberalism; 1-least modern; 5-most modern) ***	n.a.	2.8	3.1	2.8	3	3.2	3.5	3.3	3.7	no info.	
STRUCTURAL											
- educational outcomes (highest level of education) **											
only basic education (max.bo)	22	67	35	78	41	34	17	33	9	58	7
some secondary education (vbo/mavo) *****	28	13	37	8	27	31	29	31	18	18	32
starting qualification (mbo/havo/vwo/hbo/wo)	50	18	28	14	31	35	54	36	73	25	61
- labour market outcomes/social security											
share of working age population working *	66	43	54	43	54	64	57	55	63	31	55
share unemployed **	4	18	15	19	22	9	11	14	8	11	(8)
share of work age pop. receiving public assistance *	2	14	4	19	5	13	6	21	4	12	2
job functional level - elementary/lower **	37	78	65	77	72	51	55	51	39	48	
job function level - medium **	32	15	26	17	21	33	26	33	30	38	
job function level - higher/scientific **	32	7	9	6	7	15	19	16	32	15	
- residential allocation (across neighbourhood type)*											
0-15% non-western migrants in neighbourhood	86	29	31	28	29	30	37	37	55	54	58
15-50% non-western migrants in neighbourhood	13	48	48	50	49	46	45	47	36	35	33
50+% non-western migrants in neighbourhood	1	22	21	23	22	24	18	16	9	10	9

*Source: Netherlands Bureau of Statistics, Statline 2009 (means of period 1999-04, working age population defined as age 15-65); ** Sources: SPVA '98/CHIN'97, for education indicators only individuals who finished their schooling period are included; *** Sources: SCP, Rapportage minderheden 2003, SPVA '02; **** Sources: SCP, Rapportage minderheden 2003, SPVA '98/CHIN'97; The National Bureau of Statistics figures define second generation only as individuals born in the Netherlands with at least on migrant parent, while the SPVA also include migrants to the Netherlands before age 6 as second generation. For Chinese the language proficiency ranking is computed as follows:1-speaks no Dutch/often language difficulties, 2-sometimes difficulties, 3-speaks Dutch well; ***** For Chinese group, the havo educational qualification is grouped to this lower category although it fits better in the higher one. This was necessary due to the difficult distinction

between mavo and havo levels in the Chinese education system. As a consequence education levels of the Chinese are somewhat understated when compared to other groups. ° Chinese data based on responses of household heads, partners and children above 12, other group responses based on information of household heads only. °° For non-Chinese migrant groups, this indicator is somewhat understated as it indicates the share of migrants with more contacts to natives than their co-ethnic groups.

Table 4. Description of Variables.

Dependent variables	
Annual profit (ln)^t	Natural logarithm of sum of all business profits per person per year. Figures originate from the definite income tax assessments note for the years 1999 and 2000 and from the entrepreneurs' tax declarations the years 2001 to 2004.
Growing^t	Forward looking binary variable taking the value 1 if the firm has moved from one size category to a higher size category between years. Size categories are: no employees, one employee, two to four employees and five and more employees.
Survival^t	Forward looking binary variable taking the value 1 if the firm is still operating in the coming year.
Independent variables: Personal and firm characteristics	
1st generation 2nd generation	Set of dummy variables with the reference category 'natives'. 1st generation dummy takes value 1 if entrepreneur belongs to the first generation migrants, i.e. is born outside the Netherlands. 2nd generation dummy takes value 1 if entrepreneur belongs to the second generation migrants, i.e. is born in the Netherlands but at least one parent is born abroad.
Age	Entrepreneur's age in years
Married	Binary variable taking the value 1 if entrepreneur is married
Female	Binary variable taking the value 1 if entrepreneur is female
Trade Hospitality Transport/Storage/Com. Business Services Other Services	Set of dummy variables to capture the firm's sector with the reference category manufacturing/construction. The variable of the sector the firm is active in takes the value 1, all other variables take the value 0.
Independent variables related to demand side	
Employment^t	Employment rate in the municipality
Wage level (ln)^t	Natural logarithm of the mean wage level in the municipality
Citytop4	Binary variable that takes the value 1 if firm is located in one of the four major Dutch cities (Amsterdam, The Hague, Rotterdam or Utrecht.
Concentration^t	Number of migrants of group investigated divided by total

	population in the municipality
Firm concentration[t]	Number of firms owned by migrant group investigated divided by all firms in that municipality.

t indicates time varying variables

Table 5. Summary statistics per migrant group, entrepreneur/firm-based and firm location-based characteristics (group means).

	Native	Turkish		Moroccan		Surinamese		Antillean		Chinese	
		1gen.	2gen.	1gen.	2gen.	1gen.	2gen.	1gen.	2gen.	1gen.	2gen.
Entrepreneur/firm-based characteristics											
observations	547,505	40,451	6,150	16,622	2,154	26,920	6,558	5,707	2,517	22,580	1,515
female	.3192	.142	.196	.099	.215	.275	.314	.315	.315	.397	.337
	(.466)	(.349)	(.397)	(.299)	(.411)	(.446)	(.464)	(.464)	(.464)	(.489)	(.472)
age	44.41	35.86	25.71	36.08	25.84	41.37	34.78	42.39	33.99	39.85	37.72
	(11.08)	(7.66)	(4.98)	(8.77)	(4.53)	(9.21)	(9.78)	(9.65)	(7.49)	(9.42)	(12.43)
married	.6771	.782	.440	.684	.265	.466	.341	.463	.337	.801	.466
	(.467)	(.412)	(.496)	(.464)	(.441)	(.498)	(.474)	(.498)	(.472)	(.399)	(.499)
citytop4	.107	.414	.401	.503	.487	.546	.428	.298	.308	.187	.340
	(.309)	(.492)	(.490)	(.500)	(.499)	(.497)	(.494)	(.457)	(.462)	(.390)	(.474)
annual profit	23,678	17,910	13,552	17,442	12,935	19,150	18,751	18,413	18,925	19,131	24,369
	(36,796)	(32,129)	(29,657)	(34,988)	(22,369)	(33,618)	(38,777)	(37,550)	(30,254)	(22,545)	(39,539)
growing**	.161	.158	.134	.147	.103	.155	.136	.147	.141	.138	.121
	(.368)	(.364)	(.340)	(.354)	(.304)	(.362)	(.343)	(.354)	(.349)	(.345)	(.327)
survival**	.905	.840	.805	.852	.812	.854	.842	.837	.846	.928	.882
	(.291)	(.365)	(.395)	(.354)	(.390)	(.352)	(.364)	(.369)	(.360)	(.257)	(.321)
Firm location-based characteristics ***											
observations	483	370	225	288	152	346	257	285	215	447	156
employment	.651	.656	.661	.657	.665	.656	.659	.658	.660	.652	.658
	(.039)	(.037)	(.035)	(.042)	(.035)	(.037)	(.037)	(.037)	(.036)	(.040)	(.036)
wage level	23,319	23,550	23,468	23,854	24,464	23,769	24,032	24,071	24,378	23,325	24,214
	(3,260)	(3,515)	(2,765)	(3,525)	(3,674)	(3,440)	(3,634)	(3,477)	(3,499)	(3,172)	(3,804)
concentration	.008	.010	.016	.010	.015	.008	.009	.005	.005	.002	.003
	(.014)	(.015)	(.017)	(.013)	(.016)	(.012)	(.014)	(.005)	(.005)	(.001)	(.001)
firm concentration	.005	.007	.011	.003	.005	.005	.006	.003	.003	.005	.007
	(.010)	(.011)	(.013)	(.004)	(.006)	(.007)	(.007)	(.002)	(.002)	(.003)	(.003)

Note: Bold numbers indicate rejected equal means tests of first and second generations per origin group at 0.1% significance level. Standard deviations in brackets.

First and second generation migrants defined as in Table 1 according to definition of Netherlands Statistics Bureau. Variable definitions are found in Table 4. **

These variable are defined in forward looking way indicating if entrepreneur growing (operating) in the coming year. As a consequence these variables have fewer

observations than stated since information is missing for year 2004. *** These statistics are reported at the level of the municipality where firms of the respective groups are located.

Table 6. Base random-effects regression estimates for dependent variable annual profits, by origin group*.

Dependent variable: annual profit (ln)	Turkish			Moroccan			Surinamese			Antillean			Chinese		
	base	base+	base++	base	base+	base++	base	base+	base++	base	base+	base++	base	base+	base++
constant	.992	-4.34	-4.53	.584	-5.52	-5.71	.540	-4.94	-5.43	.524	-5.13	-5.44	.494	-4.56	-4.42
	(.183)***	(1.34)***	(1.33)***	(.189)***	(1.36)***	(1.36)***	(.187)***	(1.35)***	(1.36)***	(.191)***	(1.35)***	(1.38)***	(.187)***	(1.33)***	(1.34)***
1gen.	-.864	-.845	-.825	-1.01	-1.01	-.986	-1.12	-1.14	-1.12	-1.44	-1.53	-1.55	1.07	.892	.892
	(.065)***	(.068)***	(.068)***	(.097)***	(.099)***	(.099)***	(.078)***	(.081)***	(.081)***	(.161)***	(.159)***	(.159)***	(.072)***	(.085)***	(.085)***
2gen.	-.902	-.827	-.809	-.670	-.635	-.608	-.900	-.892	-.879	-.864	-.872	-.879	-.351	-.394	-.400
	(.156)***	(.155)***	(.155)***	(.245)***	(.243)***	(.244)**	(.153)***	(.152)***	(.152)***	(.237)***	(.234)***	(.234)***	(.314)	(.310)	(.310)
age	.269	.268	.268	.286	.287	.287	.288	.288	.288	.289	.289	.289	.289	.288	.288
	(.008)***	(.008)***	(.008)***	(.008)***	(.008)***	(.008)***	(.008)***	(.008)***	(.008)***	(.008)***	(.008)***	(.008)***	(.008)***	(.008)***	(.008)***
age-square/100	-.301	-.295	-.295	-.319	-.314	-.315	-.321	-.316	-.316	-.322	-.317	-.317	-.322	-.317	-.316
	(.009)***	(.009)***	(.009)***	(.009)***	(.009)***	(.009)***	(.009)***	(.009)***	(.009)***	(.009)***	(.009)***	(.009)***	(.009)***	(.009)***	(.009)***
married	.374	.385	.384	.367	.371	.370	.379	.382	.381	.388	.387	.389	.403	.398	.401
	(.029)***	(.029)***	(.029)***	(.030)***	(.030)***	(.030)***	(.030)***	(.030)***	(.030)***	(.030)***	(.031)***	(.031)***	(.030)***	(.030)***	(.030)***
female	-.671	-.492	-.493	-.674	-.496	-.497	-.693	-.519	-.520	-.678	-.496	-.495	-.653	-.492	-.491
	(.033)***	(.034)***	(.034)***	(.034)***	(.035)***	(.035)***	(.033)***	(.034)***	(.034)***	(.034)***	(.035)***	(.035)***	(.033)***	(.034)***	(.034)***
employment		3.62	3.54		3.38	3.34		3.52	3.65		3.54	3.50		3.30	3.26
		(.401)***	(.400)***		(.412)***	(.406)***		(.406)***	(.407)***		(.410)***	(.412)***		(.399)***	(.399)***
wage level (ln)		.398	.422		.488	.510		.418	.460		.434	.467		.391	.379
		(.138)***	(.136)***		(.139)***	(.139)***		(.138)***	(.139)***		(.139)***	(.140)***		(.137)***	(.137)***
concentration		-2.18			-1.42			-2.20			-6.74			-18.3	
		(.859)***			(1.15)			(1.00)**			(2.26)***			(7.52)**	
firm concentration			-3.83			-9.70			-6.71			-8.47			-6.31
			(.954)***			(2.50)***			(1.80)***			(5.57)			(3.61)*
citytop4		.585	.637		.504	.596		.579	.645		.523	.457		.434	.363
		(.058)***	(.058)***		(.083)***	(.066)***		(.088)***	(.078)***		(.060)***	(.055)***		(.063)***	(.051)***
trade		-1.67	-1.67		-1.58	-1.58		-1.59	-1.58		-1.56	-1.56		-1.55	-1.55
		(.039)***	(.039)***		(.040)***	(.040)***		(.040)***	(.040)***		(.041)***	(.041)***		(.041)***	(.041)***
hospitality		-.952	-.952		-.950	-.950		-1.01	-1.02		-.976	-.976		-.725	-.724
		(.060)***	(.060)***		(.064)***	(.064)***		(.065)***	(.065)***		(.067)***	(.067)***		(.063)***	(.063)***
transport/storage/ communication		-.919	-.922		-.916	-.916		-.885	-.884		-.881	-.883		-.872	-.873
		(.069)***	(.069)***		(.071)***	(.071)***		(.070)***	(.070)***		(.072)***	(.072)***		(.072)***	(.072)***
business services		-1.44	-1.44		-1.47	-1.47		-1.48	-1.48		-1.48	-1.48		-1.47	-1.47
		(.039)***	(.039)***		(.040)***	(.040)***		(.040)***	(.040)***		(.040)***	(.040)***		(.041)***	(.041)***
other services		-1.16	-1.16		-1.17	-1.17		-1.14	-1.14		-1.18	-1.18		-1.14	-1.15
		(.043)***	(.043)***		(.044)***	(.044)***		(.043)***	(.043)***		(.044)***	(.044)***		(.044)***	(.044)***
observations	594,106	594,106	594,106	566.281	566.281	566.281	580,983	580,983	580,983	555,729	555,729	555,729	571,600	571,600	571,600
individuals	141,231	141,231	141,231	132,873	132,873	132,873	136,401	136,401	136,401	129,618	129,618	129,618	132,747	132,747	132,747
Hypothesis 1															
z-value(H0:2gen<=1gen)	.22	.1	.1	1.41*	1.48*	1.46*	1.3*	1.49*	1.44*	2.04**	2.36***	2.39***	4.44	4.03	4.06

* All regression are run separately by origin group with reference group native male entrepreneurs, unmarried with businesses operating in manufacturing/construction sector and located outside the four major cities (Amsterdam, TheHague, Rotterdam, Utrecht). All regressions include year dummies. Standard errors in parentheses. 1, 2, 3 asterisks indicate significance of coefficients at the 10%, 5%, 1% level respectively. Variable definitions are found in the appendix. The Hausman test (base models 11 coefficients, base+ and base++ models 20 coefficients) rejects the OLS specification in favour of the RE one for all regressions at the .1% significance level suggesting presence of unobserved individual heterogeneity corrected for in the RE specification. The last row presents the z-values and corresponding significance levels of the one-sided means comparison tests between the coefficients of the first and second generations. Due to high correlation of the variables migrant concentration and migrant business concentration (.8 to .9 in most datasets), separate regressions are run for these variables.

Table 7. Base random-effects logistic regression estimates for dependent variable growth, by origin group*.

Growing**	Turkish			Moroccan			Surinamese			Antillean			Chinese		
	base	base+	base++	base	base+	base++	base	base+	base++	base	base+	base++	base	base+	base++
constant	-.003	.567	.416	-.002	.640	.697	.042	.844	.928	.039	.806	.737	.038	.982	1.01
	(.069)	(.489)	(.485)	(.072)	(.493)	(.491)	(.071)	(.491)*	(.494)*	(.073)	(.492)*	(.506)	(.071)	(.487)**	(.492)**
1 gen.	.220	.248	.238	.141	.185	.191	.036	.072	.068	-.014	.011	.015	-.155	-.090	-.089
	(.022)***	(.023)***	(.023)***	(.034)***	(.035)***	(.035)***	(.025)	(.027)***	(.027)***	(.056)	(.056)	(.056)	(.028)***	(.032)***	(.032)***
2 gen.	.248	.270	.260	-.054	-.018	-.013	-.048	-.022	-.024	-.055	-.035	-.032	-.249	-.196	-.197
	(.060)***	(.061)***	(.061)***	(.112)	(.112)	(.112)	(.055)	(.056)	(.056)	(.088)	(.088)	(.088)	(.116)**	(.117)*	(.117)*
age	.023	.024	.024	.025	.025	.025	.022	.023	.023	.022	.024	.024	.023	.023	.023
	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.000)	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***
age-square/100	-.030	-.032	-.032	-.031	-.033	-.033	-.029	-.030	-.030	-.030	-.031	-.031	-.029	-.031	-.030
	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***
married	.033	.023	.024	.032	.017	.018	.036	.024	.024	.030	.016	.015	.027	.013	.013
	(.011)***	(.012)*	(.012)**	(.012)***	(.012)	(.012)	(.011)***	(.012)**	(.012)**	(.012)**	(.012)	(.012)	(.012)**	(.012)	(.012)
female	-.063	-.048	-.047	-.058	-.042	-.043	-.055	-.040	-.039	-.060	-.043	-.044	-.057	-.041	-.041
	(.011)***	(.011)***	(.011)***	(.011)***	(.011)***	(.011)***	(.011)***	(.011)***	(.011)***	(.011)***	(.011)***	(.011)***	(.011)***	(.011)***	(.011)***
employment		-.160	-.209		-.014	-.057		-.201	-.241		-.141	-.093		-.097	-.107
		(.152)	(.150)		(.158)	(.154)		(.153)	(.155)		(.156)	(.159)		(.153)	(.151)
wage level (ln)		-.047	-.029		-.062	-.066		-.067	-.073		-.068	-.063		-.088	-.090
		(.051)	(.050)		(.051)	(.051)		(.051)	(.051)		(.051)	(.052)		(.050)*	(.051)*
concentration		-.433			-1.32			.327			.752			-1.91	
		(.322)			(.462)***			(.394)			(.963)			(3.49)	
firm concentration			.355			-3.83			1.23			-1.41			-.974
			(.407)			(1.29)***			(.756)			(2.75)			(1.67)
citytop4		-.031	-.062		.009	-.005		-.090	-.108		-.086	-.069		-.063	-.069
		(.021)	(.022)***		(.032)	(.027)		(.034)***	(.031)***		(.023)***	(.022)***		(.026)**	(.019)***
trade		.043	.043		.040	.040		.042	.042		.040	.040		.044	.044
		(.015)***	(.015)***		(.015)***	(.015)***		(.015)***	(.015)***		(.015)***	(.015)***		(.015)***	(.015)***
hospitality		-.079	-.079		-.064	-.064		-.063	-.063		-.075	-.075		-.096	-.096
		(.022)***	(.022)***		(.023)***	(.023)***		(.023)***	(.023)***		(.024)***	(.024)***		(.023)***	(.023)***
transport/storage/communication		.008	.009		-.011	-.011		-.008	-.009		-.003	-.003		-.005	-.005
		(.026)	(.026)		(.026)	(.026)		(.026)	(.026)		(.027)	(.027)		(.027)	(.027)
business services		.001	.001		-.010	-.010		-.010	-.011		-.019	-.018		-.018	-.018
		(.015)	(.015)		(.016)	(.016)		(.016)	(.016)		(.016)	(.016)		(.016)	(.016)
other services		-.098	-.099		-.096	-.096		-.102	-.102		-.103	-.102		-.100	-.100
		(.017)***	(.017)***		(.017)***	(.017)***		(.017)***	(.017)***		(.017)***	(.017)***		(.017)***	(.017)***
observations	424,266	424,266	424,266	406,983	406,983	406,983	417,292	417,292	417,292	400,459	400,459	400,459	411,916	411,916	411,916
individuals	120,002	120,002	120,002	113,694	113,694	113,694	116,711	116,711	116,711	111,274	111,274	111,274	114,221	114,221	114,221
Hypothesis 1															
z-value(H0:2gen<=1gen)	.44	.35	.35	1.69	1.75	1.76	1.41	1.57	1.54	.40	.45	.46	.78	.88	.89

* All regression are run separately by origin group with reference group native male entrepreneurs, unmarried with businesses located outside the four major cities (Amsterdam, TheHague, Rotterdam, Utrecht). All regressions include year dummies, regressions of the base+ and base++ models also include sector dummies. Standard errors in parentheses. 1, 2, 3 asterisks indicate significance of coefficients at the 10%, 5%, 1% level respectively. Variable definitions are found in the appendix. The Hausman test (base models 10 coefficients, base+ and base++ models 19 coefficients) rejects the OLS specification in favour of the RE one in all regressions at the .1% significance level suggesting presence of unobserved individual heterogeneity corrected for in the RE specification. The last row presents the z-values and corresponding significance levels of the one-sided means comparison tests between the coefficients of the first and second generations. Due to high correlation of the variables migrant concentration and migrant business concentration (.8 to .9 in most datasets), separate regressions are run for these variables.

** Binary variable, defined in forward looking way indicating if entrepreneur is growing in the coming year. As a consequence the variable is not defined for year 2004.

Table 8. Base random-effects logistic regression estimates for dependent variable survival, by origin group*.

Dependent variable: Survival to next period**	Turkish base	base+	base++	Moroccan base	base+	base++	Surinamese base	base+	base++	Antillean base	base+	base++	Chinese base	base+	base++
constant	.360	2.78	2.26	.284	1.36	1.44	.238	.886	.503	.251	1.63	.200	.364	2.32	2.83
	(.072)***	(.584)***	(.578)***	(.075)***	(.591)**	(.590)**	(.074)***	(.588)	(.591)	(.076)***	(.588)***	(.604)	(.075)***	(.586)***	(.593)***
1gen.	-.812	-.721	-.715	-.658	-.610	-.585	-.620	-.553	-.535	-.768	-.707	-.715	.327	.375	.382
	(.022)***	(.024)***	(.024)***	(.034)***	(.035)***	(.035)***	(.026)***	(.028)***	(.028)***	(.054)***	(.054)***	(.054)***	(.036)***	(.040)***	(.040)***
2gen.	-.664	-.577	-.576	-.550	-.510	-.491	-.572	-.493	-.486	-.575	-.505	-.497	-.133	-.062	-.071
	(.052)***	(.052)***	(.053)***	(.087)***	(.088)***	(.088)***	(.052)***	(.052)***	(.052)***	(.084)***	(.084)***	(.084)***	(.118)	(.118)	(.118)
age	.125	.125	.125	.129	.131	.131	.131	.132	.132	.131	.133	.133	.126	.127	.127
	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***
age-square/100	-.150	-.149	-.149	-.155	-.155	-.155	-.155	-.156	-.155	-.156	-.157	-.157	-.151	-.152	-.151
	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***	(.003)***
married	.210	.186	.189	.204	.182	.181	.217	.196	.197	.209	.180	.182	.228	.197	.204
	(.013)***	(.013)***	(.013)***	(.014)***	(.014)***	(.014)***	(.014)***	(.014)***	(.014)***	(.014)***	(.014)***	(.017)***	(.014)***	(.014)***	(.014)***
female	-.211	-.216	-.217	-.224	-.224	-.225	-.209	-.211	-.212	-.217	-.218	-.217	-.210	-.212	-.210
	(.013)***	(.013)***	(.013)***	(.013)***	(.014)***	(.014)***	(.013)***	(.013)***	(.013)***	(.013)***	(.014)***	(.014)***	(.013)***	(.014)***	(.014)***
employment		-.239	-.348		-.288	-.321		-.303	-.105		-.221	-.139		-.398	-.646
		(.185)	(.184)*		(.193)	(.189)*		(.188)	(.190)		(.192)	(.194)		(.189)**	(.187)***
wage level (ln)		-.203	-.145		-.067	-.074		-.022	.003		-.099	.039		-.141	-.174
		(.060)***	(.060)**		(.061)	(.061)		(.060)	(.061)		(.061)	(.062)		(.060)**	(.061)***
concentration		-4.50			-3.63			-4.30			-14.6			-45.4	
		(.367)***			(.524)***			(.440)***			(1.04)***			(3.86)***	
firm concentration			-5.26			-12.6			-9.64			-33.8			-20.0
			(.425)***			(1.32)***			(.813)****			(3.02)***			(1.93)***
citytop4		.147	.165		.174	.192		.278	.294		.185	.105		.182	.020
		(.024)***	(.025)***		(.037)***	(.032)***		(.039)***	(.035)***		(.027)***	(.025)***		(.030)***	(.023)
trade		-.205	-.205		-.236	-.235		-.232	-.232		-.230	-.231		-.242	-.242
		(.018)***	(.018)***		(.019)***	(.019)***		(.019)***	(.019)***		(.019)***	(.019)***		(.020)***	(.020)***
hospitality		-.277	-.278		-.292	-.292		-.301	-.302		-.306	-.304		-.233	-.233
		(.026)***	(.026)***		(.028)***	(.028)***		(.028)***	(.028)***		(.029)***	(.029)***		(.028)***	(.028)***
transport/storage/ communication		-.026	-.031		-.061	-.061		-.091	-.091		-.079	-.084		-.087	-.090
		(.032)	(.032)		(.033)*	(.033)*		(.033)***	(.033)***		(.034)**	(.034)**		(.034)***	(.034)***
business services		-.486	-.487		-.491	-.491		-.469	-.467		-.479	-.480		-.486	-.493
		(.019)***	(.019)***		(.019)***	(.019)***		(.019)***	(.019)***		(.019)***	(.019)***		(.020)***	(.020)***
other services		-.035	-.037		-.062	-.062		-.055	-.053		-.068	-.069		-.081	-.084
		(.021)	(.021)*		(.022)***	(.022)***		(.021)**	(.021)**		(.022)***	(.022)***		(.022)***	(.022)***
observations	496,302	496,302	496,302	473,475	473,475	473,475	486,162	486,162	486,162	465,182	465,182	465,182	478,157	478,157	478,157
individuals	134,454	134,454	134,454	126,786	126,786	126,786	130,227	130,227	130,227	123,905	123,905	123,905	126,971	126,971	126,971
Hypothesis 1															
z-value(H0:2gen<=1gen)	2.70***	2.63***	2.53***	1.16	1.08	1.00	.84	1.04	.85	1.93**	2.03**	2.19**	3.73	3.55	3.67

* All regression are run separately by origin group with reference group native male entrepreneurs, unmarried with businesses located outside the four major cities (Amsterdam, TheHague, Rotterdam, Utrecht). All regressions include year dummies, regressions of the base+ and base++ models also include sector dummies. Standard errors in parentheses. 1, 2, 3 asterisks indicate significance of coefficients at the 10%, 5%, 1% level respectively. Variable definitions are found in the appendix. The Hausman test (base models 10 coefficients, base+ and base++ models 19 coefficients) rejects the OLS specification in favour of the RE one in all regressions at the .1% significance level suggesting presence of unobserved individual heterogeneity corrected for in the RE specification. The last row presents the z-values and corresponding significance levels of the one-sided means comparison tests between the coefficients of the first and second generations. Due to high correlation of the variables migrant concentration and migrant business concentration (.8 to .9 in most datasets), separate regressions are run for these variables.

** Binary variable, defined in forward looking way indicating if entrepreneur is in business in the coming year. As a consequence the variable is not defined for year 2004.

Table 9. Selected random effects regression outputs from interaction models: migrant composite coefficients per independent variable and test results for hypotheses 2-5.

			DV: ANNUAL PROFIT		Welch	DV: GROWING		Welch	DV: SURVIVAL		Welch
	variable	group	gen1	gen2	(t)	gen1	gen2	(t)	gen1	gen2	(t)
Hypothesis 2 H0(2a):gen1<=0;gen2<=0 H0(2b):gen2<=gen1	employment rate	Turkish	4.48 **	5.35 *		-.854	-2.11		1.25 **	2.58 **	
		Moroccan	2.06	5.60		-.647	-3.61		1.48 **	.927	
		Surinamese	4.46 **	4.83 *		-2.18	1.89 *	**	1.11 *	1.52	
		Antillean	6.60 **	3.94		.192	-.879		.544	2.76 *	
		Chinese	3.39 **	12.6 **	*	.614	-.421		1.36 *	1.19	
	wage level	Turkish	-1.61	-3.85		2.74 **	2.91 **		-.971	-2.59	
		Moroccan	.124	3.20 **	**	.927 **	2.70 **	**	-.714	-2.04	
		Surinamese	-1.31	-1.29		.849 **	.773 **		-1.19	-.691	
		Antillean	-.340	2.05 *	*	-.422	.247		-1.07	-1.32	
		Chinese	1.54 **	1.97		.435 **	.488		-.831	-.063	
Hypothesis 3 H0(3a):gen1>=0;gen2>=0 H0(3b):gen2<=gen1	concentration	Turkish	-3.39	-5.26		2.31	4.08		-5.20 **	-7.20 **	
		Moroccan	-.730	4.36		-.220	-5.20 *		-1.09	-.940	
		Surinamese	-1.52	-6.42 **		1.62	-1.87		-4.20 **	-7.20 **	
		Antillean	-12.6	-37.2 *		-.213	5.93		-25.9 **	-11.8	
		Chinese	-117 **	-186 **		17.2	40.3		-87.7 **	-39.3	
	firm concentration	Turkish	-3.24 *	-9.00 *		5.70	4.56		-5.46 **	-8.16 **	
		Moroccan	-19.4 **	5.06		.940	-6.99		-16.2 **	-13.9 **	
		Surinamese	-8.46 **	-18.3 **		4.47	-1.96		-11.4 **	-17.7 **	
		Antillean	48.8	-45.0		4.14	67.4		-58.8 **	-36.5	
		Chinese	-24.7 **	-21.7		23.3	41.1		-33.2 **	-14.4	
Hypothesis 4 H0(4a):gen1<=0;gen2<=0 H0(4b):gen2<=gen1	citytop4	Turkish	.917 **	.699 **		.103 **	-.010		.120 **	.146 *	
		Moroccan	.612 **	.440		.090	-.139		.195 **	.232 *	
		Surinamese	.637 **	.252		.015	-.280		.264 **	.108	
		Antillean	.595 **	.221		-.156	-.107		.147	.272 *	
		Chinese	-.510	-1.75		-.076	.040		-.220	.167	*
Hypothesis 5 H0(5a):gen1(bus.serv.)<=gen1(trade); H0(5a):gen2(bus.serv.)<=gen2(trade); H0(5a):gen1(bus.serv.)<=gen1(hosp.); H0(5a):gen2(bus.serv.)<=gen2(hosp.) H0(5b):gen2>=gen1 H0(5b):gen2<=gen1	trade	Turkish	-2.82 **	-3.98 **	**	.105 **	.178		.064	.100	
		Moroccan	-3.27 **	-3.44		.230 *	.799		-.179	.331	
		Surinamese	-2.83 **	-2.73		.183	.066		-.079	.256	
		Antillean	-4.83 **	-3.12 *		.104	.040		-.240 *	.146	
		Chinese	-1.28	-2.45		.619	-.444	**	-.966	.353	
	hospitality	Turkish	-1.11 **	-1.97	**	-.018 **	.122		-.032	.017	
		Moroccan	-1.44	-3.64	**	.301	.923		.010	.117	
		Surinamese	-2.17 *	-1.23		.268	-.024		-.081	.325	
		Antillean	-1.93	-2.16		.269	-.233		-.049	-.256	
		Chinese	1.20	.979		.174	-.640	**	-.205	1.10	
	business services	Turkish	-.620 ---	-1.94 ---		.398 ---	.394 ---		-.465 ---	-.383 ---	
		Moroccan	-.108 ---	-2.50 ---		.524 ---	1.10 ---		-.433 ---	.326 ---	**
		Surinamese	-1.72 ---	-2.19 ---		.248 ---	.116 ---		.018 ---	-.051 ---	
		Antillean	-2.29 ---	-1.92 ---		.123 ---	-.083 ---		.050 ---	-.415 ---	
		Chinese	-.520 ---	-1.99 ---		.254 ---	-.477 ---		-.990 ---	.362 ---	**

Notes: The table displays the composite coefficients (base plus interaction coefficients) of first and second generation migrants per independent variable relevant for hypothesis testing. All regressions include the variables of the base+ models with the exception of the regressions for migrant business concentration, which include the variables of the base++ models. The interaction regressions are run separately for each of the following variable groups: citytop4, concentration, firm concentration, employment and wage level (ln), sector dummies. The Hausman test rejects the OLS specifications in favour of the RE ones in all regressions at the .1% significance level suggesting presence of unobserved individual heterogeneity corrected for in the RE specification. Welch unpaired means comparison test scores identify intergenerational differences in coefficients per origin group. 1 and 2 asterisks behind composite coefficients indicate rejection of stated H0 for hypotheses 2a, 3a, 4a, 5a at 10% and 5% significance levels respectively. 1 and 2 asterisks in Welch-t columns indicate rejection of stated H0 for hypotheses 2b, 3b, 4b, 5b at the 10% and 5% significance levels respectively.(Sensitivity checks carried out by running means comparison tests with assumption of equal group variances, which support stated findings.) Variable definitions are found in the appendix.

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