Immigrant entrepreneurship in the Netherlands

Demographic determinants of entrepreneurship of immigrants from non-western countries

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Summary

The rate of entrepreneurship shows considerable variation, not only between countries, but also between different populations within countries. This is especially true for immigrant populations. Many immigrants into the Netherlands originate from non-western countries, of which Turkey, Morocco, Suriname and the Antilles are the main donor countries. These immigrants belong to either the first generation (if they themselves have been born elsewhere) or the second generation (if at least one of their parents has been born elsewhere).

For immigrants from Turkey, the rate of entrepreneurship is comparable to that of the native Dutch population. This is in sharp contrast with the rate of entrepreneurship for immigrants from Morocco, Suriname and the Antilles, which is less than half compared to that of the native Dutch population. This study examines possible causes for these differences in rates of entrepreneurship, focusing on demographical determinants such as age, education, gender, household composition and degree of urbanisation.

A first indication about the relevance of demography is provided by the differences regarding the demographical composition of the immigrant groups. The immigrant populations from Turkey and Morocco are very similar regarding their demographical composition. They are on average least well educated, most often married, and most immigrants from these countries consider themselves to be Muslim. Immigrants from Suriname and the Antilles are better educated, more familiar with the Dutch culture and language, and more often single (or single parents). All immigrant populations have in common that they are relatively young (as compared to the native Dutch population), and that most immigrants of at least 15 years are first-generation immigrants.

The relevance of differences in demographical composition depends upon the relationship between demographical variables and the rate of entrepreneurship. Our analysis indicates that, generally speaking, age, marital status, the number of children, educational level and living in one of the four largest cities are positively related to the rate of entrepreneurship. Living in neighbourhoods with high population densities has a negative impact on the rate of entrepreneurship, and women are less likely to be entrepreneur than men are. Finally, first-generation immigrants are less likely to be entrepreneur than immigrants from the second generation are.

In addition to these general demographical effects, various immigrant contingency effects can be identified. These contingency effects indicate that the relationship between a specific demographical variable and the rate of entrepreneurship is different for immigrant group(s) than for the native Dutch population. Almost all identified immigrant contingency effects reduce the odds of immigrants being entrepreneur. In combination with the general demographical differences between the native Dutch population and the immigrant populations, this suggests that the rate of entrepreneurship will be higher for the native Dutch population than for the immigrant groups. For three of the four immigrant groups under consideration, this is indeed the case. This illustrates that differences in demographical composition, in combination with immigrant contingency effects, can explain part of the differences in the rates of entrepreneurship.
Despite the demographic differences with the native Dutch population, for immigrants from Turkey the rate of entrepreneurship is similar to the rate of entrepreneurship for the native Dutch population. This may be explained by the existence of ethnic enclaves for Turkish immigrants; the only identified immigrant contingency effect that increases the probability of immigrants being entrepreneur. Ethnic enclaves refer to immigrant groups, concentrated in specific spatial locations, with a variety of enterprises serving their own ethnic market and/or the general population. The presence of ethnic enclaves within the community of Turkish immigrants may be explained by the combination of two factors. First of all, the culture, religion and language of Turkish immigrants may differ considerably from that of the native Dutch population, resulting in demand for immigrant entrepreneurship. Secondly, Turkish immigrants often stem from families with an entrepreneurial background. This suggests that there is also an adequate supply of immigrant entrepreneurship for this group of immigrants.
1 Introduction

Background
More and more, entrepreneurship is recognised as an important source of job growth and economic development (OECD, 2000; Van Stel and Carree, 2002). The rate of entrepreneurship shows considerable variation over time and between countries, which has a clear impact on economic growth (Van Stel and Carree, 2002). In addition, the rate of entrepreneurship also varies between different populations within countries. This is especially true for populations of immigrants (Van den Tillaart, 2001).

Most immigrants into the Netherlands originate from non-western countries, from which Turkey, Morocco, Suriname and the Antilles\(^1\) are the largest donor countries. In addition, immigrants from these countries account for almost 75 percent of the immigrants included in the Dutch integration policy (Martens, 1999). Immigration from these countries has a history of more than three decades, yet these immigrants often find themselves in marginal economic positions (Dagevos and Veenman, 1992).

Entrepreneurship can be a way to improve the economic position of immigrants (Choenni, 1997), and their rate of entrepreneurship has risen steadily during the last decade. Nevertheless, the rate of entrepreneurship is still below the rate of entrepreneurship of the native Dutch population. In addition, it differs between immigrant groups. For example, in 2000 the rate of entrepreneurship was 10.1% for immigrants from Turkey and 3.8% for immigrants from the Antilles (Van den Tillaart, 2001).

Research on immigrant entrepreneurship in the Netherlands has been dominated by social scientists, focusing on ethno-cultural characteristics of the immigrant populations (Rath and Kloosterman, 2000). This study takes a different perspective, and starts with a general framework on entrepreneurship. Within this framework, we analyse differences in rates of immigrant entrepreneurship.

Objective and research question
Entrepreneurship may be defined in various ways (Verheul et al., 2001). In this study, we define entrepreneurship as business ownership, and immigrant entrepreneurship refers to entrepreneurship of immigrants from the four main non-western donor countries: Turkey, Morocco, Suriname and the Antilles.

Various determinants of entrepreneurship have been identified, related to economical, psychological, sociological and demographical aspects of entrepreneurship. Differences in the demographical composition of immigrants and native Dutch people are substantial and well documented. In addition, research on entrepreneurship in general has shown that the demographical composition of a population is an important determinant of entrepreneurship. Therefore, this study focuses on demographical variables as possible determinants of immigrant entrepreneurship.

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\(^1\) Throughout this study, ‘Antilles’ represents the Netherlands Antilles and Aruba, and immigrants from the Netherlands Antilles and Aruba are treated as a single population.

\(^2\) Indonesia, also a major donor country, is classified as a western country (CBS, 2000a).
To determine how (differences in) demographic characteristics influence the rate of entrepreneurship, we investigate the following research questions:

1. What are the demographical characteristics of the immigrant groups and the native population?
2. What is the general relationship between these demographic variables and the rate of entrepreneurship?
3. To which extent does the relationship between these demographic variables and the rate of entrepreneurship differ between groups of immigrants?

The first research question provides insights into similarities and dissimilarities of the demographical composition of immigrant groups and the native Dutch population. The demographical characteristics included in this study refer to age, education, marital status, number of children, gender and urbanisation. The second research question is about the general effect of demography on entrepreneurship, irrespective of country of origin. The third research question involves the identification of contingency factors, causing the relationship between the demographical variables and entrepreneurship to differ between populations. The answers to these three research questions will be combined to provide an overview to which extent differences in demographic characteristics between immigration groups and the native population affect the rate of entrepreneurship.

Outline of the study

Chapter 2 provides background information, including definitions and statistics on the number of immigrants and the rate of immigrant entrepreneurship. Next, chapter 3 presents an overview of our current understanding of immigrant entrepreneurship from an entrepreneurial point of view. The objective of this study will be placed in the wider context of research on entrepreneurship, by relating it to the eclectic framework on entrepreneurship developed by Verheul et al. (2001). Next, we discuss the relevance of individual demographical variables as determinants of entrepreneurship, and present available information on the demographical characteristics of the immigrant groups and the native population. In addition, possible contingency factors will be considered.

The first research question will be answered in chapter 3, based on existing information. In order to answer the second and third research question, additional analysis is required. To this end, two different methodological approaches have been applied. First of all, interviews have been held with immigrant entrepreneurs, to obtain an overall picture of the problem area and gain additional insights into the relevance of possible contingency factors. The main findings are reported in chapter 4. Secondly, a quantitative analysis has been applied to estimate the relationships between demographical variables and the (immigrant) rates of entrepreneurship. The results of this analysis are presented in chapter 5. Chapter 6 combines the findings of chapters 3, 4 and 5 to discuss the main characteristics of the various immigrant groups, and how these may explain the different levels of immigrant entrepreneurship. The main conclusions are presented in chapter 7.
2 Demographical changes of the Dutch population

Since the Second World War, the composition of the Dutch population changed considerably. During the first decades after the Second World War, the Netherlands were believed to be overpopulated, which caused the Dutch government to encourage emigration. This changed in the 1960s, when the government started to stimulate immigration to overcome labour shortages. Since then, the number of immigrants has increased, and in 2000 more than 2.7 million immigrants were living in the Netherlands, 50% of whom originated from non-western countries (CBS, Statline). 

Since 1970, the number of immigrants from non-western countries has shown a rapid increase. Figure 1 illustrates the number of immigrants of the four main donor countries since then. The total number of immigrants represented in this figure is the sum of first- and second-generation immigrants. Following Statistics Netherlands, these two categories are defined as follows:

- first-generation immigrants: individuals living in the Netherlands who were born elsewhere;
- second-generation immigrants: individuals who were born in the Netherlands with at least one parent born elsewhere.

figure 1 Number of first- and second-generation immigrants in the Netherlands, by country of origin

* In 2000, the definition of first-generation immigrants has changed.
Source: CBS (Statline).

1 Statline is the on-site database of Statistics Netherlands, which can be found at www.cbs.nl.

2 Other definitions of first- and second-generation immigrants are also possible (Martens and Veenman, 1996).

3 Until 1999, first-generation immigrants included individuals born elsewhere but of whom both parents were born in the Netherlands. Since 1999, these individuals are no longer counted as immigrants. This involves only a minor correction on the number of immigrants.
The age distribution of the first- and second-generation immigrants is very different. In 2000, more than half of the second-generation immigrants of the countries included in figure 1 were less than 15 years old. Within the age group of 15 to 65 years of age, first-generation immigrants accounted for approximately 80% of the total immigrant population, ranging from 77% for Suriname and 80% for the Antilles to 81% for Turkey and 84% for Morocco.

Immigrant entrepreneurs
Recent years have witnessed an increasing flow of studies on immigrant and ethnic entrepreneurship. These concepts have a lot in common, since many ethnic minority groups consist of immigrants. Nevertheless, it is important to make a distinction between these two concepts. After all, not every member of an ethnic minority is an immigrant, and neither does every immigrant belong to an ethnic minority. In addition, ethnicity is not defined by national borders, so immigrants from a certain country may belong to different ethnic groups.

Throughout this study, immigrant entrepreneurship refers to entrepreneurs who are immigrants from Turkey, Morocco, Suriname or the Antilles. Entrepreneurship has been defined in numerous ways (De Wit, 1993). In this study, entrepreneurship is defined as business ownership, where business refers to businesses with and without employees and include sole proprietors and partnerships as well as private and public limited enterprises. The rate of entrepreneurship is defined as the number of entrepreneurs divided by the labour force.

Van den Tillaart (2001) and Van den Tillaart and Poutsma (1998) provide estimates of rates of immigrant entrepreneurship (table 1). These estimates are based on information from Chambers of Commerce on the number of immigrants registered as entrepreneur. Chambers of Commerce only require entrepreneurs to register their country of birth, not the country of birth of their parents. Consequently, estimates based on these statistics refer to first-generation immigrant entrepreneurs only, and the estimates in table 1 should be interpreted as a lower boundary of the total rate of immigrant entrepreneurship. Since approximately 80% of the immigrant population within the age group of 15 to 65 years of age is of the first generation, the underestimation is however limited.

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1 For example, many of the ‘American Indians’ and ‘Blacks’ who are included in the report of the Small Business Administration (2001) on small businesses in the USA will not be counted as immigrants.

2 In line with Statistics Netherlands, the labour force is defined as the sum of individuals working twelve or more hours a week, individuals having accepted work for twelve or more hours a week, and individuals who have indicated that they want to work for twelve or more hours a week, who are available to work for twelve or more hours a week and have undertaken actions to find work for more than twelve hours a week. This definition is also used by Van den Tillaart (1998, 2001).

3 And 90% within the age group of 25 to 65 years of age.
### Table 1: Estimated percentage of first-generation entrepreneurs in the total labour force, by country of origin

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>4.40</td>
<td>7.80</td>
<td>10.70</td>
<td>10.10</td>
</tr>
<tr>
<td>Morocco</td>
<td>3.30</td>
<td>5.00</td>
<td>5.30</td>
<td>4.60</td>
</tr>
<tr>
<td>Suriname</td>
<td>2.00</td>
<td>4.50</td>
<td>4.50</td>
<td>4.80</td>
</tr>
<tr>
<td>Antilles</td>
<td>2.90</td>
<td>4.60</td>
<td>4.80</td>
<td>3.80</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>8.00</td>
<td>8.90</td>
<td>n.a.</td>
<td>10.20</td>
</tr>
</tbody>
</table>

3 Demography of immigrant entrepreneurship

3.1 A framework on immigrant entrepreneurship

Immigrant entrepreneurship is about entrepreneurship of immigrants. In order to study determinants of immigrant entrepreneurship, we therefore start from the existing body of knowledge on determinants of entrepreneurship in general.

An eclectic framework on entrepreneurship

Which factors influence an individual’s decision to become an entrepreneur? This basic question has been studied from various perspectives. Previous studies have identified psychological determinants (motives and character traits of entrepreneurs), sociological determinants (on the collective background of entrepreneurs), economical determinants (on the impact of economic climate and technological developments) and demographical determinants of entrepreneurship. Verheul et al. (2001) have combined these perspectives into an eclectic framework on entrepreneurship.

This framework recognises that determinants of entrepreneurship are not only studied from different perspectives, but also at different levels. Studies at the micro level focus on the decision-making process by individuals and the motives of people to become self-employed. Determinants of entrepreneurship primarily focus on personal factors such as psychological traits and financial assets, and demographical factors such as education, household composition and age. Often, empirical studies of this type focus on entrepreneurs within a single country, which ensures that the institutional settings are comparable for everyone.

On the other hand, the macro perspective tries to aggregate arguments at micro and meso level and focuses on a range of environmental factors, including technological, economical and cultural (including institutional) variables. This perspective is often applied to examine international differences in the rate of entrepreneurship.

Finally, entrepreneurship can be studied from a static and a dynamic point of view. The static point of view focuses on the number of entrepreneurs at a certain point in time, while the dynamic viewpoint examines changes in the number of entrepreneurs (entry and exit). Descriptive studies on entrepreneurship can include information on both points of view. For example, Van den Tillaart (2001) presents information on both number and survival rates of enterprises. In contrast, formal models on entrepreneurship are restricted to either one of these viewpoints. Attempts to combine these two approaches into a single model have been made only recently (Bosma et al., 2003).

Studies on immigrant entrepreneurship in the Netherlands

In the Netherlands, Bovenkerk (1982) was the first to elaborate on the topic of immigrant entrepreneurs. Since then, various publications on this topic have appeared. Studies such as Choeni (1997) and Rettab (2001) aim at developing models that include determinants from all relevant disciplines (psychological, sociological, economical and demographical), from both a micro and macro perspective. However, the dominant perspective from which immigrant entrepreneurship is studied is the sociological perspective, focusing on ethno-cultural characteristics of the immigrant populations (Rath and Kloosterman, 2000).
An advantage of wide-ranging models as developed by Choenni (1997) and Rettab (2001) is that they offer an overview of all relevant aspects regarding an individual’s decision on entrepreneurship. At the same time, the broad scope of these studies hampers testing of specific relationships through quantitative analysis.

**A framework on demography and immigrant entrepreneurship**

Differences in the demographical composition of immigrants and native Dutch people are substantial and well documented (CBS, 2000a; SCP, 1998; SCP, 1999a; Van den Tillaart, 2001). In addition, research on entrepreneurship in general has shown that the demographical composition of a population is an important determinant of entrepreneurship (Verheul et al., 2001). This study examines the relationship between various demographical variables and immigrant entrepreneurship, at the level of individual immigrants.

Differences in the demographic composition of immigrant groups can explain differences in rates of (immigrant) entrepreneurship through two different mechanisms:

− Given a certain relationship between demographical variables and entrepreneurship, differences in the demographical compositions of immigrant groups will result in different levels of entrepreneurship.

− The effect of demographical variables may vary between immigrant groups: the direction and size of the relationship between demographic variables and entrepreneurship may be contingent upon differences in culture and economic climate.

To take account of these two mechanisms, this study examines the following three research questions:

1. What are the demographical characteristics of the immigrant groups and the native population?
2. What is the general relationship between these demographic variables and the rate of entrepreneurship?
3. To which extent does the relationship between these demographic variables and the rate of entrepreneurship differ between groups of immigrants?

In the remainder of this chapter we discuss the relevance of individual demographical variables as determinants of entrepreneurship, and present available information on the demographical characteristics of the immigrant groups and the native population. This answers the first research question. In addition, possible contingency factors will be considered, as a prelude to the empirical analysis of the second and third research question in the subsequent chapters.

### 3.2 Demography of entrepreneurship

**Age distribution**

Generally speaking, younger people are less likely to be self-employed than elder people are (Small Business Administration, 2001; Verheul et al., 2001). The probability of becoming self-employed is found to increase with age (Verheul et al., 2001). In addition, once people have become self-employed, younger people are more likely to quit their enterprise than elder people are (Bosma et al., 2000). This further strengthens the positive relationship between age and the probability of being entrepreneur.

The age distribution of the immigrant groups is comparable to one another. However, the population of immigrant groups is substantially younger than the native population.
This suggests that the relatively low rates of immigrant entrepreneurship may be partially related to differences in age distribution.

Figure 2  Age distributions of immigrant groups and native population, by country of origin


**Education**

Human capital and entrepreneurship are generally found to be positively correlated: people with higher levels of human capital are more likely to be entrepreneur (Light and Gold, 2000; Storey, 1994), and their enterprises are more profitable (Bosma et al., 2000).

The level of human capital is often represented by the educational level of individuals. Figure 3 illustrates that, on average, the educational level is lowest for immigrant groups from Turkey and Morocco. Immigrants from Suriname and the Antilles have on average higher educational levels, yet not as high as those of the native population.

Human capital is, however, not limited to the educational level. In the case of immigrant entrepreneurship, another relevant aspect of human capital is the knowledge and fluency of the Dutch language. Being able to speak, read and write the native language more fluently increases the possibilities to obtain relevant information during the start-up phase of the enterprise, and allows the entrepreneur to communicate with a larger group of potential customers (Evans, 1989; Clark and Drinkwater, 2000). These arguments suggest a positive relationship between fluency of the Dutch language and the probability of being self-employed. However, similar arguments can also be used to suggest a negative relationship: a higher fluency level improves the position of immigrants in the labour market, and thereby increases the opportunity costs of being self-employed. Various empirical studies support the hypothesis of an overall positive relationship between level of fluency of the (main) national language and rate of entrepreneurship (Clark and Drinkwater, 2000; Portes and Zhou, 1996).

The fluency of communicating in Dutch is lowest for immigrants from Turkey and Morocco. Only a quarter to a third of the immigrants from these countries report never to have difficulties speaking Dutch; for immigrants from the Antilles this share is 71%, and for immigrants from Suriname 83% (SCP, 1999a).
Gender, marital status and number of children

The participation rate of women in the labour force is generally lower than for men. In addition, women that are part of the labour force have a lower probability of being entrepreneur than the male part of the labour force (Verheul et al., 2001). Consequently, an increase in the participation rate of women can reduce the rate of entrepreneurship.

Being married is found to be positively correlated with entrepreneurship. A possible explanation for this relationship is that marriage resolves the shirking problem that arises when the entrepreneur wants to hire employees: by employing their spouse, married entrepreneurs reduce the (perceived) probability of shirking behaviour (Portes and Zhou, 1998). In addition, partners working in their spouses’ enterprise will not always be registered (and paid) as employee, which reduces labour costs (which includes not only the wage of the employee, but also transaction costs associated with hiring a – first – employee).

Portes and Zhou (1998) formulate this effect strictly for male entrepreneurs who employ their wife. Nevertheless, these arguments are just as valid for women who want to employ their husband in their enterprise. Given the lower participation rates and entrepreneurship rates for women, it is however likely that the dominant case is that of a male entrepreneur with his wife helping out.

Marriage may even stimulate women who were previously working as employee to retreat from the labour force. To the extent that this occurs, this strengthens the effect of marriage on the rate of entrepreneurship; not by increasing the number of (female) entrepreneurs, but by decreasing the (number of women in the) labour force.

Mixed results have been reported regarding the relationship between the number of children within a household and the probability of being entrepreneur. While Portes

The household composition of immigrant groups and the native population is presented in table 2. The majority of households of immigrants from Turkey and Morocco exist of married couples with children. For immigrants from Suriname and the Antilles, as well as the native Dutch population, singles constitute the largest household type. Immigrants from Suriname and the Antilles have a large share of single-parent families in common, whilst native Dutch are least likely to have children.

### Table 2

<table>
<thead>
<tr>
<th></th>
<th>Turks</th>
<th>Moroccans</th>
<th>Surinamers</th>
<th>Antilleans</th>
<th>Dutch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singles</td>
<td>8</td>
<td>17</td>
<td>26</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>Families with one parent</td>
<td>6</td>
<td>3</td>
<td>21</td>
<td>22</td>
<td>4</td>
</tr>
<tr>
<td>Married couples with children</td>
<td>68</td>
<td>60</td>
<td>24</td>
<td>15</td>
<td>24</td>
</tr>
<tr>
<td>Non-married couples with children</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Married couples without children</td>
<td>12</td>
<td>13</td>
<td>8</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>Non-married couples without children</td>
<td>2</td>
<td>1</td>
<td>8</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Others</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>


The immigrant groups with the highest shares of married couples also have the lowest participation rate of women in the labour force (figure 4). In the absence of any contingency effects, these differences favour the rate of entrepreneurship of immigrants from Turkey and Morocco as compared to the other groups. Whether there are indeed no contingency effects will be established in chapter 5. In this chapter, we also determine the effect of the number of children on the probability of being entrepreneur.
Urbanisation

Verheul et al. (2001) report mixed findings on the relationship between the degree of urbanisation and the rate of entrepreneurship. On the one hand, a high population density in urban areas is found to stimulate the start-up of new firms, especially in the services sector. This suggests that individuals living in large cities are more likely to be entrepreneur than those living in less urbanised places. On the other hand, population density and urbanisation can lead to the pursuit of economies of scale, which has a negative effect on the rate of entrepreneurship\(^1\). Moreover, thinly populated areas with many dispersed small villages often have many small retail stores, indicating that population density can have a negative effect on the level of business ownership (Bais et al., 1995).

Especially immigrants from Suriname and Morocco live in one of the four largest cities of the Netherlands (56% resp. 48% of the immigrant population). For immigrants from Turkey and the Antilles this share is somewhat smaller (36% resp. 34% of the immigrant population), yet still considerably larger than the share of native Dutch people.

### 3.3 Immigrant contingency effects

To which extent is the relationship between demographic composition and the rate of entrepreneurship contingent upon membership of a specific immigrant group? Contingency effects may occur due to differences in psychological, sociological and economical characteristics of immigrant groups. In this section we discuss the relevance of ethnic enclaves, financial capacity, unemployment, culture and religion as possible contingency factors.

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\(^1\) The rate of entrepreneurship is negatively correlated with average firm size.
**Ethnic enclaves**

The concept of ‘ethnic enclaves’ has been introduced in the early 1980s, and defined as ‘immigrant groups who concentrate in specific spatial locations and organise a variety of enterprises serving their own ethnic market and/or the general population. Their basic character is that a significant proportion of the immigrant labour force works in enterprises owned by other immigrants’ (Barrett et al., 1996). The existence of ethnic enclaves may provide a self-sustaining economic environment. Within such an environment, immigrant entrepreneurs are better able to communicate with customers and are more aware of specific consumer preferences than native entrepreneurs are, which increases their likelihood of success within these enclaves (Clark and Drinkwater, 2000; Evans, 1989).

The existence of ethnic enclaves is closely related to the degree of urbanisation (and size) of immigrant groups. The presence of sizeable ethnic enclaves may stimulate the demand for immigrant entrepreneurs (Evans, 1989), and thus the rate of immigrant entrepreneurship. At the same time, it may also stimulate the size of immigrant enterprises and increase the possibilities for immigrants to work in enterprises owned by immigrants. This would have a negative impact on the rate of entrepreneurship (Clark and Drinkwater, 2000).

**Financial capacity**

Financial capital is often required to start an enterprise. Important sources for financial capital are banks and relatives. Immigrant entrepreneurs are less likely to receive bank funding than native entrepreneurs are (Rath, 2000), and therefore often lend capital from family or other group members. Thus, the availability of financial capital in an immigrant group will stimulate the rate of immigrant entrepreneurship.

**Unemployment**

High unemployment rates for immigrant groups have a negative impact on the availability of financial capital, and thus on the rate of immigrant entrepreneurship. The relationship between unemployment and entrepreneurship is, however, more complicated than this, and includes also positive effects (Verheul et al., 2001). For example, being unemployed reduces the opportunity cost of entrepreneurship, which suggests a positive relationship between unemployment levels and rate of entrepreneurship (Clark and Drinkwater, 2000). Consequently, the net effect of the relatively high unemployment rates for immigrant groups (CBS, 1998) on the rate of immigrant entrepreneurship is not clear.

**Culture**

Culture can be described as the values, norms and attitudes in a group (Verheul et al., 2001). These values and norms determine the attitude a group has towards various aspects of everyday life. For example, immigrants may have preferences for specific culture-related goods and services (Rafiq, 1992). This can stimulate the demand for immigrant entrepreneurship, since immigrants are better aware of these preferences than native people.

In addition, culture is an important determinant of general attitudes towards risk-taking and entrepreneurship (Verheul et al., 2001). Differences in the cultural background of immigrants may therefore result in different rates of immigrant entrepreneurship. This cultural background not only refers to the culture(s) of the country of origin, but also to the values, norms and attitudes of the families of the immigrants. For example, previous
studies have demonstrated that people whose parent(s) were also entrepreneur have a higher probability of being entrepreneur than others (De Wit, 1993).

Based on arguments of self-selection and, therefore, higher levels of unobservable motivation, it has been suggested that immigrants are more inclined towards entrepreneurial activities than natives are. Clark and Drinkwater (2000) report this in their study on ethnic entrepreneurship in England and Wales, where indeed several ethnic minorities show higher rates of entrepreneurship than the native population. However, this argument may be less relevant for the Netherlands, due to the specific Dutch immigration policy. After the Second World War, immigration was stimulated in order to solve labour shortages. Immigration policy was therefore specifically aimed at recruiting employees, not at recruiting entrepreneurs. This may offset the self-selection effects that favour entrepreneurship.

Information on entrepreneurial background of immigrants is provided by Choenni (1997). Choenni reports that many of the Turkish immigrants stem from entrepreneurial families. In contrast, immigrants from Morocco do not originate from entrepreneurial families. This suggests that, ceteris paribus, immigrants from Turkey are more likely to be entrepreneur than immigrants from Morocco, which is consistent with the rates of entrepreneurship reported in the previous chapter.

The specific cultural background of immigrants from Morocco may provide yet another explanation for their low rate of entrepreneurship. Many Moroccan immigrants (about two thirds) are Berbers who originate from the Rif, a difficult to access mountainous area in the north of Morocco. According to Van der Werk (1998), this might explain why the Moroccan society in the Netherlands is tightly interwoven and difficult to enter, and in general tries to avoid the government as much as possible.

Cultural differences between the Netherlands and the country of origin may be more important for first-generation immigrants than for second-generation immigrants. Second-generation immigrants may be more familiar with the Dutch language, culture, legislation and institutions. This suggests that rates of immigrant entrepreneurship may be higher for second-generation immigrants than for first-generation immigrants (ceteris paribus). This ‘first-generation effect’ is likely to be more relevant for immigrants from Turkey and Morocco than for immigrants from Suriname and the Antilles, since first-generation immigrants from Suriname and the Antilles are likely to be more familiar with the Dutch language, culture and institutions.

**Religion**

Religion is an important cultural aspect. If immigrant groups have different religious beliefs from the native population, this may have consequences for the opportunities and possibilities of becoming entrepreneur (as compared to the native population). This is especially relevant for immigrants from Turkey and Morocco, of whom 95% consider themselves to be Muslim. The religious beliefs of immigrants from Suriname and the Antilles are more comparable to those of the native Dutch population, with a large majority being either Christian or not religious (Martens, 1999).
It is outside the scope of this study to present a detailed discussion of Islam and how this may affect the probability of becoming an entrepreneur. Here, we focus on the valuation of entrepreneurship and the position of women.

Religions differ in their attitude towards entrepreneurship, and Islam is known (just as Hinduism) to view self-employment as a worthy activity (Rafiq, 1992). However, it can be argued that this positive attitude applies to men only. Especially in the rural towns and villages from which most of the immigrants from Morocco and Turkey originate (Van der Werf, 1998), segregation of men and women is common practice. Following this segregation, women are generally not allowed to be economically active. This may explain the differences in participation rates of women presented in figure 4, and has a negative impact on the number of female entrepreneurs. In turn, this has a positive effect on the overall rate of entrepreneurship, given that the rate of entrepreneurship is relatively low for women.

In addition, Rafiq (1992) argues that the low participation rate of Muslim women in the labour force diminishes the overall household income, causing less finance to be available in Muslim households than in other households. This lack of financial capacity suggests a negative effect on the overall rate of immigrant entrepreneurship.

**Discrimination**

A final contingency effect is not related to specific characteristics of the immigrant population, but to the attitude of the native Dutch population regarding immigrants. Discrimination of immigrant employees (which may result in underpayment of employed immigrants and relatively high levels of immigrant unemployment) may stimulate immigrants to become entrepreneur. Discrimination of immigrant customers may increase the demand for immigrant entrepreneurs (especially within ethnic enclaves of considerable size). In contrast, discrimination during the process of starting an enterprise will have a negative effect on the rate of immigrant entrepreneurship. Such discrimination can occur when obtaining information from various institutions, applying for a bank loan, negotiating prices with suppliers, etc.

### 3.4 Summary

Based on the review of literature and statistics so far, the four immigrant groups can be divided into two combinations: immigrants from Turkey and Morocco on the one hand, and immigrants from Suriname and the Antilles on the other hand.

The demographical composition of the groups of immigrants from Turkey and Morocco is very similar. Regarding age, education and household composition, but also regarding the relevance of Islam. Only one difference between these two groups of immigrants has been identified: whereas immigrants from Turkey stem from families with an entrepreneurial background, immigrants from Morocco seem to lack such entrepreneurial roots.

Immigrants from Suriname and the Antilles also have similar demographical characteristics. Their age distribution is similar to the age distribution of immigrants from Turkey.

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1 The interested reader is referred to Buldike and Mungra (1986), Light and Bhachu (1993), Rafiq (1992) and Van der Rijst (1999).
and Morocco. Regarding the labour force participation rate of women and the share of married couples in the total number of households, they have much more in common with the native Dutch population. Finally, regarding their education and fluency of the native Dutch language they take an intermediate position.

What does this tell us about the probability of being entrepreneur? Demographical differences in age and education suggest that native Dutch are most likely to be entrepreneurs, followed by immigrants from Suriname and the Antilles, while immigrants from Turkey and Morocco would have the lowest rate of entrepreneurship. If high levels of urbanisation would support entrepreneurship rates for immigrant groups (e.g., through the existence of ethnic enclaves), this would favour the rates of entrepreneurship for all immigrant groups, especially for immigrants from Suriname and Morocco. Finally, the combination of a high share of married couples and a low labour force participation rate of women for immigrants from Turkey and Morocco has a positive effect on the rate of entrepreneurship for these immigrant groups. There are also substantial differences in the number of children per household, but previous studies on the effects of these variables on the rate of entrepreneurship are not unanimous on the direction of these effects.

It is not possible to rank immigrant groups according to the overall effect of their demographical composition on their rate of entrepreneurship. This would require additional information on the relative importance of each of these demographical variables. Nevertheless, the results so far suggest that the rate of entrepreneurship for immigrants from Turkey and Morocco would be very similar. This contradicts the findings by Van den Tillaart (2001). A possible explanation is that the impact of specific demographical variables on the rate of entrepreneurship varies between immigrant groups. For example, gender differences may vary between immigrants from Turkey and Morocco. Another explanation is that the general attitude towards entrepreneurship differs between immigrant groups, as suggested by Choenni (1997) and Van der Werk (1998). Both explanations suggest the presence of immigrant contingency effects.
4 Entrepreneurship according to entrepreneurs

4.1 Introduction

This study combines two different approaches to examine the relationship between demography and immigrant entrepreneurship. The next chapter provides the results of a quantitative analysis, which will quantify the relationships between various demographic variables and the probability of being entrepreneur, controlling for possible immigrant contingency effects. This analysis is based on a large sample, and the results are representative for the Netherlands.

This quantitative approach is suitable for identifying the presence of immigrant contingency effects. However, it cannot provide any explanations for these effects. To obtain a better understanding of possible sources for immigrant contingency effects, we have interviewed a number of immigrant entrepreneurs. This chapter contains the main results of these interviews.

4.2 Methodology

Sampling

The objective of the interviews is to provide possible explanations for immigrant contingency effects, rather than hard facts. A relatively small sample is sufficient to meet this objective. The sampling procedure aimed to interview a total of 25 entrepreneurs, consisting of 5 entrepreneurs from each immigrant group and 5 native Dutch entrepreneurs. In order to increase the comparability of the interview results, interviews were limited to entrepreneurs from a single sector of industry. For two reasons, the retail sector has been selected: the share of immigrant entrepreneurs is relatively high in this sector (Van den Tillaart, 2001), and it is relatively straightforward to sample entrepreneurs from this sector. A two-step sampling procedure has been applied. In the first step, neighbourhoods with a relatively high density of immigrants were (visually) selected. Most of these neighbourhoods were located in Amsterdam, Rotterdam or Gouda. Next, these neighbourhoods were visited and retail stores were selected that appeared to be owned by individuals from a relevant immigrant group. The owner was then asked for, and he or she was invited to participate in the study.

Non-response

Not every selected store resulted in an interview. Non-response occurred due to the following reasons:

− The entrepreneur was not present
− The entrepreneur did not speak the Dutch language fluently enough
− The entrepreneur did not want to participate in the study.

Non-response was higher for female entrepreneurs (none of whom were willing to be interviewed) and elder entrepreneurs. It was especially high amongst immigrants from Morocco and Suriname. In addition, due to the relatively small number of immigrants from the Antilles, very few enterprises owned by Antillean immigrants could be identified. Ultimately, 14 interviews have been held with immigrant entrepreneurs: 5 originating from Turkey, 5 originating from Morocco, 3 originating from Suriname, and a single
entrepreneur originating from the Antilles. For comparison, also 5 native Dutch entre-
preneurs were interviewed.

4.3 Demographical characteristics

The demographical characteristics of the interviewed entrepreneurs are in line with the
findings presented in the previous chapter. Most entrepreneurs were relatively young
(although this is partially related to the high non-response levels of elder entrepre-
neurs). The native Dutch entrepreneurs were, on average, higher educated than the
immigrant entrepreneurs. Three immigrant entrepreneurs (one from Turkey and two
from Morocco) only had primary education. In contrast, one of the Moroccan immigrant
entrepreneurs had a university degree. Fluency of the Dutch language was lowest for
the interviewed immigrants from Morocco, and highest for immigrants from Suriname
and the Antilles. All entrepreneurs were married or had a girlfriend, and all but two of
the immigrant entrepreneurs had children. Often the wife helps out when it is busy; the
children were however mostly too young to help out in the enterprise.

4.4 Immigrant contingency effects

Ethnic enclaves
All but two entrepreneurs (both immigrants from Turkey) had employees, mostly family
members or friends. According to Barrett et al. (1996), this is a basic characteristic of
ethnic enclaves. Ethnic enclaves may also play a role in the start-up phase: 13 of the 14
respondents mentioned they had contacted other entrepreneur(s) prior to starting their
own enterprise, and often obtained advice from them. Information was also obtained
from family and friends and the Chamber of Commerce.

Financial capacity
The three interviewed immigrant entrepreneurs from Suriname obtained business loans
from banks, as did the native Dutch entrepreneurs. The immigrant entrepreneurs from
Turkey and Morocco encountered more difficulties in financing their enterprise. Banks
rejected all applications for business loans from these immigrants, and most of them
felt they had not been treated well at the bank. As a second-best solution, these immi-
grants financed their enterprise through a personal loan at the bank or by lending
money from family.

The likelihood of obtaining a business loan increases if an entrepreneur can present a
sound business plan. Only one of the interviewed entrepreneurs did in fact have such a
business plan. Possibly, immigrant entrepreneurs do not have enough skills to write a
business plan (in Dutch), or they may not recognise the importance of a business plan
when applying for a business loan. However, most of the native Dutch entrepreneurs in
the sample also did not have a written business plan, so this problem is probably not
limited to immigrant entrepreneurs.

Unemployment
Two of the 19 interviewed entrepreneurs (both immigrants from Morocco) were unem-
ployed previous to starting their enterprise. Although our sample is too small to draw
firm conclusions, it does not support the theory that unemployment is an important
push factor into self-employment.
The majority of the respondents had been an employee prior to becoming an entrepreneur. In addition, three entrepreneurs (immigrants from Morocco and Turkey and a native Dutch entrepreneur) had owned another enterprise before they started their current one, and two entrepreneurs (both immigrants from Suriname) set up their enterprise right after they finished their initial education.

Culture
Why do entrepreneurs become self-employed? Answers to this question provide insight into the values and attitudes of entrepreneurs towards entrepreneurship. Within our sample of entrepreneurs, the motives of the 10 immigrant entrepreneurs from Turkey and Morocco clearly differentiate them from the other 9 entrepreneurs. For the immigrant entrepreneurs from Turkey and Morocco, the two most often mentioned motives are a preference of self-employment over working as an employee, and family business succession.

The argument that self-employment is preferred over working as an employee is only made by immigrants from Turkey and Morocco. This might be seen as an indication that Turkish and Moroccan employees are more often discriminated against than native employees or immigrants from Suriname or the Antilles. However, as stated before, the small sample size makes it impossible to draw any firm conclusions.

The Turkish and Moroccan entrepreneurs who had taken over their parent’s enterprise indicated they had been helping out in their parent’s enterprise when they were younger. This finding indicates the relevance of entrepreneurial background as a determinant of self-employment. It does not necessarily indicate a relationship with the rate of immigrant entrepreneurship: family business succession does not result in an increase of the rate of entrepreneurship, but in a transfer of entrepreneurship from one generation to another.

Many of the interviewed immigrant entrepreneurs from Turkey and Morocco seemed to be pushed into self-employment, either because they had to take over the family business, because working as an employee was not to their liking, or because they were previously unemployed (which was the case for two immigrants from Morocco). In contrast, the other interviewed entrepreneurs seemed to be pulled into self-employment: their main motives to become entrepreneur are the presence of market opportunities and possibilities for making high profits, and a positive attitude towards entrepreneurship in general.

While the interviews suggest that immigrant entrepreneurs from Turkey and Morocco share certain values and attitudes towards entrepreneurship, they also indicate different attitudes towards outsiders. Generally speaking, the interviews with Turkish entrepreneurs were quite relaxed. The respondents were very friendly and did not mind being interviewed. However, during the interviews with the Moroccan entrepreneurs the atmosphere was tenser. Especially the questions on religion were treated with some suspicion. These experiences are in line with the higher non-response rate for immigrant entrepreneurs from Morocco as compared to immigrant entrepreneurs from Turkey, and with the impression that immigrants from Morocco form a closed society that is difficult to enter (as discussed in the previous chapter).

1 12 out of 19.
Religion
Some of the immigrants from Turkey and Morocco stated that religious considerations had influenced their decision to start a business. These entrepreneurs were active in the food retail sector, selling meat that was prepared according to Islamic rituals. They indicated that prior to their enterprise, such a business was lacking in their neighbourhood, which stimulated their decision to start their own enterprise.

This example supports the relevance of religion as a source of immigrant contingency effects. In addition, it supports the relevance of ethnic enclaves, at least for immigrants from Turkey and Morocco: without a substantial number of potential customers for their specific product, it is less likely that these businesses would survive.
5 A quantitative analysis of the relevance of demography

5.1 Introduction
This chapter provides a quantitative examination of the second and third research question: what is the relationship between demographical variables and the rate of entrepreneurship, and to which extent is this relationship contingent upon membership of specific immigrant groups? We estimate a regression equation where entrepreneurship is explained by available demographical variables. The estimation results are discussed in sections 5.3 and 5.4, but first section 5.2 elaborates the applied methodology.

5.2 Methodology

Sample and data collection
The regressions are performed using data from the annual Labour Force Survey (LFS) of Statistics Netherlands. The stratification plan of the LFS consists of two stages. The first stage determines which municipalities are selected and how many addresses will be drawn from them. In the second stage, addresses are selected within each municipality. In each household selected, a maximum of four individuals aged at least 15 years is interviewed. If the persons who have been selected are not available, whenever possible, another person in the household is asked to participate in the interviews. This stratification process ensures that all relevant strata of the Dutch population are included in the sample, which should result in a sample that is representative for the whole population.

For our analysis, we use a specific sub-sample of the LFS with information for the year 2000. The sub-sample contains respondents participating in the labour force that are either native Dutch, immigrants from one of the four relevant non-western countries, or immigrants from a western country. Immigrants from western countries are included to estimate whether the rate of immigrant entrepreneurship differs between first-generation and second-generation immigrants. Estimating this effect using only data on immigrants from non-western countries would be troublesome, since the large majority of adult immigrants from non-western countries belongs to the first generation, and the number of immigrant entrepreneurs from these countries in the LFS is limited (table 3).

Table 3 presents the number of respondents in the LFS who belong to the labour force, as well as the number of entrepreneurs. A first observation that can be made is that the LFS contains only a few immigrants from Morocco and the Antilles who are active as entrepreneur. Therefore, we have decided not to include any estimation results on immigrant entrepreneurs from these countries in this chapter.

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1 A more detailed discussion of the LFS is presented in CBS (2000b).
2 The definition of the labour force as applied by Statistics Netherlands can be found in chapter 2.
3 Some estimation results are included in the annex.
table 3  Number of LFS respondents belonging to the labour force (including entrepreneurs), by country of origin

<table>
<thead>
<tr>
<th></th>
<th>Labour force</th>
<th>Entrepreneurs</th>
<th>Rate of entrepreneurship (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native Dutch</td>
<td>46,639</td>
<td>4,850</td>
<td>10.4</td>
</tr>
<tr>
<td>Immigrants from western countries</td>
<td>3,939</td>
<td>372</td>
<td>9.4</td>
</tr>
<tr>
<td>Turkish immigrants</td>
<td>723</td>
<td>35</td>
<td>4.8</td>
</tr>
<tr>
<td>Moroccan immigrants</td>
<td>339</td>
<td>9</td>
<td>2.7</td>
</tr>
<tr>
<td>Surinamese immigrants</td>
<td>731</td>
<td>36</td>
<td>4.9</td>
</tr>
<tr>
<td>Antillean immigrants</td>
<td>289</td>
<td>12</td>
<td>4.2</td>
</tr>
<tr>
<td>Total</td>
<td>52,660</td>
<td>5,314</td>
<td>10.1</td>
</tr>
</tbody>
</table>


The low number of immigrant entrepreneurs from the Antilles can be explained by the combination of a low rate of immigrant entrepreneurship (table 1) and the relatively small size of this immigrant group (figure 1).

This explanation does not apply to the Moroccan immigrants. Not only is the number of Moroccan entrepreneurs in the LFS very small, but this also holds for the number of Moroccan immigrants who belong to the labour force. The total number of Moroccan immigrants is only slightly smaller than the number of immigrants from Turkey and Suriname (figure 1), yet the number of Moroccan immigrants in the LFS is less than half compared to Turkish and Surinamese immigrants (table 3).

Apparently, immigrants from Morocco are either harder to locate or more reluctant to participate in the LFS. This is in line with the findings by Van der Werk (1998), as well as with our own interviewing experiences. If entrepreneurs are more difficult to locate or more reluctant to participate than employed or unemployed immigrants from Morocco, this would contribute to the low rate of immigrant entrepreneurship within the LFS. This also implies that the subsample of Moroccan immigrants within the LFS may not be representative for the population of Moroccan immigrants.

The fourth column of table 3 contains the rate of (immigrant) entrepreneurship in the LFS. These results are not weighted to correct for the stratification plan, and are therefore not meant as an estimate of the rate of immigrant entrepreneurship in the Netherlands. Still, it is interesting to make a comparison between the rates of immigrant entrepreneurship as presented in table 3 and those presented in table 1 (chapter 2), which are based on statistics from Chambers of Commerce.

Despite the methodological differences in the measurement of the rate of immigrant entrepreneurship, it is interesting to note that the rates are comparable for the native Dutch population as well as for immigrants from Suriname and the Antilles. Regarding immigrants from Turkey and Morocco, the (unweighted) rate of entrepreneurship within the LFS is substantially below the rate of entrepreneurship presented in chapter 2. This can be explained by the stratification procedure of the LFS, which results in an
overrepresentation of people who are registered as unemployed (CBS, 2000b)\(^1\). In combination with the fact that the level of registered unemployment is much higher for immigrants from Turkey and Morocco than for the other groups in table 3 (CBS, Statline), this results in an overrepresentation of unemployed immigrants from Turkey and Morocco in the LFS.

**Variables**

The dependent variable of our analysis is entrepreneurship, which is defined as business ownership. This definition includes businesses with and without employees, and involves sole proprietors and partnerships as well as private and public limited enterprises. The definition excludes people working in their partners’ enterprise without being (part) owner (these are counted as employee) and freelancers (who are excluded from the sample). The demographical variables that are used as independent variables are presented in table 4.

**Table 4: Independent variables**

<table>
<thead>
<tr>
<th>Label</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>First generation</td>
<td>Dummy</td>
<td>Indicates whether respondent is first-generation immigrant (1) or not (0)</td>
</tr>
<tr>
<td>Age</td>
<td>Continuous</td>
<td>Age of respondent</td>
</tr>
<tr>
<td>Married</td>
<td>Dummy</td>
<td>Indicates whether respondent is married (1) or not (0)</td>
</tr>
<tr>
<td>Children</td>
<td>Continuous</td>
<td>Number of children</td>
</tr>
<tr>
<td>Gender</td>
<td>Dummy</td>
<td>Indicates whether respondent is female (1) or not (0)</td>
</tr>
<tr>
<td><strong>Education:</strong></td>
<td></td>
<td>Dummy variables representing highest level of education</td>
</tr>
<tr>
<td>Primary</td>
<td>Dummy</td>
<td>Primary school</td>
</tr>
<tr>
<td>Secondary</td>
<td>Dummy</td>
<td>Junior secondary vocational or general education</td>
</tr>
<tr>
<td>Senior</td>
<td>Dummy</td>
<td>Senior secondary vocational or senior secondary general education</td>
</tr>
<tr>
<td>High</td>
<td>Dummy</td>
<td>Higher vocational colleges</td>
</tr>
<tr>
<td>University</td>
<td>Dummy</td>
<td>University</td>
</tr>
<tr>
<td><strong>Urbanisation:</strong></td>
<td></td>
<td>Dummies representing degree of urbanisation</td>
</tr>
<tr>
<td>Outside large city</td>
<td>Dummy</td>
<td>Living outside Amsterdam, Rotterdam, The Hague or Utrecht (1; else 0)</td>
</tr>
<tr>
<td>Very high pop.</td>
<td>Dummy</td>
<td>Living in a neighbourhood with a very high population density (1; else 0)</td>
</tr>
<tr>
<td>High pop.</td>
<td>Dummy</td>
<td>Living in a neighbourhood with a high population density (1; else 0)</td>
</tr>
<tr>
<td>Normal pop.</td>
<td>Dummy</td>
<td>Living in a neighbourhood with a normal population density (1; else 0)</td>
</tr>
<tr>
<td>Low pop.</td>
<td>Dummy</td>
<td>Living in a neighbourhood with a low population density (1; else 0)</td>
</tr>
<tr>
<td>Very low pop.</td>
<td>Dummy</td>
<td>Living in a neighbourhood with a very low population density (1; else 0)</td>
</tr>
</tbody>
</table>

The degree of urbanisation is measured in two different ways. The dummy variable ‘outside large city’ indicates whether or not an individual lives in one of the four largest cities in the Netherlands. The other dummies represent the population density at the

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\(^1\) One of the purposes of the LFS is to construct statistics on unemployment.
level of postal codes. The population density can vary both within and outside the four largest cities. For the other variables, the description in table 4 is self-explanatory.

Logistic regression

Since the dependent variable of our study is dichotomous, standard regression techniques (which assume that the dependent variable is continuous) would result in biased parameter estimates. Estimating a logit model can solve this problem.

Logit regressions can be used to estimate the probability that an individual is an entrepreneur, given his or her specific characteristics. One of the characteristics of this regression method is that the interpretation of the parameter estimates is rather complicated. The estimated parameters do not represent the effect of changes in a specific variable on the probability of being an entrepreneur, but on the so-called logit transformation of that probability. This logit transformation renders the log of the odds, where the odds is the probability of being an entrepreneur relative to the probability of not being an entrepreneur.

Logit regressions do not perform well if the probability that is to be explained (such as the probability of being entrepreneur) is below 20% or above 80%. Our dataset does not meet these requirements. To improve the performance of the logit regression procedure, the share of entrepreneurs has been increased by limiting the number of non-entrepreneurs in our sample. This has been done by selecting (for each group of immigrants) approximately 1/6 of all non-entrepreneurs from the LFS sample for our analysis. Within the sub-sample used for the logit regressions, the rate of immigrant entrepreneurship is now 22% of the Turkish and Surinamese immigrants, and even higher for western immigrants and the native Dutch.

5.3 Demography of entrepreneurship

Results of the logit regression provide some insights into the relationship between demographical variables and the rate of entrepreneurship. These results are, however, difficult to interpret. Therefore, table 5 does not include the actual parameter estimates, but a transformation of these estimates that is more easily interpretable. The actual parameter estimates are included in the annex, together with an explanation of the applied transformation.

The numbers presented in table 5 are estimates of odds ratios, which reflect changes in odds associated with an increase in the independent variable. For example, the odds ratio of ‘married’ equals 1.08, meaning that for married individuals the odds of being entrepreneur are 8% higher than for unmarried individuals. Generally speaking, this implies that the probability of being entrepreneur is also 8% higher. Likewise, for Turkish immigrants the odds ratio of ‘gender’ equals 0.21, which implies that for female immigrants from Turkey (who belong to the labour force) the odds of being entrepre-

1 Alternatively, a probit model could be estimated. Generally speaking, logit and probit estimations lead to the same conclusions. Elaborate discussions of these estimation methods can be found in Maddala (1983) and Neter et al. (1996).

2 This relationship between odds and probabilities only holds for low probabilities. The probability of being entrepreneur is low enough to justify this comparison.

3 The LFS only includes people in the labour force.
neur are 21% of the odds of male immigrants from Turkey. The probability of a female Turkish immigrant being entrepreneur is approximately 78% lower than that of a male Turkish immigrant.

**Table 5 Estimated odds ratio, by country of origin**

<table>
<thead>
<tr>
<th></th>
<th>Native Dutch</th>
<th>Western countries</th>
<th>Turkey</th>
<th>Suriname</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>1.06</td>
<td>1.06</td>
<td>1.06</td>
<td>1.06</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>0.61</td>
<td>0.61</td>
<td>0.21*</td>
<td>0.24*</td>
</tr>
<tr>
<td><strong>Children</strong></td>
<td>1.19</td>
<td>1.19</td>
<td>0.82*</td>
<td>1.19</td>
</tr>
<tr>
<td><strong>Married</strong></td>
<td>1.08</td>
<td>1.08</td>
<td>1.08</td>
<td>1.08</td>
</tr>
<tr>
<td><strong>Education a</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>0.49</td>
<td>0.18*</td>
<td>0.49</td>
<td>0.03*</td>
</tr>
<tr>
<td>Secondary</td>
<td>0.67</td>
<td>0.26*</td>
<td>0.67</td>
<td>0.05*</td>
</tr>
<tr>
<td>Senior</td>
<td>0.87</td>
<td>0.31*</td>
<td>0.87</td>
<td>0.11*</td>
</tr>
<tr>
<td>High</td>
<td>0.70</td>
<td>0.43*</td>
<td>-</td>
<td>0.09*</td>
</tr>
<tr>
<td><strong>Urbanisation b</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outside large city</td>
<td>0.68</td>
<td>0.68</td>
<td>0.68</td>
<td>0.68</td>
</tr>
<tr>
<td>Very high pop.</td>
<td>0.57</td>
<td>0.57</td>
<td>3.13*</td>
<td>0.57</td>
</tr>
<tr>
<td>High pop.</td>
<td>0.54</td>
<td>0.54</td>
<td>0.54</td>
<td>0.54</td>
</tr>
<tr>
<td>Normal pop.</td>
<td>0.66</td>
<td>0.66</td>
<td>0.66</td>
<td>0.66</td>
</tr>
<tr>
<td>Low pop.</td>
<td>0.78</td>
<td>0.78</td>
<td>-</td>
<td>0.78</td>
</tr>
<tr>
<td>First generation</td>
<td>-</td>
<td>0.73</td>
<td>0.73</td>
<td>0.73</td>
</tr>
</tbody>
</table>

Valid observations: 13,161.

Percentage predicted correctly: 66% (reference value: 60%, being the share of non-entrepreneurs in the sample).

- Parameter estimate not available due to missing data.
- * Parameter estimate shows significant difference with estimate for native Dutch.
- ** Parameter estimate shows significant difference with estimate for western countries.

*a* Reference category is 'university degree'.

*b* Reference category is 'very low population'.

Note: Estimation results for immigrants from Morocco and the Antilles are excluded from this table.

The results presented in the first column of table 5 confirm the findings from previous studies discussed in chapter 3. Age and marital status are positively related with the probability of being entrepreneur. This also holds for the educational level. The reference category is the highest level of education (university degree). All dummies representing lower educational levels have an estimated odds ratio smaller than 1, with the lowest values for primary and secondary education. There is also a clear gender effect: women participating in the labour force have a lower probability of being entrepreneur than men do.

Previous studies are indecisive about the impact of the number of children and the degree of urbanisation on the probability of being entrepreneur. Our results suggest a positive impact of the number of children. Regarding the relationship with urbanisation, our results are inconclusive. On the one hand, living in one of the four biggest cities in-
creases the likelihood of being entrepreneur. The dummies on the level of population density, however, suggest an opposite relationship. Here, the reference category is neighbourhoods with the lowest population density. The estimated odds ratios suggest that an increase in population density is associated with a decrease of the probability of being entrepreneur. Combined, these results suggest that the rate of entrepreneurship is highest in the least populated areas within the four largest cities. Without further information, we cannot offer a clear explanation for this result.

5.4 Immigrant contingency effects

The first column of table 5 provides the answer to the second research question of this study. The third research question can be answered by examining the remaining columns: to which extent do the relationships between demographical variables and the rate of entrepreneurship differ between immigrant groups?

Contingency effects are present

The presence of immigrant contingency effects is indicated by the fact that all immigrant groups have several odds ratios that differ significantly from the comparable odds ratio of the native Dutch population. Each immigrant group has its own pattern of contingency effects. For immigrants from Turkey, the impact of gender, number of children and the (very high) level of population density on entrepreneurship differ from the native Dutch population. For Surinamese immigrants, differences exist regarding the effects of gender and educational levels. In most of these cases, the estimated odds ratio for the immigrant group is lower than for the native Dutch population. This implies that the identified contingency effects decrease the probability of being entrepreneur, relative to the native Dutch population. A single exception exists: for immigrants from Turkey living in neighbourhoods with very high population densities, the probability of being entrepreneur is higher (ceteris paribus) than for native Dutch people.

Gender effect contingent on country of origin

The gender effect is already substantial for the native Dutch population: for women in the labour force, the probability of being entrepreneur is almost 40% below the probability of men in the labour force (with otherwise similar demographical characteristics). For immigrants from Turkey and Suriname, the difference between men and women is even larger: the odds ratio of women being entrepreneur is less than half of the odds ratio for the native Dutch population.

The impact of the gender effect on the overall rate of entrepreneurship depends on the participation rate of women in the labour force. For immigrants from Turkey, the female labour force participation rate is low compared to the native Dutch population. As a result, the low female rate of entrepreneurship has only a limited impact on the overall rate of entrepreneurship, which may even be smaller than for the native Dutch population.

1 Due to the fact that the rate of entrepreneurship is defined relative to the labour force.
In contrast, for immigrants from Suriname the labour force participation rate of women is approximately 60% (figure 4), which is higher than for the native Dutch population. This implies that the relatively low entrepreneurship rate of women has a negative impact on the overall rate of entrepreneurship (as compared to the Dutch population).

First-generation effect
In chapter 3, the existence of a first-generation effect was hypothesised. According to this effect, first-generation immigrants have lower odds of being self-employed than second-generation immigrants. Second-generation immigrants are assumed to be more familiar with Dutch culture and society than first-generation immigrants are, which reduces the specific thresholds that first-generation immigrants are faced with. This hypothesis is supported by our estimation results.

First of all, the estimated odds ratios in the final row of table 5 indicate that first-generation immigrants are faced with a lower probability of being entrepreneur than native Dutch people: the odds of a first-generation immigrant being entrepreneur are 27% lower than the odds of a native Dutch person. This holds after controlling for differences in the demographic composition of the various immigrant groups and taking account of several demography-specific contingency effects.

Secondly, there is no indication of an overall immigrant-effect. This can be derived from the finding that none of the country-specific dummies that are included in the regression equation differ significantly from zero.

Combining these two results leads to the conclusion that a first-generation effect indeed exists: first-generation immigrants are less likely to be self-employed (ceteris paribus) than second-generation immigrants (for whom the odds of being entrepreneur are comparable to those of native Dutch people).

The first-generation effect is similar for immigrants from western countries, Turkey and Suriname. In chapter 3, the hypothesis was presented that the first-generation effect would be stronger for immigrants from Turkey than for immigrants from Suriname, since first-generation immigrants from Suriname were expected to be more familiar with Dutch culture, language and institutions. However, the regression results provide no support for this argument.

Generally speaking, the conclusion of the presence of a first-generation effect is more robust for the population of immigrants from western countries than for immigrants from Turkey and Suriname. This is due to the fact that approximately 80% of the immigrants from Turkey and Suriname within the age group of 15 to 65 years of age belong to the first generation. Consequently, our dataset contains only a few second-generation immigrants from these two countries. This introduces the risk that for these two countries, the first-generation dummy and the country dummy are highly correlated, making it difficult to distinguish the first-generation effect from a general immigrant-effect.

\(^1\) Country dummies are not included in table 5, since none of them are significant. The estimated log odds ratios of these dummies are included in table 6 in annex I.
6 Synthesis

6.1 Introduction
In the previous chapters, the three research questions of this study have been answered independently of each other. In this chapter, we integrate the main conclusions and portray the main similarities and dissimilarities of the complex relationship between demography and entrepreneurship.

6.2 Turkish immigrants
Generally speaking, demographical differences between immigrants from Turkey and the native Dutch population suggest a relatively low rate of entrepreneurship for Turkish immigrants as compared to the native Dutch. Immigrants are relatively young, less well-educated and speak the native language less fluently. All of these factors have a negative impact on the rate of entrepreneurship.

In addition, for immigrants from Turkey the estimated effect of the number of children is negative. Combined with the relatively large share of households with children for this immigrant group, this also reduces the overall rate of immigrant entrepreneurship. For all other groups, the number of children is positively related with the probability of being entrepreneur. A possible explanation is that immigrants from Turkey have on average more children than native Dutch families do. Taking care of children is costly, and these costs are positively related to the number of children. Entrepreneurship is not without (financial) risks, and individuals with more children may attach a higher weight to the financial risks of being entrepreneur than individuals with fewer children. Consequently, having relatively many children may reduce the odds of being entrepreneur relative to having one or two children. However, it is not clear why this argument would apply to immigrants from Turkey and not to immigrants from other non-western countries.

Being married has a positive effect on the rate of entrepreneurship. Since relatively many households of Turkish immigrants are marriages, this has a positive effect on the odds that immigrants from Turkey are entrepreneur. However, the negative effect of the number of children more than offsets the positive effect of marriage: 85% of married immigrant Turkish households have children, and the negative effect of the number of children is stronger than the positive effect of being married.

Female immigrants from Turkey are far less likely to be entrepreneur than native Dutch women are. This is probably related to cultural and/or religious differences. However, the female labour force participation rate is also much lower than that of native Dutch women. These two differences have an opposite effect on the rate of entrepreneurship (which is defined relative to the labour force), and the net gender effect does not seem to cause substantial differences in the rate of entrepreneurship.

On top of all these demographical effects, our calculations indicate the presence of a first-generation effect, according to which being a first-generation immigrant (which accounts for the majority of the labour force) further reduces the odds of being self-employed.
Each of these results suggests that the rate of entrepreneurship of immigrants from Turkey should be far below the rate of native Dutch people. This is clearly at odds with the actual rate of entrepreneurship, which is similar to that of the native Dutch population (Van den Tillaart, 2001). How can we explain this contradiction? A first explanation may be the existence of ethnic enclaves, which is indicated by the regression results from the previous chapter. Not only are the odds of being entrepreneur higher for immigrants living in one of the four largest cities (which holds for all populations), but for immigrants living in highly populated neighbourhoods the odds of being entrepreneur are more than 3 times higher than the odds of native Dutch people living in those neighbourhoods. We assume that these areas are not only highly populated, but that a significant share of this population consists of Turkish immigrants (which is a necessary condition for the existence of ethnic enclaves). With this assumption, the regression results indicate positive effects of ethnic enclaves on the rate of entrepreneurship for Turkish immigrants. Further support for the positive effects of ethnic enclaves are provided by the interviews, which suggest that the odds of being entrepreneur increase if one is acquainted with entrepreneurs, and that ethnic enclaves stimulate the demand for immigrant entrepreneurship (such as Islamic butchers).

Another explanation may be related to the cultural background of immigrants from Turkey. The finding that the rate of immigrant entrepreneurship is highest for immigrants from Turkey is consistent with Choenni's (1997) argument that many immigrants from Turkey have an entrepreneurial background.

6.3 Moroccan immigrants

The demographical composition of the immigrant group from Morocco is very similar to that of the immigrants from Turkey. Yet large differences exist in their rates of entrepreneurship. How may we explain these differences?

Different sources of information all point towards one explanation for this difference: whereas Turkish immigrants are reported to have a positive general attitude towards entrepreneurship, immigrants from Morocco generally lack the motivation to become self-employed.

Previous studies indicate that Moroccan immigrants do not have an entrepreneurial background. They form a closed society that generally tries to avoid contacts with official institutions. The low participation rate of Moroccan immigrants in the LFS is consistent with this finding, and our interviews further support this explanation. The high non-response level of Moroccan immigrants and the relatively tense atmosphere during the interviews that have been held are additional indications of the closed nature of this population. Furthermore, despite the small sample and high non-response rate of Moroccan entrepreneurs, we were still able to interview 5 immigrant entrepreneurs from Morocco. This is more than half of the total number of Moroccan immigrant entrepreneurs in the LFS, which reconfirms the underrepresentation of immigrant entrepreneurs from Morocco in the LFS.

Finally, the content of the interviews is also supportive of this explanation. When asked about the main reason for becoming self-employed, none of the Moroccan immigrants answered that they had a general motivation to become entrepreneur or that they saw specific market opportunities. Instead, their main reasons were that they had to take over the family business, or that working as an employee was not to their liking. However, since the Turkish entrepreneurs provided very similar answers to this question, it is
not clear to which extent these answers provide an explanation for the difference in the rate of entrepreneurship between immigrants from Morocco and Turkey.

6.4 Surinamese and Antillean immigrants

The demographical composition of the populations of immigrants from Suriname and the Antilles is similar to each other, as is their rate of entrepreneurship. This suggests that the relationships between demographical variables and the probability of being self-employed will be comparable for these two groups. However, we have not been able to investigate this suggestion. Of the four immigrant groups distinguished in this study, the immigrants from the Antilles represent the smallest group. Both the LFS and our sample of interviewed entrepreneurs contain too few observations on immigrant entrepreneurs from the Antilles to make any statements about this specific group. We therefore focus on immigrant entrepreneurs from Suriname.

Age and household composition of Surinamese immigrants have a negative effect on the odds of being entrepreneur, as compared to the native Dutch population. First of all, immigrants from Suriname are on average younger than native Dutch. Furthermore, the share of married couples is somewhat smaller. Most of all, however, the net gender effect is very strong for this population. The labour force participation rate of female immigrants from Suriname is relatively high; the low odds of female immigrants being entrepreneur therefore have a strong negative effect on the overall odds of Surinamese immigrants being entrepreneur. The combination of high labour force participation rate and low rate of entrepreneurship for female immigrants from Suriname may be related to the relatively high share of single parent families for this immigrant group (assuming that most of the single parents are women). Further research is however required to substantiate this relationship.

The high labour force participation rate of female immigrants from Suriname partially explains why the rate of entrepreneurship for Surinamese immigrants is lower than that for immigrants from Turkey: the female labour force participation rate of Turkish immigrants is less than 30%, whereas it is more than 60% for Surinamese immigrants. If the rate of entrepreneurship would be calculated as a percentage of the total population instead of labour force participants, a different picture would emerge.

Immigrants from Suriname are on average better educated than immigrants from Turkey and Morocco, and have a better knowledge of the Dutch language. The relationship between level of education and rate of entrepreneurship is, however, very different for immigrants from Suriname than for most other immigrants. The results from the regression equation indicate that the odds of being entrepreneur are very low for all educational levels, except in the case of a university degree.

There is no indication of the relevance of ethnic enclaves. A possible explanation is that the Surinamese culture is not dissimilar enough from the native Dutch culture. Ethnic enclaves are more likely to exist within immigrant groups whose culture, language and/or religion differs strongly from the native culture. The cultural differences between the native Dutch population and Surinamese immigrants are less than those between native Dutch and Turkish immigrants. This could explain why ethnic enclaves seem to be relevant for immigrants from Turkey and not for immigrants from Suriname.
7 Conclusion

Whether or not an individual decides to become an entrepreneur depends on many different aspects. Psychological, economical, sociological and demographical determinants are all relevant in explaining the rate of entrepreneurship. Differences in these determinants not only explain why rates of entrepreneurship vary between countries, but also between populations within a single country, such as populations of immigrants. For immigrants from Turkey, the rate of entrepreneurship is comparable to that of the native Dutch population. This is in sharp contrast with the rate of entrepreneurship for immigrants from Morocco, Suriname and the Antilles, which is less than half compared to that of the native Dutch population. This study has examined the relevance of demographical determinants in explaining rates of entrepreneurship for these immigrant populations, as compared to the rate of entrepreneurship for the native Dutch population.

The relevance of demographical determinants
The first research question of this study was whether the demographical composition of these populations differs from that of the native Dutch population. As shown in chapter 3, the immigrant populations from Turkey and Morocco are very similar regarding their demographical composition, as are the immigrant populations from Suriname and the Antilles. Immigrants from Turkey and Morocco are on average least well educated and most often married. In addition, most immigrants from these countries consider themselves to be Muslim. Immigrants from Suriname and the Antilles are better educated, more familiar with the Dutch culture and language, and more often single (or single parents). All immigrant populations have in common that they are relatively young (as compared to the native Dutch population), and that most immigrants elder than 14 are first-generation immigrants.

The next question is how these demographical variables are related to the rate of entrepreneurship. Logistic regressions have indicated that, generally speaking, age, marital status, the number of children, educational level and living in one of the four largest cities are positively related to the rate of entrepreneurship. Living in neighbourhoods with high population densities has a negative impact on the rate of entrepreneurship, and women are less likely to be entrepreneur than men.

Immigrant contingency effects
However, not all of these relationships are equally strong for all immigrant groups. Various immigrant contingency effects have been identified for immigrants from Turkey and Suriname. These contingency effects show that the relationship between a specific demographical variable and the rate of entrepreneurship is different for immigrant group(s) than for the native Dutch population. Almost all identified immigrant contingency effects reduce the odds of immigrants being entrepreneur. In combination with the general demographical differences between the native Dutch population and the immigrant populations, this suggests that the rate of entrepreneurship will be higher for the native Dutch population than for the immigrant groups. For three of the four immigrant groups under consideration, this is indeed the case. This illustrates that differences in demographical composition, in combination with immigrant contingency effects, can explain part of the differences in the rates of entrepreneurship.
The relevance of demographical variables cannot be understood without referring to other determinants of entrepreneurship. This is especially true for the interpretation of the immigrant contingency effects. For example, the probability of women being entrepreneur is much lower for immigrants from Turkey and Suriname than for the native Dutch population. Especially for immigrants from Suriname, where the female labour force participation rate is high, this has a negative impact on the rate of entrepreneurship for the total immigrant population. For immigrants from Turkey, the odds of women being entrepreneur are even lower than for immigrants from Suriname. However, due to the low female labour force participation rate, this does not affect the rate of entrepreneurship much. Our estimations indicate the existence of these immigrant contingency effects, but do not provide an explanation for them. Possibly, for immigrants from Suriname this gender effect is related to the high share of single parent families, while for immigrants from Turkey it is related to cultural and religious convictions.

Another example is the relevance of ethnic enclaves for immigrants from Turkey. The estimation results suggest that the relatively high rate of entrepreneurship for these immigrants is mainly due to the concentration of immigrant entrepreneurs in highly populated neighbourhoods in the four largest cities of the Netherlands. This positive effect of ethnic enclaves is the only identified immigrant contingency effect with a positive effect on the odds of immigrants being entrepreneur. The importance of ethnic enclaves for the community of Turkish immigrants may be explained by the combination of two factors. First of all, the entrepreneurial background of many Turkish immigrants suggests an adequate supply of immigrant entrepreneurship. Secondly, the culture, religion and language of Turkish immigrants may differ considerably from that of the native Dutch population. In combination with a feeling of being discriminated by the native population, this could strengthen the demand for immigrant entrepreneurship. This could also explain why ethnic enclaves do not seem to be relevant for immigrants from Suriname: the demand for immigrant entrepreneurship may be too low.

Finally, estimation results for immigrants from western countries indicate that first-generation immigrants are less likely to be entrepreneur (ceteris paribus) than immigrants from the second generation. This can be due to the fact that second-generation immigrants are more familiar with Dutch culture, language and institutions. An alternative explanation is that the first-generation effect is related to the Dutch immigration policy. After the Second World War, immigration was stimulated in order to solve labour shortages in the Netherlands. Immigration policy was therefore specifically aimed at recruiting employees, not at recruiting entrepreneurs.

The first-generation effect implies that an increase of the share of second-generation immigrants in the labour force will increase the rate of immigrant entrepreneurship. The estimation results suggest that this holds for immigrants from western countries as well as immigrants from Turkey and Morocco. However, the small number of second-generation immigrants from Turkey and Morocco in our sample means that we have to be careful with this interpretation of the first-generation effect. Furthermore, if second-generation immigrants will be more integrated in the Dutch society than first-generation immigrants, this could also result in a higher female labour force participation rate. Although this may stimulate the integration of these groups into Dutch society, and increase the total number of immigrant entrepreneurs, it will have a negative effect on the rate of entrepreneurship.
Policy recommendations

Immigrant entrepreneurship may improve the economic position of immigrants from non-western countries and support the general integration of these immigrant groups in the Dutch society. It is therefore encouraging to know that between 1986 and 2000, immigrant rates of entrepreneurship have grown at a faster rate than the rate of entrepreneurship of native Dutch people. It may be expected that, even without additional policy measures, the number of immigrant entrepreneurs is likely to increase in the future. This expectation is supported by the presence of the first-generation effect. However, we have to acknowledge that there is only weak evidence for the presence of a first-generation effect for immigrants from non-western countries.

Our study indicates that policy measures that would improve the educational levels of immigrants, including their Dutch language skills, would also stimulate the rate of immigrant entrepreneurship. Apart from such a general policy measure, the presence of contingency effects indicates the need for policies that explicitly target immigrants from specific countries and cultures. For example, the high rate of entrepreneurship amongst immigrants from Turkey indicates that this group does not need any additional policy measures. In contrast, the closed nature of the population of Moroccan immigrants, combined with their reluctance to communicate with official institutions, indicates that policies should first of all be aimed to stimulate general integration into Dutch society. Only after this has improved are more specific policies to promote entrepreneurship likely to be successful.
Annex I  Regression estimates

To estimate the probability that an individual is an entrepreneur, we have applied logit regressions. Table 6 shows the results of the logit regressions performed on the sub-sample from the LFS, including estimation results for immigrants from Morocco and the Antilles. Only results that significantly differ from 0 (at a 95% significance level) have been included in the table.

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Native Dutch</th>
<th>Western countries</th>
<th>Turkey</th>
<th>Morocco</th>
<th>Suriname</th>
<th>Antilles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta</td>
<td>SE</td>
<td>Beta</td>
<td>SE</td>
<td>Beta</td>
<td>SE</td>
<td>Beta</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.86</td>
<td>0.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.06</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
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<td>0.04</td>
<td>-1.08</td>
<td>0.61</td>
<td>-9.22</td>
<td>5.60</td>
</tr>
<tr>
<td>Children</td>
<td>0.17</td>
<td>0.02</td>
<td>-0.37</td>
<td>0.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>0.08</td>
<td>0.05</td>
<td></td>
<td>-3.36</td>
<td>1.92</td>
<td></td>
</tr>
</tbody>
</table>

**Education**

<table>
<thead>
<tr>
<th>Level</th>
<th>Native Dutch</th>
<th>Western countries</th>
<th>Turkey</th>
<th>Morocco</th>
<th>Suriname</th>
<th>Antilles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta</td>
<td>SE</td>
<td>Beta</td>
<td>SE</td>
<td>Beta</td>
<td>SE</td>
<td>Beta</td>
</tr>
<tr>
<td>Primary</td>
<td>-0.71</td>
<td>0.1</td>
<td>-0.99</td>
<td>0.34</td>
<td></td>
<td>-2.73</td>
</tr>
<tr>
<td>Secondary</td>
<td>-0.40</td>
<td>0.08</td>
<td>-0.94</td>
<td>0.27</td>
<td></td>
<td>-2.66</td>
</tr>
<tr>
<td>Senior</td>
<td>-0.14</td>
<td>0.08</td>
<td>-1.04</td>
<td>0.23</td>
<td></td>
<td>-2.09</td>
</tr>
<tr>
<td>High</td>
<td>-0.35</td>
<td>0.08</td>
<td>-0.50</td>
<td>0.25</td>
<td>-</td>
<td>-2.07</td>
</tr>
</tbody>
</table>

**Urbanisation**

<table>
<thead>
<tr>
<th>Type</th>
<th>Native Dutch</th>
<th>Western countries</th>
<th>Turkey</th>
<th>Morocco</th>
<th>Suriname</th>
<th>Antilles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta</td>
<td>SE</td>
<td>Beta</td>
<td>SE</td>
<td>Beta</td>
<td>SE</td>
<td>Beta</td>
</tr>
<tr>
<td>Outside city</td>
<td>-0.38</td>
<td>0.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very high pop.</td>
<td>-0.56</td>
<td>0.11</td>
<td>1.70</td>
<td>1.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High pop.</td>
<td>-0.61</td>
<td>0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal pop.</td>
<td>-0.41</td>
<td>0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low pop.</td>
<td>-0.25</td>
<td>0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First generation</td>
<td>-</td>
<td>-</td>
<td>-0.32</td>
<td>0.15</td>
<td></td>
<td>-3.73</td>
</tr>
</tbody>
</table>

N = 13161.
- parameter estimate not available due to missing data.

The estimated parameters of a logit regression represent log odds ratios: the effect of changes in a specific variable on the log of the odds of being entrepreneur. The odds are defined as the probability of being an entrepreneur relative to the probability of not being an entrepreneur. Put more formally: if p represents the probability of being entrepreneur, the log odds are defined as log(p/(1-p)).

These parameter estimates are difficult to interpret. First of all, the interpretation of log odds ratios is not straightforward. Secondly, the parameters for immigrant populations are reported in deviation of the comparable parameters for the native Dutch population. The advantage of this approach is that it is relatively easy to search for contingency effects where the relationship between specific demographical variables and the
probability of being entrepreneur differs significantly between an immigrant group and the native Dutch population. It does, however, add to the difficulties of interpreting these numbers.

To ease the interpretation of the regression results, table 5 in the main text presents odds ratios rather than log odds ratios. The odds ratio can be obtained through a simple transformation of the estimated log odds ratio (labelled ‘Beta’ in table 6), by calculating \( \exp(Beta) \). For immigrant groups, we have calculated the absolute odds ratio rather than the odds ratio relative to the Dutch population (as is the case for the log odds ratios in table 6): \( \exp(Beta_{\text{native Dutch}} + Beta_{\text{immigrant group}}) \).

Table 5 in the main text does not include a transformation of the constant term and immigrant group dummies (which are included in the third row of table 6). As can be seen in table 6, none of the immigrant group dummies is significantly different from zero. However, it should be kept in mind that all immigrant groups have a significant first-generation effect, and that approximately 80% of the immigrants from non-western countries (in the relevant age group) belong to the first generation.
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