PIER Working Paper 05-029

"The Role of Turkish Immigrants in Entrepreneurial Activities in Germany"

by

Amelie Constant, Yochanan Shachmurove and Klaus F. Zimmermann

http://ssrn.com/abstract=846329

The Role of Turkish Immigrants in Entrepreneurial Activities in Germany

Amelie Constant

IZA Bonn

constant@iza.org

Yochanan Shachmurove

The City College of The City University of New York and University of Pennsylvania

yochanan@econ.sas.upenn.edu

and

Klaus F. Zimmermann

Bonn University, IZA, and DIW Berlin

Zimmermann@iza.org

Corresponding author:

Klaus F. Zimmermann

IZA, P.O. Box 7240

D-53072 Bonn, Germany

Phone: +49 228 3894 200

Fax: +49 228 3894 210

Email: Zimmermann@iza.org

ABSTRACT

This paper addresses a central issue to migration the role of immigrants in entrepreneurial activity. In particular, the paper focuses on the determinants of the decision to become an entrepreneur for Turks living in Germany. The paper provides some important benchmarks, including the self-employment behavior of natives. The paper utilizes a comprehensive and reliable data base, the German Socioeconomic Panel to undertake systematic econometric analyses using appropriate statistical methods. The findings are that observable characteristics play different roles in the self-employment choice of immigrants and natives, whereas age-earnings profiles are similar for native and immigrant entrepreneurs.

INTRODUCTION

While self-employment is a risky venture, it is very appealing because it offers independence, a sense of higher self-worth and life satisfaction, and higher earnings and socioeconomic standing. Entrepreneurship not only injects new dynamism into an economy but it is also of great importance for economic prosperity and the future economic development of a country. Self-employment is a cure against unemployment and welfare drain through job creation, at the very least for the self-employed themselves. Small entrepreneurs, in particular, have contributed in the creation of revolutionary businesses and they account for the majority of the employed workers.

The Lisbon Agenda of the European Union (EU) aims at making Europe the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth, with more and better jobs and better social cohesion. It states that economic policies should aim at a rise of the overall employment rate in Europe. Two recent Green Papers by the Commission of the European Communities (2003, 2005) have taken up this challenge. The 2003 Green Paper on "Entrepreneurship in Europe" notices the immense potentials a rising culture of self-employment could create for European countries and suggests actions towards an entrepreneurial society. The 2005 Green Paper on "Managing Economic Migration" puts concerns with admission procedures for the economic immigration of non-EU nationals in the forefront (p. 4): "More sustained immigration flows could increasingly be required to meet the needs of the EU labour market and ensure Europe's prosperity.

Furthermore, immigration has an increasing impact on entrepreneurship. The EU must also take account of the fact that the main world regions are already competing to attract migrants to meet the needs of their economies." In the face of scarce empirical evidence that could guide policy-makers, these initiatives open up the debate about the role of ethnic entrepreneurship and suggest new efforts to increase our empirical knowledge in this field.

In contrast to the US, entrepreneurial activities in European countries like Germany are comparatively low, and immigrants exhibit an even lower rate than natives. Recently, nascent enterprises show that there is a growing business culture in Germany, and they have attracted the government's attention to ensure their viability. Within Germany, many individual states and cities are seriously taking actions to promote self-employment. In 2000, for example, the self-employed workers comprised 9.8% of the total labour force with 12.6% men and 6.2% women. Among the German self-employed, 27.1% are in the knowledge intensive services. Overall, close to 3 million small or mid-size enterprises (SMEs) in the crafts, industry, trade, tourism, service, and liberal professions create nearly 70% of the jobs, and account for 46% of gross investment in Germany.

To investigate the potential for migrant entrepreneurship, Germany is a good study case. Germany has a strong immigration tradition. It exhibits low rates of self-employment, especially among immigrants. With the German Socioeconomic Panel (GSOEP), which has a strong representation of the guestworker generation, researchers have one of the best household panels of the world in their hands. Turks

are the largest and most prominent ethnic group in the country. Turkish migrants are present also in many other European countries, and they are known to have a significant entrepreneurial spirit. Turks have a substantially higher self-employment rate than other non-EU migrants, and the self-employed Turks in Germany represent about 70% of all Turkish entrepreneurs in the European Union. This particular ethnic community is not sufficiently studied in the literature.

Hence, we will address the following questions: What factors drive self-employment in Germany among native West Germans, immigrants, and Turks in particular? How do immigrant entrepreneurs fare in terms of earnings compared to native Germans? To answer these questions we analyse the economic and social determinants of the probability to become an entrepreneur and we estimate earnings regressions that gauge the assimilation effect among the self-employed. We control for the standard human capital variables, such as years of education, vocational training, language proficiency, and years of residence in Germany. Moreover, we add variables to account for labour market characteristics, demographics, social, and psychological ties. For the empirical analyses we employ data from the German Socioeconomic Panel (GSOEP) to study the factors that influence self-employment decisions.

The paper is organized as follows: Firstly, we investigate why migrant entrepreneurship is supposed to be different, and what we know from recent empirical research. We then present and characterise the data and our research hypotheses. A further section describes the sample populations to obtain a general picture of the differences between natives, other migrants and the Turks. We continue with an outline of the

methodological approach. Then the results of the econometric estimations are presented. The paper concludes with a summary of the research findings and a thorough discussion of the policy implications.

IS MIGRANT ENTREPRENEURSHIP DIFFERENT?

Besides the stereotypical traits of the native workers as entrepreneurs - such as risk-loving, high-ability, quick decision-making individuals - immigrants are in addition a self-selected group of rational individuals who are willing to undertake risks in order to maximise their lifetime earnings and better their lives in the new country. They are characterised by a strong incentive to invest in human capital and have the inner drive to succeed in the host country's labour market. By virtue of their willingness to assume the risk of migration (both pecuniary and psychic) and undertake this new and often risky venture they can be viewed as the first entrepreneurs.

Put differently, immigrants as risk takers, are more dynamic and inherently more prone to becoming self-employed than any other group. Self-employed individuals are working hard to fulfil their dreams, and in the process they create new jobs and opportunities. Hence, the hypothesis is that migrant ethnic entrepreneurs are a positively selected group; either because migrants are brighter and a more active part of the population, or because they involve ethnicities that have stronger preferences or genes that foster the drive to self-employment.

On the other hand, impediments to good jobs and to upward occupational mobility as

well as unemployment and discrimination in the labour market may impel immigrants to undertake the self-employment avenue. As the literature has shown, entrepreneurship may be the only avenue for their socioeconomic advancement. Entrepreneurship might be the easiest way to integrate into the economy of the host country. Self-employment could be the first step to succeed in the labour market and to prepare for a movement into paid-employment. Recent research has demonstrated that migrants use self-employment more often than natives to escape unemployment and as a basis to return to regular employment even years after arrival in the host country.

While the prevalence of self-employment among both immigrants and natives in the labour market has been researched and documented by many studies in the US, research on entrepreneurship and especially immigrant entrepreneurship in Europe, and Germany in particular, has been somewhat scant. Recent surveys on the expanding literature on self-employment in a comparative setting investigating research on Europe, the US and other immigration countries include Le (1999), Blanchflower et al. (2001), Audretsch (2002), and Audretsch et al. (2002). These studies identify the role of managerial and other individual abilities, family background, occupational status, financial constraints, the nature of work, and ethnic enclaves, among other factors as relevant determinants of self-employment.

Empirical research on immigrant assimilation has typically found an entry earnings disadvantage for immigrants, which narrows over time as immigrants "assimilate" in the host country's labour market. The rate of convergence varies among the different immigrant groups. Borjas' (1986) study on the self-employment experience of

immigrants in the US shows that not only self-employed immigrants have higher annual incomes than salaried immigrants but they also have higher incomes than comparable self-employed natives. This is extended by Lofstrom (2002), who finds substantial differences between migrant workers and self-employed migrants in earnings and educational attainment. Entrepreneurs have a better education and earn more than other working migrants. However, education has a smaller impact on the self-employment probabilities of migrants compared to natives. The earnings of self-employed immigrants converge quickly to the earnings of the self-employed natives.

In North America, immigrants have higher self-employment rates than natives (see Yuengert, 1995, for the US and Li, 2001, for Canada). Yuengert (1995) investigates the determinants of these differences. He finds that immigrants from countries with larger self-employment sectors have higher self-employment rates. Migrants in the US cluster more in high-tax states, and find greater opportunities for tax deductions and avoidance as entrepreneurs than as salaried workers. The study is not supportive of the ethnicity enclave hypothesis. Fairlie and Meyer (1996) point out that it is of substantial importance to account for the dramatic ethnic and racial differences in self-employment across the US population. These differences prevail even if one controls for broad combinations of groups such as Asians and Hispanics and the standard tool of regressors. They find that ethnic or racial groups that emigrate from countries with high self-employment rates do not have high self-employment rates in the US. Their results also suggest that the more economically advanced groups have a higher propensity for self-employment than the more disadvantaged migrant groups.

There is only scarce evidence about migrant entrepreneurs in Europe and especially in Germany. The findings by Clark and Drinkwater (1998) suggest that self-employment is a way out of discrimination in paid-employment for immigrants in Great Britain. Salaried work does not pay as well for ethnic minorities, compared to natives, and the earnings difference has increased over time. The increase in the earnings disadvantage has been correlated with a rise in the self-employment among ethnic minorities. Although there are higher self-employment rates for non-whites than for whites, one nevertheless observes a substantive variance among the ethnic groups. Most ethnic minorities also earn less in self-employment than similar self-employed whites.

Borooah and Hart (1999) study the large differences in self-employment between Indians and black Caribbean men in Great Britain. They find that social attributes related to family formation are at least as important as individual characteristics. Basu (1998) finds no evidence that Asians in Britain were pushed into self-employment to avoid unemployment. Their economic success as entrepreneurs seems to be positively associated with the share of personal capital invested in the beginning and with educational qualifications.

The immigration process into Germany has now been well studied (see, for instance, Zimmermann, 1995; Constant, 1998). Germany is known to have a comparatively low rate of self-employment, but migrants exhibit an even lower rate. This is in spite of the fact that the self-employed immigrants reach earnings parity with self-employed natives and earn a premium of 30% over immigrant workers in the blue collar category (Constant, 1998). A recent comparative study between Germany and Denmark shows

that the self-employment of immigrants is male dominated and self-employed immigrants in Germany earn twice as much as the immigrants in paid-employment (Constant and Schultz-Nielsen, 2004). Constant and Zimmermann (2004) find that immigrants use self-employment as a mechanism to circumvent and escape unemployment and to integrate into the host country's labour market.

It is unclear why in a country with a relative high unemployment rate and with a relatively institutionalised labour market entry one does not observe more self-employment among immigrants. An exception is the Turks, the largest foreign ethnic group in Germany with a significant entrepreneurial tradition. In 2002, Turkish entrepreneurs in Germany represented 69% of all Turkish entrepreneurs in the European Union (Türkiye Arastirmalar Merkezi Vakfi, 2003). This suggests investigating immigrant entrepreneurship in Germany further and studying the Turkish group separately.

DATA, VARIABLES, AND HYPOTHESES

For the empirical analysis our data are drawn from the German Socioeconomic Panel (GSOEP), a nationally representative data set (SOEP Group, 2001) that has been conducted annually since 1984 and is provided by the German Institute for Economic Research (DIW Berlin). In this study we use data from the GSOEP of the year 2000. The GSOEP includes substantial information on labour force participation, self-employment categories, various aspects of life in Germany, and contains an assortment

of attitudinal questions. More important, the 2000 data permit a more detailed analysis of the self-employed. We can, thus, differentiate between those self-employed in agriculture, in the free-lance or professional sector, and in other self-employed categories including working for a family business. The year 2000 was also a good year for the German economy as a whole and with respect to self-employment. It was a year with higher economic growth rates and somewhat reduced unemployment compared to other years.

In this paper we concentrate on comparing the performance of the migrants with those of the West Germans and hence exclude East Germans. Even a decade after unification, East Germans do not have significant experiences of self-employment. As a general rule, migrants cluster predominantly in the West German territory, and avoid the less-developed East with its much higher unemployment rates. The group of migrants studied here contains the traditional former "guestworkers", namely those from Greece, Italy, Spain, former Yugoslavia, and Turkey, who or whose parents were hired especially in the early sixties to meet the demand for blue collar workers. The guestworker immigrants along with the West Germans have been with the GSOEP since its inception. In addition, we also use data on the "new" immigrants, who came to Germany mainly in the eighties and nineties. They came primarily from Eastern European countries (the transition countries), such as Poland, Romania, the Ukraine, and states of the former Soviet Union (ex-USSR), such as Kazakhstan and Uzbekistan. Many of these immigrants are ethnic Germans, meaning that they are of German descent. While we compare all immigrants to West Germans, as the relevant native reference group, we separately investigate the Turks, who are the largest foreign ethnic

group in Germany and compare them to other immigrants grouped as EU and non-EU nationals.

We classify as Turks all individuals who were born in Turkey or in Germany and who are Turkish nationals, or who are German citizens but live in Turkish households. Because of the idiosyncrasies of the German migration system and the German immigration law, the typical distinction between first and second generation immigrants does not apply in Germany. Immigrants who are born in Germany are not necessarily German citizens, and even if they acquire the German citizenship they may follow separate paths in the labour market than native Germans. The samples we select for our analyses exclude those individuals who are enrolled in school; those registered as unemployed; and those in the military, because military personnel follow different trajectories and may skew our estimates. Additionally, we restrict our analysis to individual workers aged 20 to 65, a prime age for being in the labour force and for self-employment endeavours.

Men and women usually follow different paths in the labour market. In Germany, native women are not fully integrated in the labour market, although the situation has somewhat changed in recent years. While immigrant women have somewhat higher labour force participation rates, self-employed women in Germany in general are an even smaller sub-sample of working women. Consequently, this small female sample could not justify a separate analysis, and, thus, our analysis focuses on the self-employment endeavours of men in Germany in 2000.

A dummy for self-employment is constructed from a self-reported answer from the GSOEP questionnaire regarding the employment status of the individuals. It includes small and larger scale farming, free-lance professionals, working in other business, and working in family business. For all self-employed, this is their main job. We exclude self-employment as a secondary job. The salaried workers' category includes blue collar, white collar, and civil servants. According to our selection criteria we ended up with 1947 West German men, 826 non-Turk immigrants, and 273 Turks. Out of them, 10.4% are self-employed West Germans, 5.3% are self-employed non-Turk immigrants, and 7.3% are self-employed Turks.

For the analysis on the probability to go into self-employment, the explanatory variables used include human capital variables (years of schooling and vocational training, years of residence in Germany, and health), variables that show socioeconomic attachments to Germany and the country of origin (willingness to stay in Germany, feelings of belonging to Germany, and whether the individual was born in Germany), other demographics (marital status and age), and control for country of origin. We measure the effects of years of schooling and vocational training in the home country and years of schooling and vocational training in Germany separately. That way we control for differences in the initial stock of human capital (education before migration) and render immigrants' education in Germany qualitatively similar to that of Germans and among themselves.

We expect that better educated individuals will be more likely go into self-employment. To the extent that education captures higher ability and allows individuals to know more

and to have a superior information set, we would expect that more years of schooling will push individuals into self-employment. In Germany, we would expect a strong correlation between education and self-employment because, especially for certain occupations, there are mandatory educational requirements and qualifications. However, it has often been argued that self-employment is an alternative job choice for less qualified and less skilled individuals. Moreover, qualified or talented individuals who lack educational degrees are probably better off in self-employment, since paid-employment in Germany honours more measurable criteria. We have also added health, which is a vital element of human capital. We include the variable "disability limits work" as an additional factor, and hypothesise that disability and self-employment are negatively correlated.

While older workers are more risk averse, we expect that self-employment proclivity will increase with age discounted for non-linearities. Older workers have more wisdom, more experience and know-how, more financial capital, larger social milieu, and they make more prudent choices. The variable years-since-migration measures the time and quality of exposure into the German environment. It quantifies labour market experience and various facets of human capital accumulated in Germany that is often unobserved. This variable is entered in the linear and squared term, and should be interpreted in conjunction with the age variable. For those immigrants with missing values in the years-since-migration variable, we carefully calculated it following a simple algorithm: If the individual is born in Germany then years-since-migration equals zero. If the individual is born in his home country but went to school in Germany we assigned years of migration according to whether the individual went to elementary or secondary school

in Germany. We further include a dummy for "born in Germany", and we interact this dummy with age as additional control to see whether there are any differential effects in the labour market behaviour of the German born immigrants.

Marital status plays a role in self-employment from two conflicting directions. On the one hand, married men could be more risk averse than single men and avoid the more risky venture of self-employment, especially when their household depends on their income. On the other hand, self-employment can be an attractive choice for married men because it can offer flexibility in location and time. Moreover, married men can benefit from their wives' support and can count on them helping with their business. However, this is a more plausible scenario for immigrants and for certain occupations. Self-employed married men can also count on their wives' stable income, if they are working; first, as an income smoothing strategy to go through rough times, and second they can benefit from access to their health insurance.

Immigrants who feel that they do not belong to Germany will rather choose self-employment in the hopes of avoiding discrimination or alienation from conventional paid-employment. Moreover, we would expect that immigrants, who do not feel that they belong to Germany, will have a stronger sense of independence, which is a powerful push for self-employment proclivity. Similarly, immigrants who want to stay in Germany will also choose self-employment as a means of becoming successful, establishing themselves, and have a business to hand down to their children. Lastly, in the immigrant regression we include the dummies Turk and non-EU-immigrant for the country of origin effects. The reference group is ex-Yugoslavs and EU-nationals, that is,

14

Greeks, Italians, and Spaniards. This reference group actually represents the rest of the "guestworker immigrants."

Additional explanatory variables affecting the earnings of self-employed men are introduced in the earnings regressions. These are labour market variables, such as Treiman occupational prestige scores, tenure/seniority with a job/business, and hours of work. In the immigrant regression we include a dummy for German speaking capabilities. The variable "speak mostly German" comes from a self-reported answer. Immigrants were asked whether they speak mostly German in their everyday life. While this information does not necessarily reflect superior knowledge of the language, it nonetheless captures the ease that immigrants have with the German language, and the image they portray to others about being willing to integrate. Speaking the host country's language facilitates economic adaptation and improves economic performance. Since self-employment is, in most cases, a customer intensive and people oriented profession we expect that those who speak mostly German will have higher earnings.

In the earnings regression we expect that age, education, health, and language will have a positive impact on the earnings of the self-employed men. The key variable for immigrant assimilation is years-since-migration, which is entered as a linear and a square term. Because our analysis is based on a single cross-section, dummy variables representing period and/or cohort effects are not entered in the regression. By construction, the years-since-migration variable is a linear combination of both the period and cohort effects. This variable measures the time and quality of exposure to

the German environment and should be viewed in tandem with age. The quadratic term measures the rate at which immigrant earnings change with additional years in Germany above and beyond the age effect. The estimated assimilation effect for immigrants is, therefore, a combination of both the years-since-migration and age parameters. We expect to find concave age-earnings profiles for both German and immigrant self-employed men and the earnings of immigrants to increase faster due to the additive power of the years-since-migration variable. We also include an interaction of the dummy "born in Germany" with age as an additional control to see whether there are differential assimilation effects for the German born immigrants.

While the literature on married men has shown that they earn more than single men in standard salaried jobs, it is not clear whether self-employed married men earn more than their single counterparts. With regard to labour market variables, we expect that those self-employed men who work longer hours, and whose business is in a higher ranked prestige scale, will enjoy higher earnings. The prestige scale we are using is the Treiman standard international occupational prestige scale. Developed by Treiman (1977) this scale is based on the international classification of occupations ISCO codes. The scale ranges from 13 (the lowest ranking of labourers, such as garbage collectors and shoe shiners, for example) to 78 (the highest ranking of professionals, such as medical doctors, and university professors, for example).[2] Having a more stable business, captured by the variable "length of time with business," reflects a serious commitment in the labour market and should have a direct advantageous impact on earnings. Some ethnicities could be more entrepreneurial than others and succeed financially. While we have no priors on the earnings of the different immigrant

ethnicities, we expect to find significant differences in their earnings, as well as differences between immigrants and native West Germans.

CHARACTERISTICS OF THE SAMPLE POPULATIONS

In this section, we provide an overview of the basic characteristics of self-employed and salaried workers in Germany of 2000 by ethnicity. We separately compare West Germans to Turks and all other immigrants except Turks. The differences and similarities between self-employed and salaried workers, based on raw data, are highlighted in Table 1. Across all ethnic groups self-employed men earn, on average, significantly more than their salaried counterparts.[3] It is noteworthy that not only self-employed immigrants earn more than self-employed Germans, but that self-employed Turks have the highest weekly earnings among all.[4] These raw statistics further show that self-employment is a lucrative choice for all men, and for immigrants, in particular, self-employment is a means of traversing and even overcoming the native-ethnic earnings disparity.

<<Table 1 about here>>

Similarly, this pattern applies to the hours of work per week. All self-employed men work more hours per week than the salaried workers and self-employed immigrants and Turks work even more hours than Germans do. While all ethnic groups of self-employed enjoy a higher occupational prestige status than the salaried workers, West German men stand out by their highest Treiman occupational prestige score. West German men

17

are followed by other immigrants in prestige scores, while Turks are lagging behind having the lowest occupational prestige score. It appears from this table that migrants have not been able to achieve a prestige score as high as the Germans through self-employment, but they are definitely better off than the salaried immigrants. On average, except the Turks, self-employed men also exhibit occupational stability and success by having their business for nearly as long as their salaried counterparts are with their employers. West German men have the highest score with 11 years in business, on average.

With the exception of Turks, among West Germans and immigrants the self-employed are older, on average, than the salaried workers. The average self-employed Turk is also younger than the average self-employed immigrant or West German. West Germans are the best educated group having finished, on average, at least high school. However, with regard to education, there are not any discernible differences between self-employed and salaried workers. In general, the average number of years of schooling and vocational training is larger for the self-employed in all groups. Whereas immigrants have fewer years of education than Germans, Turks have the lowest education of the rest of the immigrants. The post-migration educational attainment of Turks and the other immigrants is higher when they are self-employed. Further, while immigrants have some schooling before they migrated to Germany, the total amount of their schooling is still below that of the West Germans.

Across all samples, a substantial proportion of men are married, while the share is slightly higher for the self-employed. Turks have the largest share of married men

among both groups of workers, followed by the other migrants and the West Germans. Self-employed West Germans have a substantially higher percentage of small children in the household than their salaried countrymen, while there is no such difference among the migrants. For Turks, the difference is reversed, with the self-employed having a lower percentage of small children. Table 1 also shows that immigrants and Turks have been living in Germany for a long time. The average self-employed Turk, in particular, has been in Germany for 19 years, indicating a rather permanent migration.

EU nationals (39%) are the largest group amongst self-employed other immigrants, followed by ex-Yugoslavs (36%) and non-EU nationals (25%). With regards to self-employment percentages, we find a variety in the percentage rates. West German men have the highest percentage of self-employment (10%), followed by Turks with 7%, and the other immigrants with a low 5%. These percentages show that Turks may be more entrepreneurial than the other immigrants but not as entrepreneurial as the West Germans. Self-employed Turks represent 31% of all self-employed immigrants. In sum, Table 1 shows that there are differences between self-employed and paid-employed workers, but there are also important differences between self-employed immigrants and West Germans, as there are differences between self-employed Turks and other immigrants. Immigrants and Turks fare better than West Germans as self-employed, and they fare better than their salaried counterparts as well.

In Figure 1 we illustrate the earnings structures of the three groups of self-employed men under study. Clearly, their earnings distributions are very different, and West German men dominate with higher earnings. Immigrants and especially Turks are

lacking the upper tail of the income distribution that the West Germans have. Note that the analysis is based on the self-employed only because the purpose of the paper is to see how Turks fare in the labour market as self-employed in reference to the other self-employed immigrants and the West Germans.

<<Figure 1 about here>>

In Table 2, we portray the citizenship versus national identity and integration issues. This table clearly shows that for native Germans there is a tautology between nationality and citizenship. West Germans are 100% German citizens and have been born in the German territory. With regard to the immigrant population in Germany, the GSOEP gives us the opportunity to look at their citizenship, their multiple nationalities, and the country they are born in. Immigrants who want to maintain their cultural and ethnic identities are often blamed as causing conflict within the host country, and their poor performance is often explained through their desire to maintain their identities. These summary statistics on citizenship, nationality, feelings of belonging to Germany, and desire to stay in Germany show that these characteristics vary by employment status.

<<Table 2 about here>>

It is striking that while 57% of the self-employed other immigrants are German citizens only 15% of the self-employed Turks are citizens. Further, a higher percentage of the self-employed other immigrants and Turks are German citizens, compared to their salaried counterparts. Out of the German citizens, only 44% of the self-employed other

20

immigrant group is born in Germany while no one among the self-employed Turks is born in Germany. Among the self-employed non-German citizens, 16% of the other immigrants and 41% of Turks are born in Germany but have their parents' nationality.[5] Interestingly enough, the self-employed other immigrants have lower intentions to apply for German citizenship compared to the salaried workers, but the opposite is true for Turks. When they were asked if they would apply for German citizenship if they were allowed to keep their parents' citizenship, fewer self-employed than paid-employed immigrants said that they would.

The last interesting fact from Table 2 is that, among the group of other immigrants, the self-employed feel more comfortable living in Germany although fewer of them want to stay in Germany compared to salaried workers. Also, a higher percentage of the self-employed Turks feel that they belong to Germany, and want to stay in the country than Turks in paid-employment. Comparing the self-employed Turks to the other immigrants, a higher share of Turks, on average, feels that they do not belong to Germany (35% versus 16%). However, 70% of the self-employed Turks want to stay in Germany and make it their home country, while this is only 30% among the other immigrants. With regard to worries about their finances, we find the self-employed West Germans and Turks to express more worries than their salaried counterparts. Self-employed Turks worry the most. Among the other immigrants, self- and paid-employed worry equally about their finances, and self-employed other immigrants worry the least. For the category worries about immigration to Germany, the self-employed worry less than their salaried counterparts. Lastly, while all groups seem to be concerned about hostility against immigrants in Germany, it is the self-employed Turks who are concerned the

most about this (40%).

Table A1 in the Appendix shows the types of self-employment our samples are in. Overall, the vast majority of self-employed men own small-scale businesses, and they either are the sole proprietor or they employ less than nine employees. West Germans more than any other group are in the self-employed farmer category. The highest percentage of self-employed men across all groups lies in the "other business" category. This category includes retail and restaurants. Turks are relatively the strongest in this category, especially in the small scale business. About 24% of the self-employed West Germans are in the free-lance professional category followed by 20% of the immigrants. This category includes lawyers, doctors, teachers, and the hi-tech computer category. It is remarkable that there are no Turks in this category. On the other hand, Turks have the largest share among the groups of people working in the family business (10%).

METHODOLOGICAL ANALYSIS

In our methodological framework, the unit of the analysis is the individual. In the first part of the econometric analysis we model the choice behaviour of workers as a binomial logit. We assume that individual agents in the host country are facing two alternatives: The option of choosing self-employment versus the option of choosing a salaried job. Individual agents maximise utility gained from the attributes of that choice. We assume that utility depends on the corresponding financial rewards of the choice. If the expected earnings from self-employment exceed the expected earnings from other

types of employment, the individual workers choose to become self-employed.

Such behaviour can be described in probabilistic terms. We estimate the probability to become self-employed based on values of a set of explanatory variables. This probability is not directly observed, however. The bgistic regression model (see any standard econometrics textbook or Greene, 2000) is an advantageous technique for estimating models with a binary dependent variable, which takes the value of one if an individual is self-employed and the value of zero otherwise. A virtue of the model is that it can be expressed in terms of the log odds ratio in a simple closed form such that

$$\ln(P/(1-P)) = \boldsymbol{b'}x \qquad (1)$$

where P is the probability of the event, x a set of explanatory variables and $ß$ is a vector of the corresponding effect parameters. In essence, the estimated coefficients represent the change in the log odds of a unit increase in the independent variable. We estimate the logit regression on self-employed West German men and immigrants separately. In the immigrant equation we include dummies for Turks and non-EU nationals.

The explanatory variables in x consist of a set of human capital measures, individual specific characteristics, and socioeconomic characteristics. We also include variables that measure economic, social, and psychological attachments to Germany. All these independent variables are expected to affect the individual's probability to become an entrepreneur. The probability to become self-employed is also a function of age and its square, of years-since-migration and its square, and of being German born. Years-

since-migration is the key instrument in the analysis on immigrants. This will give us insights into the self-selection process and the role of the different characteristics of choosing the entrepreneurial avenue. We expect that individuals who are more educated, have more years of residence in Germany, have good health, are married, and do not come from socialist economies will have a higher probability to choose self-employment.

Next, we operationalise the earnings assimilation of entrepreneurs in Germany. The estimation of earnings of the self-employed men is given by the following structural equation (Mincerian earnings equation):

$$\ln W = \mathbf{a} + \mathbf{g}'z + \mathbf{n} \tag{2}$$

where $\ln W$ is the natural logarithm of gross weekly earnings, z is a vector of socioeconomic characteristics similar to those specified in the logistic analysis but augmented to determine earnings, and v is the error term. Here we include measures of labour market characteristics. Earnings are a function of the same socioeconomic characteristics of all groups with additional variables that explain the earnings of immigrants. Additional explanatory variables affecting the earnings of immigrants only are years of education before migration and categorical variables for language capability, born in Germany, and an interaction term between age and born in Germany. The vector z in the immigrant earnings function also includes some key variables to capture possible assimilation effects, namely years-since-migration and its square. The years-since-migration coefficients along with the age coefficients measure the

experience-aging effect on earnings. Our prediction is that the earnings of immigrants increase with additional years-since-migration to a point where they reach those of Germans.

We expect the earnings profiles with respect to age to have an inverted U-shape. If self-employed workers are positively self-selected for their inner drive to be independently successful and to climb the socioeconomic ladder, they should also earn significantly higher earnings, all else equal. As in the logit regression, we estimate the earnings regressions on self-employed West German men and immigrants separately. Turks and non-EU nationals are dummies in the immigrant regression. We believe that each group is cohesive and homogeneous and is governed by similar experiences. Yet, there are distinct socio-economic and labour market differences among groups that warrant separate analyses. The heterogeneity among the groups under study is subject to very different influences by the business cycle, government policies, institutional frameworks, and demographics.

ESTIMATION RESULTS

In Table 3 we present the results of the binomial logit regression estimation on the probability of self-employment for the respective samples. For each group, we present the coefficient estimates with the standard errors in parenthesis underneath; the asterisk denotes significance at the 5% level in a one-tail test. In the adjacent column we present the odds ratios. Across both ethnic groups, the probability to become self-employed increases significantly with age at a decreasing rate. These results further

show a stable age profile that is very similar between Germans and immigrants. Surprisingly, education is not a significant determinant of the self-employment propensity for West German and immigrant men in our sample. One explanation could be that the years of schooling between self-employed and salaried Germans are the same. An additional explanation is that Germans choose self-employment for the financial rewards and not as a means to overcome educational frustrations from paid-employment.

<<Table 3 about here>>

In the West German sample we find that the odds of choosing self-employment decrease for those who are married; being married decreases the self-employment probability by 29%. We believe that this result can be explained by the more traditional - in the sense of the "breadwinner" ideology - German family. That is, West German women have a long tradition of staying home and taking care of the children and the household and rely on their husbands to provide for the household. Consequently, self-employment, which can be a risky venture, would not be an optimal choice for German men. In addition, we argue that married men may have higher risk aversion and, therefore, are less likely to opt for self-employment.

Among immigrant men not born in Germany, we find that the odds of going into self-employment decrease with additional years of residence in Germany at a decreasing rate. However, these results should be interpreted in conjunction with the age variable. Any additional year of residence in the country is a one year increase in age. Still, the

age and years-since-migration variables have estimated effect parameters with opposite signs for the linear and the quadratic terms, while the parameters of the age variables clearly dominate those from the years-since-migration variables. This implies that the overall age-self-employment probability scheme is flatter for migrants than for natives. This is similar to those migrants born in Germany, who have zero years-since-migration by definition. While the effect parameters for the "born in Germany" dummy and its interaction with age are not statistically different from zero, the slope of the age-self-employment probability relationship is again smaller than that for the natives, and the intercept for those types of migrants comes closer to that of the natives. To summarise: New immigrants coming into the country are starting at a higher level of self-employment proclivity than natives, and immigrants born in the country are in between. All groups exhibit a rising self-employment proclivity with age (at a declining rate), whereas natives show a much stronger rise which will eventually lead to a higher self-employment probability.

The rest of the variables for the immigrant equation are not significant, besides the effect parameter for Turks. The odds of choosing self-employment are 70% higher for Turks than for EU and other non-EU migrants. A possible explanation is that Turks are more entrepreneurial than the rest of the immigrants in our sample. Alternatively, this entrepreneurial advantage for Turks could disguise a decision against structural barriers, limited employment choices, and discrimination in the labour market. Immigrants often experience social exclusion, and entrepreneurship may be a way of cutting through it and being accepted.

In Table 4 we present the results of the human capital earnings regression for self-employed West German and immigrant men. For each ethnic group we present the coefficient estimates with the standard errors in parenthesis underneath. The asterisk denotes significance at the 5% level in a one-tail test. It is interesting that the intercept is a lot higher in the immigrant equation than in the German, indicating that migrant entrepreneurs earn more initially. As expected, we find that the age-earnings profiles for both samples are concave. Amazingly, the age coefficients are identical for both groups (the natives and the migrants), and the additional parameters for those migrants who immigrated (years-since-migration and its square) and those migrants who were born in Germany are not statistically significant. These coefficients are also very small in absolute terms. This suggests that, apart from initial conditions, the age-earnings profile is practically identical for all types (natives, new immigrants and immigrants born in the country).

<<Table 4 about here>>

In Figure 2 we plot the age-earnings profiles of the self-employed West Germans and immigrants. Both profiles are estimated at the mean of all other covariates. The immigrant profile is calculated for age, age squared, years-since-migration and its square term, and born in Germany and its interaction with age, assuming that immigrants entered Germany at the age of 20, and weighing the two groups of migrants (new immigrants and immigrants born in the country) at their population shares. This figure shows that it pays for immigrants to go into self-employment. Their earnings are higher than those of the Germans from the beginning of their career and stay higher

until the age of 55. It is only after the age of 55 that self-employed Germans fare better than the immigrants. This finding is consistent with the logit results reported above that suggest that migrants are more probable than natives to be self-employed at younger ages than at older ages.

<<Figure 2 about here>>

Table 4 shows that education does not have a significant effect on the earnings of self-employed Germans. While more education makes individuals more capable and well-rounded, the stereotypical returns to education scenario for the paid-employed does not apply here. However, self-employed immigrants who are higher educated in Germany experience a penalty of 6% in their earnings whereas education at home plays again no role. These findings are consistent: Since education does not pay off for either immigrants or natives, pre- and post-migration schooling has no effects on the decision to become self-employed for natives or immigrants (see again Table 3). Immigrants will only engage in education in Germany if they plan to reap the benefits in paid-employment, and, hence, the negative effect measured for them on self-employment is justified.

With respect to the rest of the predictors, we find that longer hours of work per week and high Treiman occupational scores significantly increase the earnings of self-employed West Germans, while the length of time in business provides no particular advantage for them. For immigrants, the long tenure with the business is significant and positive indicating that those immigrants who manage to have a stable business are

faring better. Similarly, the self-employed immigrants who have higher Treiman prestige scores earn 2% more than those who do not. Work effort, measured by the number of worked hours per week, does not play a statistically significant role for the earnings of self-employed immigrants contrary to what we find for the West Germans.

Lastly, married West German self-employed men earn 21% more than other men. It appears that the breadwinner model of the German family allows men to focus more in their business and drives them to be more determined to succeed, once they have chosen this avenue. However, marriage has a negative coefficient for immigrant men. All else equal, the earnings of self-employed immigrants in our sample decrease by 53% when they are married, as opposed to being single, divorced, or widowers. A plausible explanation for this finding lies in the different structure of the immigrant families. If immigrant wives help with the family business then this might have a confounding effect on earnings because the earnings are shared through family work. In addition, if immigrant wives work, men can potentially count on their wives' incomes, and hence provide lower efforts in their business. Alternatively, if risk-averse married men are pushed into self-employment, they may not be right for the business, and this is manifested through lower earnings.

Finally we have evidence on ethnic differences in earnings: Controlling for socioeconomic and labour market characteristics, we find that the earnings of Turkish self-employed men are no different than the earnings of EU nationals. In contrast, we find that the earnings of non-EU immigrants are 80% lower than the earnings of EU nationals, but they are also statistically significantly lower than those of the Turks.

Hence, it is consistent that Turks are more likely to be self-employed than other non-EU immigrants (see here and Table 3). Turks are also more likely to be self-employed than EU immigrants, although they earn (controlled for various characteristics as in Table 4) no more than EU immigrants; all in all, this suggests some ethnic entrepreneurial spirit.

SUMMARY AND CONCLUSIONS

In this paper we have analysed the entrepreneurial behaviour and monetary success of natives and immigrants in Germany while focussing in particular on immigrants from Turkey. Turks are by far the largest immigrant group in Germany, and they are also widely present in other Western European countries. About 70% of all Turkish entrepreneurs in the European Union (EU) are economically active in Germany. We, therefore, deal with an important but underresearched economic and social issue. In particular, this paper has investigated the probability of individual German and immigrant men to choose self-employment as opposed to salaried jobs. We then estimated the earnings of the self-employed to gauge the determinants of success in self-employment. Based on a recent release of the German Socioeconomic Panel (GSOEP), we find that Germany's self-employment sector occupies a very low percentage. While self-employed Germans are 10% of the male labour force, Turks are 7%, and the self-employment of all other male immigrants available in the survey (Greeks, Italians, Spaniards, ex-Yugoslavs, and other Eastern Europeans) is at a low 5%.

The empirical results presented in this paper suggest that Germans and immigrants are

31

behaviourally very similar with respect to key variables such as age and education. Immigrants do not differ with respect to duration in the country or whether they are German born. Education neither plays a decisive role in determining self-employment over salaried work choices nor in explaining earnings. The age-earnings profiles measured by the estimated effect parameters are the same for natives and immigrants, while the proclivity to become self-employed is concave with respect to age for both groups. The differences between both groups arise with the facts that, first, immigrants start with a higher probability to work than natives but have a slower increase in the self-employment probabilities thereafter, and, second, earnings from self-employment are initially higher for immigrants, but their earnings path crosses eventually that of the natives. Hence, at younger ages, it pays for immigrants to be self-employed, and they actually earn more, but natives catch up over time. This confirms the hypothesis that self-employment is a powerful instrument to integrate immigrants economically into the host country.

Marriage plays a significantly different role for natives and migrants in self-employment proclivity and earnings. Married West German men are less likely self-employed than other natives, but they earn more. The marriage status of immigrants does not play a significant role for the probability of self-employment, but has a negative effect on immigrant earnings. The breadwinner model of the German family allows men to focus more in their business and drives them to be more determined to succeed, once they have chosen this avenue. This model does not apply to immigrant households. Hence, if immigrant wives help with the family business, then this might have a confounding effect on male earnings because the earnings are shared through family work. In addition, if

immigrant wives work, men can potentially count on their wives' incomes, and hence provide lower efforts in their business. In a competitive environment lower effort or care is penalised.

When it comes to ethnic differences, Turks are 70% more likely to be self-employed than any other immigrant group. Together with the EU immigrants, their earnings are significantly higher than those of the non-EU immigrants. A possible explanation is that Turks are more entrepreneurial than the rest of the immigrants in our sample. Alternatively, the measured entrepreneurial advantage for Turks could disguise structural barriers, limited employment choices, and discrimination in the labour market. Immigrants often experience social exclusion, and entrepreneurship may be a way of cutting through it and being accepted. Since Turks are more likely to be self-employed than EU immigrants, although they do not earn more (controlled for various social characteristics), this may suggest some ethnic entrepreneurial spirit.

Immigration policy can take up some of the lessons suggested from these empirical findings: (i) Self-employment is a powerful instrument of integrating immigrants into the host country. Migrants should be allowed to easily execute the entrepreneurial choice and to start an own business. (ii) Young and single male entrepreneurs are to be preferred to obtain maximum benefits for the labour market. (iii) High educational levels play an important role in any point system of immigrant selection, and further education in the host country is suggested to provide a better integration into the labour market. However, in the analysis of this paper, education neither seems to have a decisive role for the self-employment choice nor for its remuneration. (iv) Turks seem to exhibit special entrepreneurial activities that should not be ignored.

NOTES

1. An earlier version of this paper was presented at the Middle Eastern Economics Association (MEEA) session of the Allied Social Science Association (ASSA) 2003 meeting in Washington, DC. We thank conference participants, Mark Fallak, Daniel Mueller, and three referees of this journal for many useful comments. The GSOEP data used in this study are available upon request from the German Socio-Economic Panel at DIW Berlin (www.diw.de/gsoep). Financial support for this research from Volkswagen Foundation for the IZA project on "The Economics and Persistence of Migrant Ethnicity" is gratefully acknowledged.

2. Essentially, Treiman matched occupational titles from national and local prestige studies conducted in 60 countries to the three-digit version of ISCO68, and added a fourth digit to accommodate distinctions that were found cross nationally in prestige scales but not in ISCO68. To generate the scale, he then averaged the national prestige scores and appropriately rescaled to a common metric. As Treiman put it, these prestige scores are seen as representing the relative amount of power each occupation commands, in terms of skills, authority, and economic control occupations have access to.

3. Self-employment earnings could be underreported. The amount reported to the tax authorities, which is often used in empirical studies, is more likely to be biased downwards than the responses in anonymous private household surveys like the GSOEP. Therefore, our measure is less likely to suffer from biases due to tax considerations. But there is also a potential source of overestimation, if the self-reported earnings of the entrepreneur include returns on their own personal capital invested in the business. It could then be that the measure is upward biased. Again, the GSOEP is fairly safe against this bias since the respective question is explicitly about work income. Also, we believe that the average business in our survey renders low levels of physical capital.

4. An analysis of independent-sample t-tests failed to reveal, however, a statistically significant difference between self-employed West Germans and other immigrants or Turks with respect to their mean levels of weekly earnings. In contrast, analysis of independent-samples t-test revealed a significant difference between paid-employed West Germans and other immigrants or Turks with respect to their mean levels of weekly earnings.

5. Up until recently citizenship in Germany was synonymous to nationality and was based on the "law of blood." Accordingly, individuals born outside Germany are Germans if their ancestry is German but individuals born in Germany of foreign parents are not. The new law combines the existing law of blood with the "law of soil" that is the law in the US, for example. Individuals born in Germany are Germans but they have to decide by the age of 18 which nationality to keep. Naturalisation rates increased by 130% in 2000, mainly due to the decreased time limit.

34

REFERENCES

Türkiye Arastirmalar Merkezi Vakfi (Stiftung Zentrum für Türkeistudien)

    2003   "Die Wirtschaftskraft der türkischen Selbständigen", Essen: Stiftung Zentrum für Türkeistudien.

Audretsch, D.B.

    2002   "Entrepreneurship: A Survey of the Literature", paper prepared for the European Commission, Enterprise Directorate General, mimeo.

Audretsch, D.B. et al

    2002   *Entrepreneurship: Determinants and Policy in a European-U.S. Comparison*, Boston: Kluwer Academic Publishers.

Basu, A.

    1998   "An Exploration of Entrepreneurial Activity among Asian Small Businesses in Britain", *Small Business Economics* 10 (4): 313-326.

Blanchflower, D.G. et al

    2001   "Latent Entrepreneurship Across Nations", *European Economic Review* 45 (4-6): 680-691.

Borooah, V.K., and K. Hart

    1999   "Factors Affecting Self-Employment among Indian and Black Caribbean Men in Britain", *Small Business Economics* 13 (2): 111-129.

Borjas, G.J.

    1986   "The Self-Employment Experience of Immigrants", *Journal of Human Resources* 21 (4:, 485-506.

Clark, K., and S. Drinkwater

    1998   "Ethnicity and Self-employment in Britain", *Oxford Bulletin of Economics and Statistics* 60 (3): 383-407.

Commission of the European Communities

    2003   "Green Paper. Entrepreneurship in Europe", Brussels, COM (2003) 27: final.

    2005   "Green Paper. On an EU Approach to Managing Economic Migration", Brussels, COM (2004) 811: final

Constant, A.

1998   *The Earnings of Male and Female Guestworkers and Their Assimilation into the German Labor Market: A Panel Study 1984-1993,* Ph.D. Dissertation: Vanderbilt University.

Constant, A., and M-L Schultz-Nielsen

2004   "Immigrant Self-employment and Economic Performance", in T. Tranæs, and K. F. Zimmermann (Eds), *Migrants, Work, and the Welfare State*, University Press of Southern Denmark: Odense.

Constant, A., and K.F. Zimmermann

2004   "Self-Employment Dynamics Across the Business Cycle: Migrants Versus Natives", IZA Discussion Paper No. 1386.

Fairlie, R.W., and B.D. Meyer

1996   "Ethnic and Racial Self-employment Differences and Possible Explanations", Journal of Human Resources 31 (4): 757-793.

Greene, W.H.

2000   *Econometric Analysis*, Prentice-Hall: Upper Saddle River, New Jersey.

Le, A.T.

1999   "Empirical Studies of Self-Employment", *Journal of Economic Surveys* 13 (4): 381-416.

Li, P.S.

2001   "Immigrants' Propensity to Self-employment: Evidence from Canada", *International Migration Review* 35 (4): 1106-1128.

Lofstrom, M.

2002   "Labor Market Assimilation and the Self-employment Decision of Immigrant Entrepreneurs", *Journal of Population Economics* 15 (1): 83-114.

SOEP Group

2001   "The German Socio-Economic Panel (GSOEP) after more than 15 years - Overview", *Quarterly Journal of Economic Research* 70 (1): 7-14.

Treiman, D.J.

1977   *Occupational Prestige in Comparative Perspective.* New York: Academic Press.

Veall, M., and K.F. Zimmermann

1996   "Pseudo-R^2 Measures for Some Common Limited Dependent Variable Models", *Journal of Economic Surveys* 10 (3): 241-259.

Yuengert, A.M.

1995   "Testing Hypotheses of Immigrant Self-Employment", *Journal of Human Resources* 30 (1): 194-204.

Zimmermann, K.F.

1995   "Tackling the European Migration Problem", *Journal of Economic Perspectives* 9 (2): 45-62.

TABLE 1

SELECTED CHARACTERISTICS ON SELF-EMPLOYED AND SALARIED WORKERS BY ETHNICITY

	WEST GERMANS		IMMIGRANTS[a]		TURKS	
	Self-employed	Salaried workers	Self-employed	Salaried workers	Self-employed	Salaried workers
Weekly earnings (in DM)[b, c, d]	1743.84 [b]	1299.87 [a]	1835.20 [b]	1042.23 [a]	1969.24 [b]	1010.41 [a]
Average weekly hours of work[b]	50.64	42.65	52.00	42.35	52.69	40.84
Treiman occupational prestige score[b]	47.28	43.72	44.84	38.07	39.16	35.21
Length of time with firm/business[b]	11.00	12.00	9.17	8.69	6.99	9.63
Age in years	43.63	41.87	43.25	40.19	37.05	39.45
Years of schooling & vocational training in Germany	12.61	12.29	6.38	5.71	4.90	4.22
Years of schooling & vocational training before migration	-	-	3.82	3.98	5.30	5.10
Speak German all the time (in %)	-	-	23	30	45	25
Disability limits work (in %)	10	12	9	13	0	12
Married (in %)	67	65	73	70	80	78
Children in HH < 16 yrs old (in %)	47	36	41	41	55	60
Years-since-migration	-	-	13.50	12.72	19.00	19.31
Ex-Yugoslavs (in %)	-	-	36	44	-	-
EU nationals (in %)	-	-	39	39	-	-
Non-EU nationals (in %)	-	-	25	17	-	-
Number of observations	202	1488	44	663	20	205
Self-employed as percent of total group observations	10	-	5	-	7	-
Number of observations with > 0 income	202	1745	44	782	20	253

[a] Includes Greeks, Italians, Spaniards (EU nationals), ex-Yugoslavs, and other Eastern Europeans.
[b] Calculated for those individuals with positive earnings only.
[c] DM - German Mark = 0.479 US Dollar in 2000.
[d] The analysis of independent-sample t-tests revealed a statistically significant earnings difference between West Germans and the other immigrants and between the West Germans and Turks for the salaried workers, but failed to reveal that for the self-employed.

Source: Own calculations from GSOEP 2000.

TABLE 2
SELECTED CHARACTERISTICS ON CITIZENSHIP AND ATTITUDINAL VARIABLES BY EMPLOYMENT
STATUS AND ETHNICITY

	WEST GERMANS		IMMIGRANTS[a]		TURKS	
	Self-employed	Salaried workers	Self-employed	Salaried workers	Self-employed	Salaried workers
German citizen	100%	100%	57%	54%	15%	12%
Born in Germany[b]	100%	100%	44%	50%	-	16%
Have 2nd nationality[b]	-	-	16%	11%	-	13%
Not a German citizen	-	-	43%	46%	85%	88%
Born in Germany[c]	-	-	16%	26%	41%	18%
Apply for German citizenship[c]	-	-	16%	24%	35%	33%
Apply if allowed to have dual citizenship[c]	-	-	42%	48%	53%	68%
Feel that do not belong to Germany	-	-	16%	25%	35%	46%
Want to stay in Germany	-	-	30%	45%	70%	61%
Worries about finances	20%	11%	18%	18%	35%	30%
Worries about immigration to Germany	29%	35%	18%	20%	20%	21%
Worries about hostility against foreigners	21%	25%	14%	24%	40%	36%
Number of observations	202	1745	44	782	20	253
Total number of observations	1947		826		273	

[a] Includes Greeks, Italians, Spaniards (EU nationals), ex-Yugoslavs, and other Eastern Europeans.
[b] Based on German citizens
[c] Based on non German citizens

Source: Own calculations from GSOEP 2000.

TABLE 3
ESTIMATION RESULTS ON THE PROBABILITY OF SELF-EMPLOYMENT: IMMIGRANT AND NATIVE MEN IN GERMANY IN 2000

Parameters	WEST GERMANS		ALL IMMIGRANTS	
	Coefficient (St. error)	Odds ratio	Coefficient (St. error)	Odds ratio
Constant	-10.048* (1.390)	-	-8.682* (2.172)	-
Age	0.353* (0.063)	1.424	0.295* (0.105)	1.344
Age squared	-0.004* (0.001)	0.996	-0.004* (0.001)	0.996
Years-since-migration	-	-	-0.023 (0.019)	0.977
Years-since-migration squared	-	-	0.001* (0.0005)	1.001
Born in Germany	-	-	-0.552 (1.304)	0.576
Born in Germany * age	-	-	-0.029 (0.042)	0.972
Years of education in Germany	0.028 (0.028)	1.028	0.045 (0.034)	1.046
Years of education before migration	-	-	0.044 (0.058)	1.045
Disability limits work	-0.303 (0.253)	0.739	-0.688 (0.538)	0.503
Married	-0.342* (0.173)	0.710	-0.243 (0.333)	0.784
Feel that they do not belong to Germany	-	-	-0.416 (0.335)	0.659
Want to stay in Germany	-	-	-0.141 (0.306)	0.868
Turk	-	-	0.528* (0.311)	1.695
Non-EU Immigrant	-	-	0.270 (0.468)	1.310
AIC	0.651		0.445	
Likelihood Ratio	-627.315		-229.357	
Veall/Zimmermann Pseudo-R^2	0.054		0.085	
Number of observations	1947		1099	

* $p < 0.05$ (one-sided test)

TABLE 4
EARNINGS REGRESSION ESTIMATION RESULTS: SELF-EMPLOYED MEN IN GERMANY
IN 2000

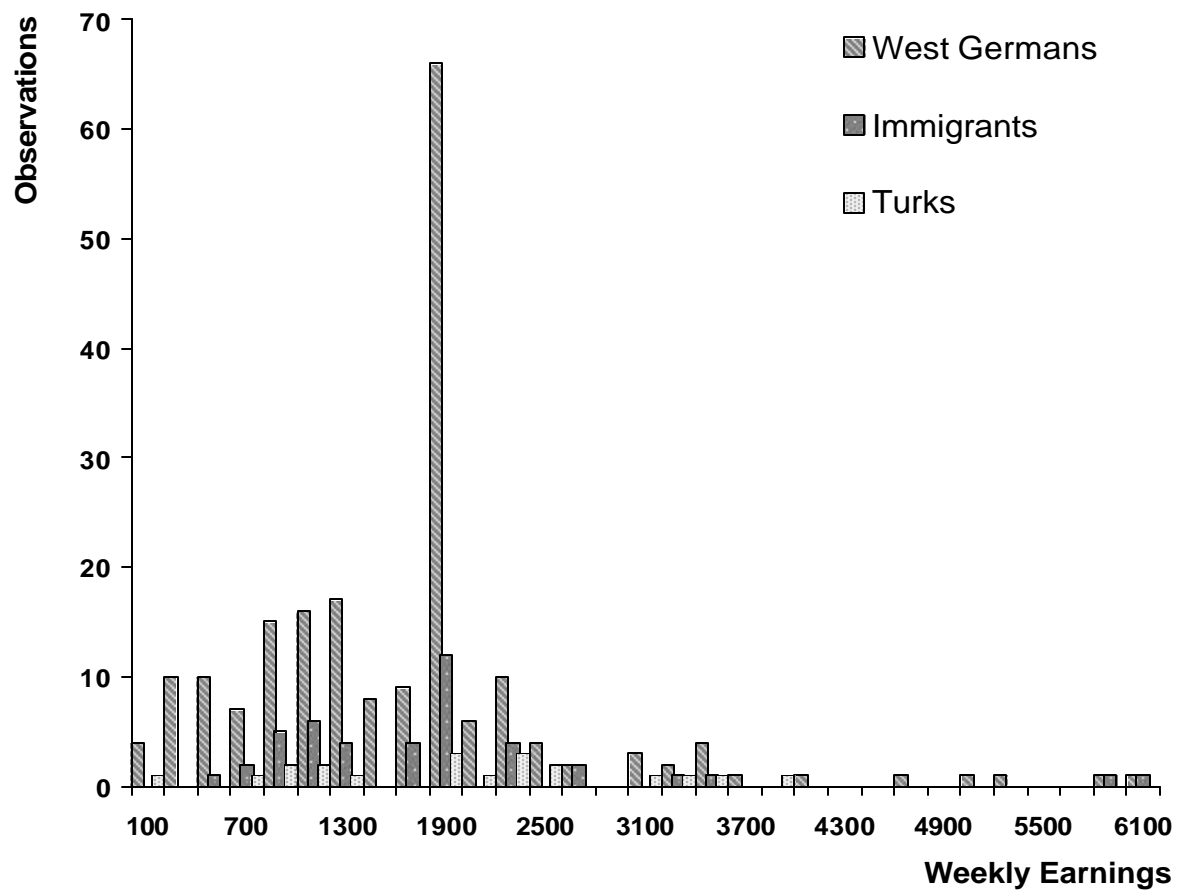| Parameters	WEST GERMANS Coefficient (St. error)	ALL IMMIGRANTS Coefficient (St. error)
Constant	2.480* (0.747)	4.246* (1.207)
Age	0.152* (0.037)	0.152* (0.055)
Age squared	-0.002* (0.0004)	-0.002* (0.001)
Years-since-migration	-	-0.003 (0.009)
Years-since-migration squared	-	-0.00003 (0.0002)
Born in Germany	-	-0.656 (0.558)
Born in Germany * age	-	0.020 (0.016)
Years of education in Germany	0.015 (0.021)	-0.064* (0.020)
Years of education before migration	-	-0.045 (0.028)
Speak mostly German	-	-0.222 (0.168)
Disability limits work	0.046 (0.150)	-0.185 (0.311)
Hours per week	0.010* (0.003)	0.004 (0.005)
Length of time with business	0.002 (0.006)	0.045* (0.011)
Treiman occupational prestige score	0.012* (0.004)	0.019* (0.007)
Married	0.208* (0.103)	-0.527* (0.161)
Turk	-	0.056 (0.145)
Non-EU immigrant	-	-0.798* (0.248)
Mean of log weekly earnings	7.245	7.383
(St. dev.)	(0.724)	(0.584)
F Value	10.42	3.35
R^2	0.302	0.533
Number of observations	202	64

* $p < 0.05$ (one-sided test)

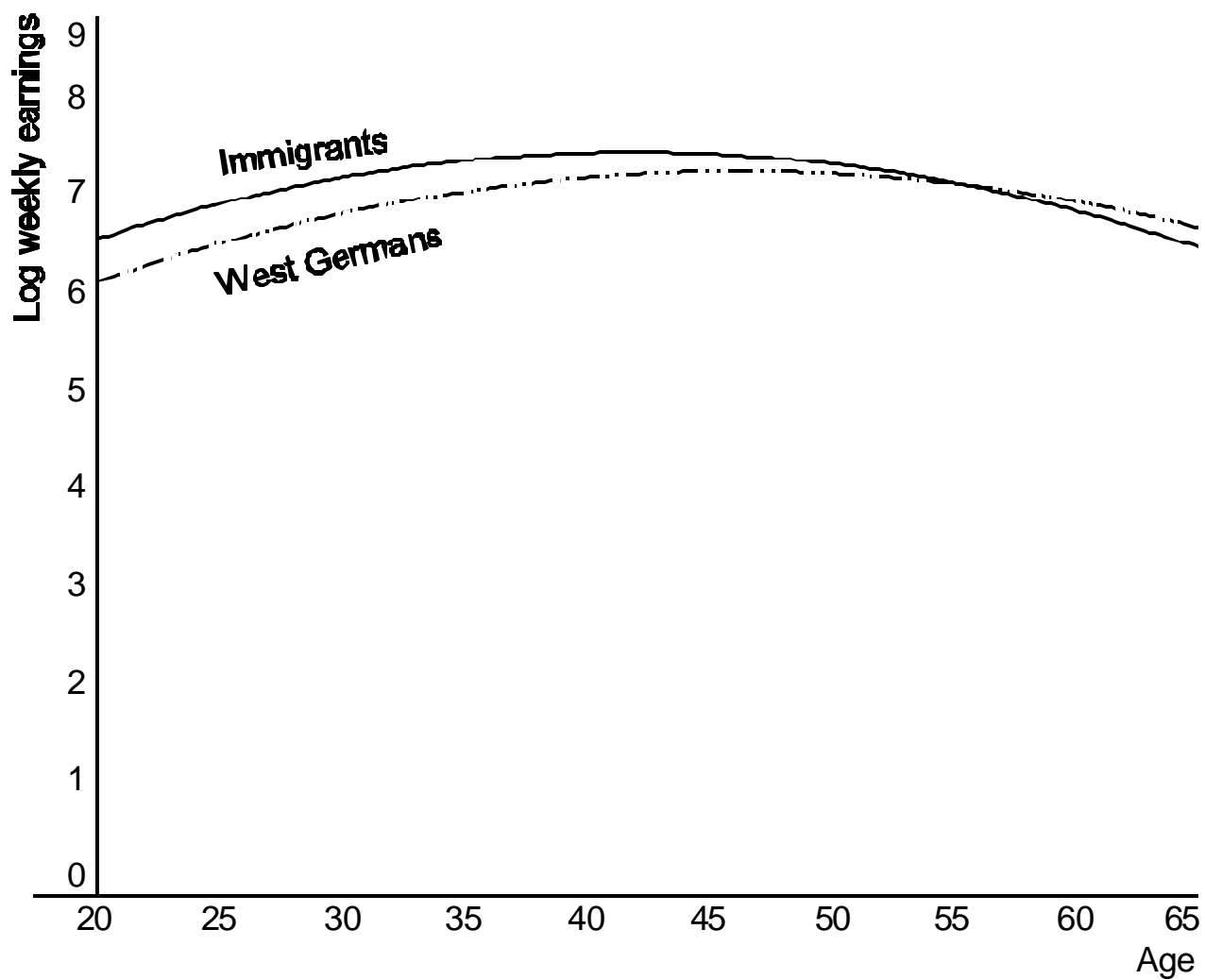41

Figure 1: Distributions of Earnings; Self-employed Men

Figure 2: Age-Earnings Profiles; Self-employed Men

TABLE A1
TYPE OF SELF-EMPLOYMENT BY ETHNICITY

	WEST GERMANS	IMMIGRANTS[a]	TURKS
Independent farmer			
with < 9 co-workers	11%	5%	-
Free-lance professional			
with < 9 employees	22%	20%	-
with >= 9 employees	2%	-	-
Other business			
with < 9 employees	59%	68%	85%
with >= 9 employees	4%	7%	5%
Work in family business	2%	-	10%
Number of observations	202	44	20
[a] Includes Greeks, Italians, Spaniards (EU nationals), ex-Yugoslavs, and other Eastern Europeans.			

Source: Own calculations from GSOEP 2000.