The Savings Behavior of Temporary and Permanent Migrants in Germany

Thomas K. Bauer
RWI Essen, Ruhr-University Bochum, IZA Bonn, and CEPR London

Mathias Sinning
RWI Essen

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Abstract. This paper examines the relative savings position of migrant households in West Germany paying particular attention to differences between temporary and permanent migrants. Our findings reveal significant differences in the savings rates between foreign-born and German-born individuals. These differences diminish for temporary migrants, if their remittances are taken into account. The results of a decomposition analysis indicate that the major part of the differences in the savings rate between Germans and permanent migrants as well as between temporary and permanent migrants can be attributed to differences in observable characteristics. Dividing the sample of immigrant households into regions of origin, we find substantial differences in the savings behavior of migrants from different source countries.

JEL-Classification: F22, E21, C24.

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1 Introduction

Due to the growing number of immigrants worldwide, the economic situation of the foreign-born population and the economic and social integration of immigrant minorities into the host-countries's society have become increasingly important. Following the seminal contribution by Chiswick (1978), the economic literature concentrates predominantly on earnings and employment status as indicators of economic integration (Borjas 1994, Zimmermann 2005). Despite its importance, only a few contributions rely on more long-run indicators of the overall economic well-being, such as wealth or savings rates (Cobb-Clark and Hildebrand 2002, Amuedo-Dorantes and Pozo 2002). Such long-run indicators of economic integration, however, may be important for several respects, because they do not only measure current integration but also allow to draw inferences about the future economic situation of immigrant minorities.

A good example of such a long-run indicator of economic integration are private savings. As a result of the demographic change induced by increasing life expectancy and declining birth rates, private savings have become increasingly relevant in many developed countries with a pay-as-you-go pension system to supplement public pensions after retirement. Germany, the major immigration country in the European Union, represents an excellent example of the importance of private savings for the future economic situation of immigrants. In the 1960s and 1970s, a large number of "temporary" guest workers – mainly labor migrants from Southern Europe – were encouraged to migrate to Germany. Many of them, however, decided to stay in Germany permanently (Bauer, Dietz, Zimmermann, and Zwintz 2005). The savings behavior and the resulting wealth position of these guest workers may become an important factor for the German pension system, because about 1.5 million foreigners in Germany will reach retirement age within the next 15 years.

Several arguments suggest the existence of savings disparities between immigrants and the native-born population. Firstly, differences in the savings behavior may be caused by the original migration motive of immigrants, in particular whether migration is planned to be permanent or only temporarily. Secondly, immigrants

may engage in precautionary saving by remitting parts of their income to their home countries. Hence, these transfers have to be considered while investigating the savings behavior of foreign households. Thirdly, differences in the savings patterns and wealth position may be caused by differences in the earnings potential between natives and immigrants resulting from differences in socioeconomic characteristics such as, for example, differences in the cultural and economic background or skill differences. The savings gap between natives and immigrants may further be the result of institutions such as regulations concerning the access to social benefits. Finally, the family may play a different role with respect to support in old age for immigrants if compared to natives. If, for example, immigrants can expect more credibly that their descendants will care for them when they are old, they may use more of their income to invest in the earnings potential of their children rather than accumulating savings for the period after retirement.

This paper aims at providing a comprehensive descriptive analysis of the savings pattern of immigrants relative to natives using German data. In this endeavor, we pay special attention to the relative importance of remittances and control for differences between permanent and temporary migrants. Specifically, the following research questions will be addressed in this paper: Are there differences in the savings rate between immigrants and natives? Do remigration plans of immigrants affect their savings rates? What is the relative importance of remittances in the context of wealth accumulation? Which part of the savings differential can be attributed to differences in the characteristics of permanent and temporary immigrants and natives and which part is due to a different savings behavior? Do we observe the same differences in the savings pattern among immigrant households from different regions of origin? And, finally, can different savings behavior be explained by interest rate differentials between the host and the home country or a different role of the family?

The paper contributes to the existing migration literature in several respects. First, we provide evidence on the economic integration of immigrants in Germany using savings rates rather than earnings and employment and analyze whether differences in the savings rate between immigrants and natives are due to different

socioeconomic characteristics or behavioral differences. In addition, we contribute to our understanding of the effects of the migration motive on economic assimilation. Finally, we provide further evidence on the importance and the use of remittances.

Our findings reveal significant differences in the savings rate between Germans and foreigners and substantial differences in the savings behavior of migrants from different source regions. However, these differences get smaller when taking the remittances of migrants into account. Decomposing the savings rate differential between German natives and permanent migrants, we find that more than half of the savings rate differential can be explained by differences in socioeconomic characteristics. The decomposition analysis of the savings rate differential between temporary and permanent migrants indicates that more than 80% of the differential is attributable to differences in observable characteristics.

The paper proceeds as follows. Section 2 gives a short survey of the existing literature on the savings behavior of migrants and derives a simple theoretical model that highlights the factors which may influence the savings behavior of natives and temporary and permanent migrants. Section 3 describes the data used for the empirical analysis and explains our estimation strategy. In this section we further develop a decomposition method for Tobit models which follows the method proposed by Blinder (1973) and Oaxaca (1973) for linear regression models and allows us to isolate the part of the savings differential between immigrants and natives that can be explained by differences in socioeconomic characteristics from the part attributable to differences in savings behavior. The estimation results are presented in Section 4. Section 5 concludes.

2 The Savings Differential between Natives and Immigrants

2.1 Overview of the Literature

¿From a theoretical point of view, differences in the saving patterns between immigrants and natives may be caused by a variety of factors. Firstly, different savings

behavior may be caused by the migration motive. Galor and Stark (1990) argue, for example, that the remigration probability of immigrants in the host country is higher than the migration probability of comparable natives. They use an overlapping-generations model to show that the higher probability of remigration increases the labor supply in the host country and consequently the saving propensity of immigrants. This argument suggests, that it may be important to distinguish between temporary and permanent migrants when investigating the savings behavior of immigrants relative to natives, with temporary migrants saving more than permanent migrants and natives.

Following the literature on migration that occurs for risk-diversification within families (Stark 1991), Dustmann (1997) develops a model in which immigrants' duration abroad and savings are jointly determined. He demonstrates that immigrants may accumulate more precautionary savings than comparable natives if they face greater income risk on the labor market of the host country. Dustmann (1997) also argues that the lifelong income risk of immigrants may be smaller than the income risk of natives, if immigrants are able to diversify labor market risks across countries. In this case, precautionary savings of immigrants may be lower than those of natives. Supporting this hypothesis, Amuedo-Dorantes and Pozo (2002) find lower savings rates for immigrants than for natives. They argue, however, that the apparent lower precautionary savings of immigrants may be caused by the fact that immigrants engage in precautionary saving by remitting parts of their income to their home countries.

To explore this issue further, Amuedo-Dorantes and Pozo (2004) pay particular attention to the determinants of remittances. Using data on Mexican immigrants in the United States, they find that a higher income risk leads to increased remittances of immigrants. Using data for Germany, Merkle and Zimmermann (1992) find that remigration plans represent an important determinant of remittances. However, they do not find a significant effect of remigration plans on the savings behavior. Based on these results, they conclude that temporary migrants hold savings mainly in their home country.

Savings disparities may also be caused by the fact that immigrants represent

a highly selected group of people. Because of self-selection and the immigration policies of the receiving countries, immigrants are neither representative for the population in the home nor for the population in the host country. Therefore, savings disparities may exist because of differences in the socioeconomic and cultural background. Skill differences, for example, may be responsible for differences in the economic performance of immigrants and natives (Chiswick 1978, Borjas 1987), and hence savings rates.

Cobb-Clark and Hildebrand (2002) argue that individuals in the sending country may have certain social norms and expectations about intergenerational transfers which can influence the amount of inherited wealth and consequently the post-migration savings behavior. These norms and expectations may lead to differences in the savings behavior between immigrants and natives as well as within the het-erogenous immigrant population. Using data of the Survey of Income Program Participation (SIPP), they show that foreign-born households in the United States are less wealthy than their U.S.-born counterparts. Their findings further indicate that the diversity in wealth levels can be attributed primarily to differences between source-regions rather than differences between entry-cohorts. Although Cobb-Clark and Hildebrand (2002) find that entry-cohorts do not affect overall wealth levels, they demonstrate that the year of arrival is significantly related to the portfolio choices of the foreign-born population in the United States. Carroll, Rhee, and Rhee (1998) also find differences in the saving patterns of immigrants across countries of origin. However, they demonstrate that these patterns do not resemble the national saving patterns in the sending countries because of immigrant selectivity variations across sending regions, indicating that savings disparities within the immigrant population do not reflect cultural differences.

Not only the cultural background in the home country but also the situation of immigrants in the host country may differ substantially from that of the native-born population because of institutional reasons. Shamsuddin and DeVoretz (1998) argue that immigrants may have limited access to social welfare programs, which could impose different constraints on the wealth accumulation decisions of immigrants and natives, leading to an increased savings propensity of immigrants. For Germany,

however, there are no regulations or institutions that indicate that migrants, who reside in Germany legally, have different access to social benefits than comparable Germans (Bauer, Dietz, Zimmermann, and Zwintz 2005).

2.2   Theoretical Model

In the following, we provide a theoretical framework for the analysis of savings and remittances of temporary and permanent migrants and highlight the factors which may be responsible for differences in the savings behavior between natives and immigrants as well as between temporary and permanent migrants. We consider a simple inter-temporal consumption model in which households can choose between consumption in period 1 (c_1) and consumption in period 2 (c_2). In this model, we distinguish three different household types: natives (N), permanent migrants (P), who intend to stay in the host country in both periods, and temporary migrants (T), who intend to return to their home country in the second period. Temporary and permanent migrants may be combined to a single group of migrants, $M = (T, P)$. While staying in the host country, migrants send remittances to their home country which consist of savings (s), altruistic remittances (c_a), and other transfers (z) which result in a payoff $f(z)$ upon the return to the sending country. We follow Amuedo-Dorantes and Pozo (2004) by assuming that the payoff function is increasing in transfers z at a declining rate: $f'(z) > 0$ and $f''(z) < 0$. The returns to saving are given by the interest rate r.

Altruistic remittances can be interpreted as migrants' family consumption. They imply that the utility of migrants does not only depend on own consumption but also on the consumption of their family members (Chiuri 2000). Moreover, immigrants may transfer additional parts of their income to their home country for other reasons (z). The motives behind these transfers comprise (i) insurance motives, (ii) the exchange of services and (iii) inheritance.[1] First of all, immigrants do not only send remittances to their home country to insure family members against income

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[1]Rapoport and Docquier (2005) provide an overview of the different categories of remittances. They also consider repayments of loans as well as strategic motives as possible causes of migrants' remittances. However, these motives do not yield a payoff upon the return to the home country.

losses (Coate and Ravallion 1993) but also to insure themselves. Amuedo-Dorantes and Pozo (2004) demonstrate that due to income risk (such as future unemployment in the host country), immigrants transfer remittances to the home country to *purchase* family-provided and self-insurance. Secondly, temporary migrants may transfer remittances to *purchase* services such as taking care of the migrant's assets (Cox 1987, Rapoport and Docquier 2005). Thirdly, family members in the sending country may use their possibility of depriving migrants of their rights to inheritance to secure remittances (Bernheim, Shleifer, and Summers 1985). Consequently, the expectations about future bequests may induce migrants to send remittances to the home country. In the following it is assumed that temporary migrants are not only able to send savings and altruistic remittances to their home country but also additional savings-related transfers which result in a payoff $f(z)$ upon their return. The corresponding payments of permanent migrants are considered to be altruistic.

We assume that the lifetime utility is an additive separable function with sub-utility functions $u(\mathbf{c}) = (u_1(c_1), u_2(c_2), u_a(c_a))$ being increasing in consumption and altruistic remittances, strictly concave and continuously differentiable. $u_a(c_a)$ represents the utility drawn from altruistic remittances and $u_1(c_1)$ and $u_2(c_2)$ are sub-utility functions of the consumption level in period 1 and 2, respectively. The lifetime utility function can then be written as follows:

$$
\begin{aligned}
U(\mathbf{c}) &= U(c_1, c_2, c_a; \delta, \theta) \\
&= \mathbf{1}\{N\}[u_1(c_1) + \delta u_2(c_2)] + \mathbf{1}\{M\}[\theta u_1(c_1) + (1 - \theta)u_a(c_a) + \delta u_2(c_2)],
\end{aligned}
\tag{1}
$$

where $\mathbf{1}\{G\}$ for $G = (N, M) = (N, (T, P))$ is an indicator function differentiating native households (N) and migrant households (M), where the latter are further differentiated into temporary (T) and permanent (P) migrant households. $\delta = 1/(1 + \rho)$ denotes the relative tastes for future versus current consumption, where ρ represents the time preference rate of the household. The parameter θ reflects the importance of consumption in the host country in relation to altruistic remittances ($0 \leq \theta \leq 1$). Assuming that the price level in the host country does not change over time and across countries, we obtain the following budget constraints:

$$
c_1 \leq \mathbf{1}\{N\}[y_1 - s] + \mathbf{1}\{P\}[y_1 - s - c_a] + \mathbf{1}\{T\}[y_1 - s - c_a - z]
\tag{2}
$$

and

$$c_2 \leq \mathbf{1}\{N\}[y_2 + s(1+r)] + \mathbf{1}\{P\}[y_2 + s(1+r)] + \mathbf{1}\{T\}[y_2 + s(1+r) + f(z)], \quad (3)$$

where y_1 and y_2 represent the income level in period 1 and 2, respectively.[2] Note that savings (s) of migrant households consist of savings in the host country (s_H) and abroad (s_A). We assume that the interest rates in the host and home country (r_H and r_A) are identical, i.e. $s(1+r) = s_H(1+r_H) + s_A(1+r_A)$. Under the given restrictions, native and migrant households choose their optimal level of savings (and remittances) – which implies the optimal level of consumption – to maximize utility. The first order conditions that follow from the maximization problem are given by

$$
\begin{aligned}
\frac{\partial U}{\partial s} &= \mathbf{1}\{N\}[(1+r)\delta u_2'(c_2) - u_1'(c_1)] \\
&+ \mathbf{1}\{M\}[(1+r)\delta u_2'(c_2) - \theta u_1'(c_1)] = 0,
\end{aligned}
\quad (4)
$$

$$\frac{\partial U}{\partial c_a} = \mathbf{1}\{M\}[(1-\theta)u_a'(c_a) - \theta u_1'(c_1)] = 0, \quad (5)$$

$$\frac{\partial U}{\partial z} = \mathbf{1}\{T\}[f'(z)\delta u_2'(c_2) - \theta u_1'(c_1)] = 0, \quad (6)$$

In order to compare the optimal levels of saving of native and immigrant households, we assume in a first step that altruistic remittances are not important ($\theta = 1$) and that the interest rate (r) is equal to the time preference rate (ρ). It is further assumed that natives and immigrants have the same time preference rate. Then the first order condition given by equation (4) reduces to

$$u_1'(c_1) = u_2'(c_2). \quad (7)$$

Following Dustmann (1997), we assume that – given a constant flow of consumption k – temporary migrants have a higher marginal utility from consumption at home than from consumption in the host country:

$$\mathbf{1}\{T\}[u_2'(k)] > \mathbf{1}\{T\}[u_1'(k)]. \quad (8)$$

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[2]For simplicity, we assume that income risk does not exist. Dustmann (1997) provides a detailed analysis of precautionary savings in the presence of return migration and income risk.

Then it follows from equation (7) that temporary migrants have a higher optimal level of consumption in period 2 than in period 1:

$$c_2^T - c_1^T > 0,$$

where $c^G = \mathbf{1}\{G\}c, G = (N, (T, P))$. Equation (4) indicates that this difference will decrease if the interest rate declines or if the time preference rate increases, i.e. if consumption in period 1 becomes more important. Moreover, equation (6) reveals that immigrants will enhance their level of consumption in period 2 by sending savings-related transfers to their home country if the marginal payoff $f'(z)$ rises.

In contrast to temporary migrants, permanent migrants and natives are more likely to prefer an inter-temporal consumption smoothing between period 1 and 2 since they plan to spend both periods in the same country. Therefore, we assume that natives and permanent migrants respectively have the same marginal utility and consequently the same optimal level of consumption in period 1 and 2:

$$\mathbf{1}\{N\}[u_2'(k)] = \mathbf{1}\{N\}[u_1'(k)] \qquad \Rightarrow c_1^N = c_2^N \tag{9}$$

and

$$\mathbf{1}\{P\}[u_2'(k)] = \mathbf{1}\{P\}[u_1'(k)] \qquad \Rightarrow c_1^P = c_2^P. \tag{10}$$

Equations (8) - (10) imply that temporary migrants save more than comparable natives if remittances are not considered, confirming the findings of Galor and Stark (1990) and Dustmann (1997). Additionally, in the absence of remittances, the savings level of permanent migrants is as high as the savings level of comparable natives. However, equation (6) reveals that temporary migrants will reduce savings and increase savings-related transfers if savings have a lower marginal payoff than savings-related transfers: $f'(z) > (1 + r)$. Moreover, both temporary and permanent migrants will save less if altruistic remittances become important ($\theta < 1$). Consequently, considering remittances and assuming that temporary and permanent migrants have the same preferences for altruistic transfers ($c_a^T = c_a^P$), it follows from equations (8) and (10) that temporary migrants save more than permanent migrants (if z is sufficiently small). Equations (4), (9) and (10) imply that the savings

level of permanent migrants is smaller than the savings level of comparable natives if altruistic remittances become relevant. Consequently,

$$s^T > s^P \text{ and } s^N > s^P.$$

The savings differential between natives and temporary migrants may be positive or negative, depending on (i) the preference of temporary migrants towards consumption in the home country, (ii) the relative importance of altruistic remittances and (iii) the marginal payoff of savings-related transfers. Particularly, due to the existence of savings-related transfers, the observed savings level of temporary migrants may be lower than that of comparable natives.

Since both temporary and permanent migrants send altruistic remittances to family members in the home country, their savings behavior may be different from the savings behavior of comparable natives. Hence, from an empirical point of view, it seems likely that a substantial part of the savings differential between natives and immigrants is attributable to differences in the savings behavior. Moreover, due to different preferences and the existence of savings-related transfers, the savings behavior of temporary migrants might also differ substantially from the savings behavior of comparable permanent migrants as well as natives.

3 Data, Econometric Method, and Decomposition Analysis

3.1 Data

In our empirical analysis, we utilize data from the *German Socio-Economic Panel* (SOEP) for the years 1992 to 2004.[3] The SOEP is a representative longitudinal

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[3]The data used in this paper was extracted from the SOEP Database provided by the DIW Berlin (http://www.diw.de/soep) using the Add-On package SOEP Menu v2.0 (Jul 2005) for Stata(R). SOEP Menu was written by Dr. John P. Haisken-DeNew (john@soepmenu.de). The following authors supplied SOEP Menu Plugins used to ensure longitudinal consistency, John P. Haisken-DeNew - h2110x h2707x h2743x h2748x h2817x h3111x p195x p2222x p2283x p2285x p2292x p296x p3466x p3469x p3482x, Markus Hahn and John P. Haisken-DeNew (GENERATED)

study including German and immigrant households residing in the old and new German states which started in 1984. In 2004, about 22,000 persons in nearly 12,000 households were sampled. The Panel includes information about socioeconomic and demographic characteristics, household composition, occupational biographies, etc. Our empirical analysis is restricted to the years 1992 to 2004 since information about savings are only available for this period. We define immigrants as foreign-born persons who immigrated to Germany since 1948 (including foreign-born individuals who received German citizenship after immigration). This definition does not comprise ethnic migrants (e.g. persons who possess German nationality since birth and immigrated to Germany) or the second generation of immigrants (persons with foreign nationality who were born in Germany).

The SOEP provides information on the intentions of immigrants to stay in Germany. We use this information to define temporary migrants as migrants, who claim to return to their home country, while migrants who claim that they stay in Germany forever are considered as permanent migrants. Note that this classification may change over time. Since less than two percent of the migrant population in the sample lives in East Germany, our analysis concentrates on West Germany. The empirical analysis is performed on the household level, because the SOEP provides savings information only for households. We further restrict our analysis on household heads aged 18 to 65 years. After excluding all observations with missing values on one of the variables used in the analysis, our panel data set contains 45,862 household-year-observations of 9,131 households.

To investigate differences in the savings rate between immigrants and natives, we estimate regression models, which resemble the model of earnings assimilation of immigrants developed by Chiswick (1978). Formally, the regression equation can be written as follows:

$$
\begin{aligned}
S_{it} &= \beta_0 + \mathbf{Z}_{it}\beta_1 + M_i(\beta_2 + \mathbf{Z}_{it}\beta_3 + \beta_4 R_{i(t-1)} + \beta_5 YOM_{it}) + \mathbf{D}_t\beta_6 + \varepsilon_{it} \\
&= \mathbf{X}_{it}\beta + \varepsilon_{it}, \tag{11}
\end{aligned}
$$

for $i = 1, ..., N$, t $= 1,...,$T. S_{it} represents the savings rate of household i at time t, which is measured as the monthly amount of savings divided by monthly household net income. In addition to savings in Germany, the savings rate may include transfers of immigrants households to their home country. M_i is a dummy variable reflecting whether the head of a household immigrated to Germany, and $R_{i(t-1)}$ is a dummy variable indicating whether a household head with migration background intents to return to his home country. Since savings may also have an effect on current or future return intentions, our model contains a lag variable indicating return intentions in the previous year. Instead of a quadratic function of the years since migration proposed by Chiswick (1978), our specification includes dummy variables for years of migration (YOM), which indicate differences in the savings rate between different immigration cohorts.

The vector $\mathbf{Z}_{it}$ summarizes additional explanatory variables used to control for other determinants of savings, including dummy variables for different levels of education, household size, a dummy variable indicating whether the household owns a house and/or apartment, a dummy variable which specifies whether the household head is employed, a dummy variable indicating a single parent household, and dummy variables indicating whether children below 5 or 15 years, respectively, live in the household. Since life-cycle theory suggests that savings decisions are influenced by permanent income levels (Cobb-Clark and Hildebrand 2002), we also include a squared function of permanent income into our model. Similar to Feldstein and Pellechio (1979) and Chiteji and Stafford (1999), we measure permanent income as the average monthly household net income in real 2000 Euro over the last five years. In addition, the vector $\mathbf{Z}_{it}$ includes dummy variables for different age cohorts, because we expect a non-linear path of the savings rate over the life cycle. In order to control for differences in the coefficients between native and immigrant households, we include interaction terms between the migrant dummy and the socioeconomic characteristics included in the vector $\mathbf{Z}_{it}$. Finally, $\mathbf{D}_t$ represents a vector of year dummies. A detailed description of the definition of the variables used in our analysis is given in Appendix-Table 1. Appendix-Table 2 contains descriptive statistics.

A particular difficulty when analyzing savings of immigrants is the treatment of

remittances of immigrant households to their home country. The information on remittances of foreign households in the SOEP reveals whether these remittances are consumption related transfers (e.g. payments to increase consumption levels of family members staying in the home country), savings in the home country, or remittances which were sent to the home country for other reasons. However, this information is only available for the years 1984-1991, 1993, and 1995. After 1995, the information on remittances does not allow a distinction between consumption related transfers, savings, and other transfers. Moreover, information on savings in Germany of both native and immigrant households are available only for the years 1992 to 2004. Therefore, we pay particular attention to the comparison of different assumptions about the nature of remittances for the period 1996-2004. However, we are able to evaluate whether these assumptions are reasonable by comparing our estimates for this period with those for the years 1993 and 1995, which do not have to be based on assumptions about the nature of remittances.

Treating all kinds of remittances as altruistic remittances represents one possible assumption about payments of foreign-born individuals to their home country. In this case, savings are only represented by savings in the host country (Amuedo-Dorantes and Pozo 2002). Alternatively, it may be assumed that all remittances could be treated as investments, which implies that they should be treated as savings. In our empirical analysis, we will take into account two different definitions of the savings rate. Firstly, following Amuedo-Dorantes and Pozo (2002), we will investigate the case in which remittances of both temporary and permanent migrants are altruistic, taking into account only savings in the host country. Secondly, we assume that only remittances of temporary migrants represent savings related transfers, while remittances of permanent migrants are considered to be altruistic.[4]

The latter strategy is supported by Figure 1, which shows the average monthly amounts of savings and remittances of temporary and permanent migrants over the period 1984-2004. According to this Figure, average savings and remittances

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[4]We also ran regressions in which we considered the remittances of permanent immigrants as savings. This procedure, however, did not change our results qualitatively. The estimates are available from the authors upon request.

of temporary migrants are substantially higher than those of permanent migrants. Savings related transfers of temporary migrants to their home country, which could be identified for the years 1984-1991, 1993, and 1995, vary between 58 Euro in 1993 to 118 Euro in 1984, whereas permanent migrants save only a relatively small amount of money abroad (between 2 Euro in 1993 to 26 Euro in 1987). While savings related transfers of temporary migrants represent 26.2% of the total savings in 1993 and 29.5% in 1995, permanent migrants transfer only 1.7% of their total savings in 1993 and 2.6% in 1995 to their home country. These numbers suggest that remittances of temporary migrants cannot be regarded as purely altruistic and that neglecting these remittances may exaggerate differences in the savings rate between native and temporary immigrant households would be exaggerated.

Although remittances reported by temporary migrants after 1995 may contain altruistic remittances, Figure 1 suggests that the available information on remittances for the period 1996-2004 allows us to treat remittances as a proxy for savings of temporary migrants abroad, whereas remittances of permanent migrants seem to represent predominantly altruistic remittances rather than savings. In the following empirical analysis, we will compare the findings derived for the period 1996-2004 with estimates for the years 1993 and 1995 to draw inferences about the actual relationship between savings and remittances of temporary migrants. The savings of permanent migrants in their home country, however, may be neglected while analyzing their overall savings behavior.

Table 1 contains some descriptive statistics of native and immigrant households in our sample. Almost 40% of the native households and 54 to 58% of the immigrant households report no savings at all. Considering only savings in Germany, the savings of immigrant households are about 62% of the respective savings of German households. The savings rate of natives is 9.4% for the sample years 1993 and 1995 and 8.5% in the period from 1996 to 2004. Note that these numbers are similar to those reported by other studies using the GSOEP but are lower than those obtained by the national accounts, which are relatively stable around 10%. This difference in the savings rate can be explained by a wider definition of savings in the national accounts if compared to the GSOEP. In addition, national accounts include not

14

only savings of private households (Fricke, Frick, and Wagner 2004). The savings rates of immigrants are 7.0% and 5.7%, respectively. Temporary migrant households have higher savings rates in Germany as well as in their home country if compared to permanent migrant households. Considering remittances of temporary migrant households as savings, their savings rate is even higher than the savings rate of German households.

Treating the remittances of temporary migrants as savings is supported by the numbers for the years 1993 and 1995, for which we have information on the purpose of the remittances of migrant households. The statistics for these years indicate that the total savings rate of permanent migrant households does not change significantly if one also considers savings in the home country, whereas the savings rate of temporary migrant households increase from 7.4% to 10.6% and becomes even higher than the savings rate of German households.

3.2 Econometric Method and Decomposition Analysis

Table 1 has shown that a large share of the households in our sample does not save at all. Therefore, OLS estimations of equation (11) might result in inconsistent estimates of the parameter vector β. To take the censored nature of our dependent variable into account, we also estimate equation (11) using a Tobit model, which can be written in the form of an index function model (Tobin 1958):

$$
\begin{aligned}
S_{it}^* &= \mathbf{X}_{it}\gamma + \eta_{it}, \quad \text{where} \\
S_{it} &= 0 \quad \text{if} \quad S_{it}^* \leq 0, \\
S_{it} &= S_{it}^* \quad \text{if} \quad S_{it}^* > 0, \quad i = 1, ..., N, \quad t = 1, ..., T.
\end{aligned}
\tag{12}
$$

The expected value of savings given the observable characteristics (the so called "unconditional expectation") consists of the probability of S being uncensored and the expectation of S given positive savings (the "conditional expectation"):

$$
\begin{aligned}
E(S_{it}|\mathbf{X}_{it}) &= P(S_{it} > 0|\mathbf{X}_{it})E(S_{it}|S_{it} > 0, \mathbf{X}_{it}) \\
&= \Phi(\frac{\mathbf{X}_{it}\gamma}{\sigma})\mathbf{X}_{it}\gamma + \sigma\phi(\frac{\mathbf{X}_{it}\gamma}{\sigma}),
\end{aligned}
\tag{13}
$$

where $\phi(\cdot)$ represents the standard normal density function and $\Phi(\cdot)$ is the cumulative standard normal density function.

In order to provide a comprehensive descriptive analysis of the savings behavior of immigrants relative to natives, we pay particular attention to the isolation of the part of the savings differential that can be explained by differences in socioeconomic characteristics from the part attributable to differences in the coefficients using the decomposition method proposed by Blinder (1973) and Oaxaca (1973).

To perform this decomposition, we estimate equations (11) and (12) separately for natives (n) and migrants (m), resulting in the models

$$S_{itg} \quad = \quad \mathbf{X}_{itg}\beta_g + \varepsilon_{itg}, \tag{14}$$

and

$$S_{itg}^* \quad = \quad \mathbf{X}_{itg}\gamma_g + \eta_{itg}, \tag{15}$$

$$S_{it} \quad = \quad 0 \quad \text{if} \quad S_{it}^* \le 0,$$

$$S_{it} \quad = \quad S_{it}^* \quad \text{if} \quad S_{it}^* > 0,$$

for $i = 1, ..., N_g, \quad t = 1, ..., T_g, \quad g = (n, m), \quad \sum_g N_g = N$, and $\quad \sum_g T_g = T$, respectively. For the linear model (11), Blinder (1973) and Oaxaca (1973) propose the decomposition

$$
\begin{aligned}
\overline{S}_n - \overline{S}_m = \Delta_{nm}^{OLS} \quad &= \quad E_{\beta_n}(S_{itn}|\mathbf{X}_{itn}) - E_{\beta_m}(S_{itm}|\mathbf{X}_{itm}) \\
&= \quad [E_{\beta_n}(S_{itn}|\mathbf{X}_{itn}) - E_{\beta_n}(S_{itm}|\mathbf{X}_{itm})] \\
&\quad + [E_{\beta_n}(S_{itm}|\mathbf{X}_{itm}) - E_{\beta_m}(S_{itm}|\mathbf{X}_{itm})] \\
&= \quad (\overline{\mathbf{X}}_n - \overline{\mathbf{X}}_m)\widehat{\beta}_n + \overline{\mathbf{X}}_m(\widehat{\beta}_n - \widehat{\beta}_m),
\end{aligned}
\tag{16}
$$

where $E_{\beta_g}(S_{itg}|\mathbf{X}_{itg})$ for $g = (n, m)$ means that the expected value of S_{itg} conditional on $\mathbf{X}_{itg}$ is evaluated at the parameter vector β_g, $\overline{S}_g = \frac{1}{N_g T_g} \sum_{i=1}^{N_g} \sum_{t=1}^{T_g} S_{itg}$ and $\overline{\mathbf{X}}_g = \frac{1}{N_g T_g} \sum_{i=1}^{N_g} \sum_{t=1}^{T_g} \mathbf{X}_{itg}$. The first term on the right hand side of equation (16) shows the savings differential between the two groups due to differences in characteristics, whereas the second term shows the differential that is due to differences

in coefficients.[5] We will interpret the latter as the savings difference between the two groups that is due to a different savings behavior.

Given the observable socioeconomic characteristics $\mathbf{X}_{itg}$, the linear model might be a good approximation to the expected value of savings $E(S_{itg}|\mathbf{X}_{itg})$ for values of $\mathbf{X}_g$ which lie close to the mean. However, due to the large number of individuals who do not save at all, the application of a simple linear regression model may lead to biased estimates of the parameter vector and hence misleading results of the decomposition. Therefore, we aim to provide a similar decomposition that is based on the results of the Tobit models (12).

Equation (13) indicates that a decomposition of savings disparities similar to equation (16) is not appropriate if the dependent variable is censored, because the marginal effects depend on the estimated variance of the error term. For the Tobit models we therefore propose an alternative decomposition of the mean difference of S between the two groups (n) and (m):

$$
\begin{aligned}
\Delta_{nm}^{Tobit} = {} & [E_{\gamma_n,\sigma_n}(S_{itn}|\mathbf{X}_{itn}) - E_{\gamma_n,\sigma_m}(S_{itm}|\mathbf{X}_{itm})] \\
& + [E_{\gamma_n,\sigma_m}(S_{itm}|\mathbf{X}_{itm}) - E_{\gamma_m,\sigma_m}(S_{itm}|\mathbf{X}_{itm})].
\end{aligned} \tag{17}
$$

Using equation (13), one can show that equation (17) can be estimated by

$$
\begin{aligned}
\hat{\Delta}_{nm}^{Tobit} = {} & [\frac{1}{N_n}\sum_{i=1}^{N_n}[\Phi(\frac{\mathbf{X}_{itn}\widehat{\gamma}_n}{\widehat{\sigma}_n})\mathbf{X}_{itn}\widehat{\gamma}_n + \widehat{\sigma}_n\phi(\frac{\mathbf{X}_{itn}\widehat{\gamma}_n}{\widehat{\sigma}_n})] \\
& -[\frac{1}{N_m}\sum_{i=1}^{N_m}[\Phi(\frac{\mathbf{X}_{itm}\widehat{\gamma}_n}{\widehat{\sigma}_m})\mathbf{X}_{itm}\widehat{\gamma}_n + \widehat{\sigma}_m\phi(\frac{\mathbf{X}_{itm}\widehat{\gamma}_n}{\widehat{\sigma}_m})] \\
& +[\frac{1}{N_m}\sum_{i=1}^{N_m}[\Phi(\frac{\mathbf{X}_{itm}\widehat{\gamma}_n}{\widehat{\sigma}_m})\mathbf{X}_{itm}\widehat{\gamma}_n + \widehat{\sigma}_m\phi(\frac{\mathbf{X}_{itm}\widehat{\gamma}_n}{\widehat{\sigma}_m})] \\
& [\frac{1}{N_m}\sum_{i=1}^{N_m}[\Phi(\frac{\mathbf{X}_{itm}\widehat{\gamma}_m}{\widehat{\sigma}_m})\mathbf{X}_{itm}\widehat{\gamma}_m + \widehat{\sigma}_m\phi(\frac{\mathbf{X}_{itm}\widehat{\gamma}_m}{\widehat{\sigma}_m})],
\end{aligned} \tag{18}
$$

where $\widehat{\gamma}_g$ and $\widehat{\sigma}_g$ represent the estimated parameter vector and the variance of the error term of group g, respectively. Similar to the decomposition equation of the

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[5]Note that the decomposition equation may also be written as $\Delta_{nm}^{OLS} = (\overline{\mathbf{X}}_n - \overline{\mathbf{X}}_m)\widehat{\beta}_m + \overline{\mathbf{X}}_n(\widehat{\beta}_n - \widehat{\beta}_m)$. In our empirical analysis, we consider both notations of the decomposition equation. However, since we find that the estimates derived from the two equations do not differ substantially from each other, we focus on equation (16) throughout the paper.

linear model, the calculation of the counterfactual parts of equation (17) is based on the average characteristics and the estimated error variance of migrants as well as the estimated coefficients of natives.

In contrast to the decomposition of the OLS model, the Tobit decomposition also requires the consideration of the error variance in the counterfactual part of the decomposition equation. Consequently, instead of using only the parameter vector of natives, one can also use (γ_n/σ_n) as counterfactual term in the decomposition equation which results in

$$[E_{\gamma_n,\sigma_n}(S_{itn}|\mathbf{X}_{itn}) - E_{\gamma_n,\sigma_n}(S_{itm}|\mathbf{X}_{itm})] + [E_{\gamma_n,\sigma_n}(S_{itm}|\mathbf{X}_{itm}) - E_{\gamma_m,\sigma_m}(S_{itm}|\mathbf{X}_{itm})].$$

Such a specification of the decomposition may differ substantially from (17) if large differences in the variance of the error term between the two groups exist. In our analysis, we focus on the estimation of equation (17), because this decomposition is comparable to the OLS decomposition described in equation (16). A detailed discussion of the Tobit decomposition and an application to the gender wage differential using SOEP data is given by Bauer and Sinning (2005).

In the following empirical analysis we will report the estimation results from different specifications of the linear models (11) and (14) and the respective decomposition according to equation (16). To account for the clustering of savings at zero, we also report the results of estimating different specifications of the Tobit models (12) and (15) and the results of the Tobit-Blinder-Oaxaca decomposition according to equation (17). Following McDonald and Moffitt (1980), we decompose the estimated marginal effects of the explanatory variables on the conditional mean of the observable dependent variable for the Tobit models into a part, which represents the change in the expected savings rate of the households with positive savings, weighted by the probability of having a positive savings rate, and into a part that represents the change in the probability of positive savings, weighted by the expected value of savings if savings are positive.

4 Estimation Results

4.1 OLS and Tobit Estimates

Table 2 reports the results from pooled OLS and Tobit estimates of models (11) and (12) for the years 1993 and 1995 (Part A) as well as the period from 1996 to 2004 (Part B). As described in section 3, we have information on the purpose of remittances only for the years 1993 and 1995, but are not able to distinguish between consumption related transfers, savings, and other transfers for the period 1996 to 2004. Therefore, columns (1) to (2c) of Table 2 reports estimates for the savings rate assuming that remittances are purely altruistic, whereas in columns (3) to (4c) remittances of temporary migrants are treated as being savings.

Immigrant households save significantly less than natives. The marginal effect of the unconditional expected value presented in column (2a) of Part A indicates that the average household with migration background saves 6.9 percentage points less than comparable natives if remittances are not taken into account. For the period 1996-2004, the respective effect is 5.8 percentage points. The McDonald-Moffitt-decomposition reported in columns (2b) and (2c) of Part A (Part B) reveals that the propensity to save at all is 37.7% (33.7%) lower for immigrant households if compared to native households and that, conditional on having savings, immigrant households save about 5.2 (4.3) percentage points less than native households. The marginal effects of different immigration cohorts are insignificant in almost all cases. Only the marginal effect given in column (4a) of Part A indicates that the savings rate of immigrants who arrived between 1974 and 1983 is higher than the savings rate of more recent immigrants.[6]

Considering only savings in Germany, there does not seem to be a significant difference between immigrant households who intend to return to their home country and permanent immigrant households. The differences between temporary migrants

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[6]In order to test whether the effect of the migrant dummy and the interaction terms specified in equations (11) and (12) are jointly significant, we carried out adjusted Wald tests and χ^2-tests for OLS and Tobit specifications, respectively. These tests indicate that the coefficients are jointly significantly different from zero in all cases.

and natives become smaller, however, if we treat remittances of migrants as savings. In this case, a χ^2-test shows that the differences between temporary migrants and natives become even insignificant for the sample period 1996 to 2004.

Due to unobserved heterogeneity, both the OLS and Tobit estimates presented in Table 2 may be biased. Unobservable future inheritances, for example, may have strong effects on the wealth accumulation behavior. Cobb-Clark and Hildebrand (2002) argue that there might exist substantial differences in social norms and expectations about intergenerational transfers in different countries. Consequently, unobservable factors may also have different effects on savings of foreign-born and native-born individuals. For that reason, we have compared our results to similar specifications of OLS and Tobit models with fixed effects to control for unobserved individual heterogeneity. However, the estimates of these models do not differ substantially from those of the pooled models.[7]

4.2   Decomposition Analysis

In order to distinguish the part of the savings gap that can be explained by socioeconomic characteristics from the part attributable to differences in the savings behavior, we apply a Blinder-Oaxaca decomposition based on the results of Tobit estimates. Table 3 reports estimates separately for the periods 1993, 1995 and 1996-2004 as well as estimates on the pooled sample of all available periods. The results based on the savings rate without remittances are shown in columns (1) to (3). Columns (4) and (5) contain the estimates for natives and temporary migrants as well as for temporary and permanent migrants, when treating remittances of temporary migrants as savings.[8]

In order to test more formally whether the results of the decomposition analysis in the sample years 1993 and 1995 ($\widehat{\Delta}_1$) are significantly different from the respective results for the period 1996-2004 ($\widehat{\Delta}_2$), we carried out a t-test, where t-values are approximated by $|(\widehat{\Delta}_1 - \widehat{\Delta}_2)/\sqrt{Var(\widehat{\Delta}_1) + Var(\widehat{\Delta}_2)}|$. In most cases the test results reveal that differences between the components of the raw differential in the two

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[7]The estimates of fixed effects models are available upon request.

[8]The underlying estimates of the decomposition analysis in Table 3 are available upon request.

periods are not significant. Only the raw differentials depicted in columns (4) and (5) and the explained part of the differential in column (5) differ significantly between Part A and B. This result is supported by the descriptive statistics presented in Table 1. Overall, the tests suggest that remittances of temporary migrants observed in the second period of the sample represent a sufficiently precise proxy variable for savings related transfers to their home country, even if these transfers may contain altruistic remittances. Therefore we focus on the decomposition results reported in Part C of Table 3.

The estimates in column (1) of Part C suggest that 54.6% of the savings rate differential between natives and permanent migrants is due to differences in observable characteristics. However, there remains a substantial part of the savings rate differential (45.4%) that can be attributed to a different savings behavior. The results of the decomposition analysis in column (2) suggest that the main part of the savings differential between natives and temporary migrants is due to a different savings behavior. Differences in the savings rate between temporary and permanent migrants, however, can mainly be explained by observable characteristics (see column (3)). Taking remittances of temporary migrants into account, the raw differential between natives and temporary migrants becomes negative (column (4)). However, the estimates suggest that a major part of the negative differential appears to be attributable to observable characteristics. This result indicates that the savings differential between natives and temporary migrants in column (2) is mainly be attributable to a different savings behavior because it ignores the fact that temporary migrants transfer substantial parts of their income to their home country. Finally, the results in column (5) of Part C indicate that 61.5% of the savings rate differential between temporary and permanent migrants can be attributed to differences in observable characteristics and 38.5% to a different savings behavior. Comparing these findings to the estimates given in column (3), it turns out that the differences in the savings behavior between temporary and permanent migrants increase if remittances of temporary migrants are treated as savings.

We further use the decomposition results to test our treatment of remittances as savings. In particular we investigate whether the unexplained part of the sav-

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ings differential is correlated with the interest rate differential between the home country and Germany. To perform this test we estimate in a first step the decompositions reported in Table 3 separately for 1993 and each year in the period from 1995 to 2004. In a second step we correlate the unexplained part resulting from these decompositions with the interest rate differential between the home countries of the immigrants and Germany, taking the information on interest rates from the International Financial Statistics of the IMF. The results from this analysis support our hypothesis that remittances of temporary migrants could be treated as savings. Considering only savings in Germany as dependent variables, the coefficient of correlation between the unexplained parts of the savings differential and the interest rate differential is 0.083 and statistically significant at a 5%-level. This correlation suggests that differences in the savings behavior between immigrants and natives are relatively large if the interest rate in the home country is higher than in Germany. If we treat remittances as savings, however, the coefficient of correlation between the unexplained parts of the savings differential and the interest rate differential becomes insignificant.

4.3 Differences across sending countries

The decomposition results for natives and immigrants originating from different regions are reported in Table 4, where OECD countries include member states of the OECD as well as Israel and Singapore, and CEE (Central and Eastern European) countries comprise Romania, Poland, Hungary, Bulgaria, Czech Republic, Ukraine, Belarus, Slovenia, Slovakia, Estonia, Latvia, Lithuania, and Ex-Yugoslavia.[9] The estimates of the decomposition given in column (1) show substantial differences in the predicted raw differential between natives and immigrants by region of origin. While immigrants from OECD countries save 2.0 percentage points and immigrants from CEE 2.7 percentage points less than natives, the savings rate differential between natives and turkish migrants amounts to 4.3 percentage points. In all cases the results indicate that the main part of the savings rate differential between natives and permanent migrants from different regions of origin is induced by differences in

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[9]The underlying estimates are available upon request.

observable characteristics. However, only for turkish immigrants the unexplained part is statistically significant.

Considering differences between natives and temporary migrants (column (2)), we find that the savings rate differential is insignificant for immigrants coming from CEE (Central and Eastern European) countries. While the savings rate differential between natives and temporary migrants from OECD countries is only 1.2 percentage points, temporary migrants from Turkey save on average 3.4 percentage points less than natives. However, there are substantial differences in the savings behavior between the two immigration groups. Whereas the difference in the savings rate between natives and temporary migrants from OECD countries is mainly due to observable characteristics, more than half of the savings rate differential between natives and temporary migrants from Turkey is attributable to a different savings behavior.

While differences in the savings rate between temporary and permanent migrants from OECD countries and Turkey do not exist, permanent migrants from CEE countries save 2.2 percentage points less than temporary migrants. The estimates indicate that even more than 100% of the savings rate differential between temporary and permanent migrants from CEE countries can be explained by observable characteristics, while differences in the savings behavior do not exist. The negative part of the savings differential attributable to differences in the savings behavior may be interpreted as a higher preference of permanent migrants to save (see Neuman and Oaxaca (1998) for a similar interpretation).

Treating remittances of temporary migrants as savings, we find that there are no significant differences between the savings rate of natives and temporary migrants from Turkey, whereas temporary migrants from OECD and CEE countries even save significantly more than natives. In the case of temporary migrants from CEE countries half of this difference can be explained by differences in the observable characteristics. However, substantial differences between temporary and permanent migrants can be found. While the savings rate differential between temporary and permanent migrants from OECD countries and from Turkey is about 5.0 percentage points, temporary migrants from CEE countries save 12.3 percentage points more

than comparable permanent migrants, indicating that temporary migrants from CEE countries transfer large shares of their income to the country of origin.

Differences in the savings rate between temporary and permanent migrants from OECD countries can mainly (61.2%) be attributed to observable characteristics. Although a similar result (60.8%) can be found for immigrants from CEE countries, a comparison of the estimates in columns (3) and (5) suggests that the part of the savings rate differential between temporary and permanent migrants which is due to a different savings behavior (39.2%) is caused by the consideration of remittances. Therefore, differences in the savings behavior between temporary and permanent migrants are mainly determined by transfers of temporary migrants to their home country. A major part (66.9%) of the differences between temporary and permanent migrants from Turkey are caused by differences in their savings behavior. Again, the results indicate that differences in the savings behavior between the two groups are induced by remittances of temporary migrants. Overall, the results reported in Table 4 suggest that there are differences in the savings behavior of migrants from different source regions, even though there is a common pattern in the savings behavior between permanent and temporary migrants.

4.4   The role of family ties

One explanation for the different savings behavior of migrant and German households may be seen in a different role of the family. Often the argument has been put forward that it is more common among immigrant households that children support their parents in old age than in German families. Therefore, immigrants use more of their income to invest in the earnings potential of their children rather than accumulating savings for the period after retirement.

To test this hypothesis we employ data from the German Mikrozensus – an annual representative cross sectional survey of 1% of all German households collected by the German statistical office – for the year 2003. A short description of this data set is provided by Schwarz (2001). The German Mikrozensus provides extensive information on the sources of income of an individual. In the survey, the individuals are also asked whether they receive financial transfers from private persons and

whether they receive social benefits. If the above hypothesis is true, one would expect that retired immigrants have a higher probability to receive transfers from private persons and a lower probability to receive social benefits than comparable Germans.

Using a sample of individuals aged 65 and older, we estimate Probit models, where the dependent variable takes the value one if an individual receives transfers from private persons, and 0 otherwise. As control variables we use dummy variables for the marital status of the individual, a dummy for East Germany, two dummy variables for the age groups 65 to 70 and 71 to 80 with individuals older than 80 being the reference group, a female dummy, two dummies for the educational level, dummy variables indicating whether the person is living in a small and a big city, respectively, the number of children living in the households, an immigrant dummy as well as different interaction terms between the immigrant indicator and the other control variables.

Columns (1a) and (1b) of Table 5 report the marginal effects of the Probit estimates. In both specifications, the immigrant dummy is statistically insignificant. This result does not support the hypothesis of a relatively stronger role of the family for immigrants with respect of private support in old age if compared to natives.[10]

Columns (2a) and (2b) of Table 5 show the results of estimating Probit models for the probability of receiving social assistance. The results in column 4 indicate that immigrants older than 64 have a higher probability to receive social benefits than comparable natives. The significant higher dependence of older immigrants on social benefits turns out to be robust towards changes in the specification of the model, such as including interaction effects of the immigrant dummy and the other covariates into the model (see column (2b)). Note that this result is not in line with the existing evidence of immigrant participation in the German welfare program, which usually finds that immigrants do not have a higher probability to receive social benefits than comparable natives.[11] These studies, however, use a

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[10]This result is in line with our estimates of the determinants of the savings rate, where the existence of children has no statistical significant different impact on the savings rate of immigrant and native households.

[11]See, among others, Fertig and Schmidt (2002) and Riphahn (1998). A survey of the literature

representative sample of the immigrant and native population, whereas our estimates concentrate on persons above age 65.

Overall, the results in Table 5 suggest that there is no evidence that immigrant households save less because they can count more on the support of their families when old than native households. In addition, the results indicate that immigrants have a relatively higher propensity to depend on social benefits when old. To what extend the latter is caused by an insufficient wealth accumulation in working life, however, requires a more careful analysis that is not possible with the data at hand.

5   Conclusions

This paper analyzes the relative savings position of temporary and permanent migrants in West Germany. Departing from a simple inter-temporal consumption model, we provide a theoretical framework for the analysis of savings and remittances of temporary and permanent migrants. The theoretical findings suggest that differences in the savings behavior between native and immigrant households are caused by savings and consumption related transfers of immigrant households to their country of origin. Since temporary migrants may receive payoffs from investments after their return to the home country, the theoretical findings provide evidence for differences in the savings behavior between native-born and foreign-born individuals as well as between temporary and permanent migrants.

In the empirical analysis, we investigate the savings gap between native and immigrant households using data from the German Socio-economic Panel (GSOEP). Particular attention is paid to differences in the savings behavior between temporary and permanent migrants. The estimation results reveal that immigrants save significantly less than natives. On average, household heads with a migration background save 6-7 percentage points less than comparable natives if remittances are not taken into account. However, we find that differences between natives and temporary migrants disappear as soon as remittances of temporary migrants are treated as savings.

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is provided by Bauer (2002).

We further apply the decomposition method proposed by Blinder (1973) and Oaxaca (1973) for linear models and develop a similar decomposition method for Tobit models to isolate the part of the savings rate differential that can be explained by differences in socioeconomic characteristics from an unexplained part that can be interpreted as differences in the savings behavior. Decomposing the savings rate differential between German natives and permanent migrants, we find that the major part of the savings rate differential is the result of differences in socioeconomic characteristics, such as differences in permanent income and household size, suggesting that permanent migrants might not have the capacity to save as much as native households because they have to spend a larger share of their income to satisfy basic needs. However, there remains a substantial part of the savings rate differential which is due to a different savings behavior. We further provide evidence that suggest that this behavioral differences cannot be explained by a different role of the support from family members for immigrants and natives, which would makes precautionary savings less important for immigrants.

The results of this paper indicate that the Germany welfare system may face additional unforeseen burdens in the coming years. In the next 15 years, about 1.5 million foreigners will reach retirement age. These foreigners appear to have a substantial lower savings rate than natives and hence it must be feared that they have not accumulated sufficient savings for the time of their retirement. This in turn may results in an increased utilization of the German social security system by immigrants. Policy measures to increase the earnings and hence savings potential, however, can only partly solve the problem of a comparable low savings rate of immigrants, because a substantial part of the savings gap between immigrants – especially those who plan to stay in Germany permanently – and natives appears to be due to a different savings behavior. Additional measures seem to be necessary to change this behavior. One potential measure may be a special information campaign for immigrants to increase their awareness of the increasing importance of private savings as a supplement to public pensions.

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FIGURE 1: **Savings and Remittances of Temporary (T) and Permanent (P) Migrants, 1984-2004**
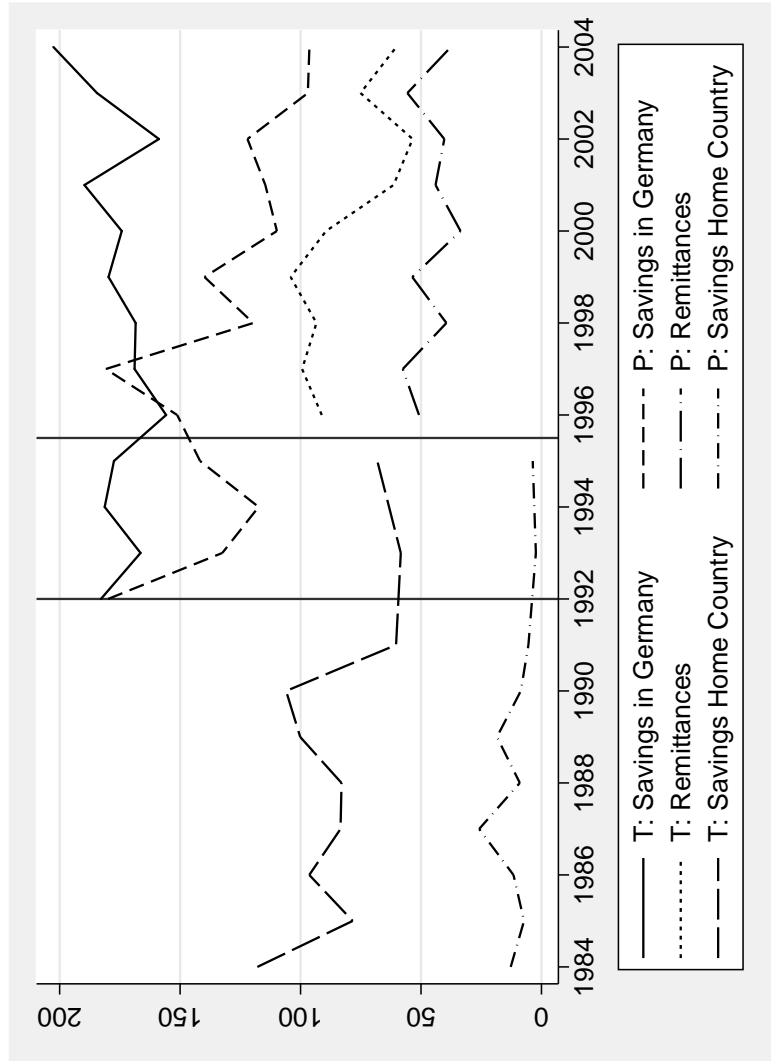
Variable	Natives	Immigrants	Permanent Migrants	Temporary Migrants
1993, 1995				
No Savings	0.362	0.539	0.539	0.539
	(0.009)	(0.020)	(0.031)	(0.026)
Savings (in Germany)	242.134	150.383	139.561	159.174
	(8.881)	(10.571)	(16.037)	(14.057)
Savings conditional on positive saving	379.682	326.047	302.590	345.101
	(12.702)	(17.222)	(27.068)	(22.109)
Savings Home Country		40.020	3.623	69.588
		(6.583)	(2.079)	(11.614)
Other Transfers to Home Country		30.307	15.317	42.483
		(4.886)	(3.546)	(8.317)
Savings in Home and Host Country		190.403	143.184	228.762
		(12.578)	(16.260)	(18.428)
Savings Rate (Savings in Germany)	0.094	0.070	0.065	0.074
	(0.002)	(0.005)	(0.008)	(0.006)
Savings Rate Home Country		0.008	0.002	0.012
		(0.002)	(0.001)	(0.004)
Rate of Other Transfers		0.014	0.007	0.020
		(0.002)	(0.002)	(0.004)
Savings Rate Home and Host Country		0.087	0.067	0.106
		(0.006)	(0.008)	(0.008)
Net Income	2224.135	1911.937	1840.978	1969.581
	(29.250)	(34.852)	(50.881)	(47.467)
Number of Observations	5111	1368	623	745
1996-2004				
No Savings	0.378	0.570	0.580	0.553
	(0.004)	(0.011)	(0.014)	(0.018)
Savings (in Germany)	226.495	144.778	126.535	177.170
	(3.186)	(6.770)	(7.641)	(12.939)
Savings conditional on positive saving	364.278	336.897	301.083	396.737
	(4.552)	(12.735)	(14.065)	(24.627)
Remittances		56.973	45.931	76.578
		(3.511)	(4.415)	(5.826)
Savings and Remittances		172.369	126.535	253.748
		(7.273)	(7.641)	(14.649)
Savings Rate (Savings in Germany)	0.085	0.057	0.052	0.066
	(0.001)	(0.002)	(0.003)	(0.004)
Savings and Remittances Rate		0.073	0.052	0.110
		(0.003)	(0.003)	(0.006)
Net Income	2252.574	1983.018	1925.432	2085.260
	(10.700)	(24.320)	(28.333)	(44.812)
Number of Observations	34053	5330	3315	2015

31

TABLE 2: **Determinants of the Savings Rate – Natives and Immigrants**

| | Savings Rate | | | | | Savings Rate including Remittances | | | | |
| | (1) OLS | (2) Tobit | (2a) Uncond. Exp. | (2b) Prob. Uncens. | (2c) Cond. Uncens. | (3) OLS | (4) Tobit | (4a) Uncond. Exp. | (4b) Prob. Uncens. | (4c) Cond. Uncens. |
			Marginal Effects					Marginal Effects		
Part A: 1993, 1995										
Immigrant	-0.0347 (0.0255)	-0.1504** (0.0636)	-0.0687*** (0.0189)	-0.3774*** (0.1397)	-0.0518*** (0.0169)	-0.0663** (0.0285)	-0.1789*** (0.0638)	-0.0771*** (0.0161)	-0.4321*** (0.1249)	-0.0593*** (0.0156)
Immigrant × Return($t-1$)	0.0118 (0.0101)	0.0142 (0.0175)	0.0091 (0.0115)	0.0349 (0.0423)	0.0064 (0.0081)	0.0261** (0.0112)	0.0395** (0.0177)	0.0265** (0.0127)	0.0925** (0.0393)	0.0186** (0.0089)
Immigrant × YOM before 1964	0.0112 (0.0207)	0.0342 (0.0552)	0.0227 (0.0389)	0.0818 (0.1255)	0.0160 (0.0274)	0.0257 (0.0226)	0.0578 (0.0535)	0.0400 (0.0404)	0.1311 (0.1093)	0.0282 (0.0288)
Immigrant × YOM 1964-1973	0.0194 (0.0187)	0.0360 (0.0522)	0.0239 (0.0367)	0.0863 (0.1187)	0.0168 (0.0258)	0.0299 (0.0203)	0.0524 (0.0507)	0.0357 (0.0373)	0.1208 (0.1074)	0.0252 (0.0265)
Immigrant × YOM 1974-1983	0.0351* (0.0190)	0.0693 (0.0515)	0.0488 (0.0400)	0.1564 (0.1009)	0.0345 (0.0289)	0.0652*** (0.0215)	0.1133** (0.0500)	0.0846** (0.0425)	0.2300*** (0.0752)	0.0609* (0.0321)
Constant	0.0509*** (0.0103)	-0.0496*** (0.0164)				0.0510*** (0.0103)	-0.0512*** (0.0165)			
R²/Wald statistic (χ^2)	0.110	369.10				0.106	340.15			
Part B: 1996-2004										
Immigrant	-0.0381*** (0.0137)	-0.1255*** (0.0291)	-0.0576*** (0.0094)	-0.3372*** (0.0703)	-0.0432*** (0.0081)	-0.0288* (0.0157)	-0.0941*** (0.0289)	-0.0466*** (0.0114)	-0.2497*** (0.0745)	-0.0341*** (0.0090)
Immigrant × Return($t-1$)	0.0140** (0.0062)	0.0169 (0.0106)	0.0106 (0.0069)	0.0448 (0.0276)	0.0074 (0.0048)	0.0468*** (0.0092)	0.0671*** (0.0127)	0.0457*** (0.0095)	0.1609*** (0.0266)	0.0322*** (0.0068)
Immigrant × YOM before 1964	-0.0134 (0.0105)	-0.0243 (0.0224)	-0.0138 (0.0120)	-0.0666 (0.0622)	-0.0098 (0.0086)	-0.0043 (0.0119)	-0.0067 (0.0216)	-0.0039 (0.0126)	-0.0175 (0.0569)	-0.0028 (0.0089)
Immigrant × YOM 1964-1973	-0.0002 (0.0070)	-0.0017 (0.0140)	-0.0010 (0.0084)	-0.0046 (0.0379)	-0.0007 (0.0059)	0.0151* (0.0092)	0.0247 (0.0151)	0.0156 (0.0100)	0.0630* (0.0373)	0.0109 (0.0070)
Immigrant × YOM 1974-1983	0.0041 (0.0082)	0.0032 (0.0149)	0.0019 (0.0091)	0.0086 (0.0400)	0.0014 (0.0064)	0.0078 (0.0088)	0.0149 (0.0149)	0.0092 (0.0095)	0.0383 (0.0378)	0.0065 (0.0067)
Constant	0.0312*** (0.0056)	-0.0744*** (0.0096)				0.0307*** (0.0056)	-0.0793*** (0.0100)			
R²/Wald statistic (χ^2)	0.135	1117.90				0.127	1057.88			

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. Weighted OLS and weighted Tobit using weights provided by the SOEP. Observations: Part A: 6,479, Part B: 39,383. Standard errors, which are reported in parentheses, are adjusted in order to take repeated observations of households into account. The regression further includes as control variables three age dummies, two education dummies, and a dummy variable for the employment status of the household head, permanent household income and permanent household income squared, household size, the presence of children below age of 5 and 15 years, and single parent households, interaction terms between the immigrant dummy and the above variables as well as year dummies.

32

	Savings			Savings and Remittances	
	(1) Natives vs. Permanent	(2) Natives vs. Temporary	(3) Temporary vs. Permanent	(4) Natives vs. Temporary	(5) Temporary vs. Permanent
Part A: 1993, 1995					
$\widehat{\Delta}^{Tobit}$	0.0252***	0.0205***	0.0047	-0.0134*	0.0394***
	(0.0078)	(0.0060)	(0.0092)	(0.0080)	(0.0104)
Explained Part	0.0066	0.0040	0.0025	-0.0131*	0.0167*
	(0.0073)	(0.0051)	(0.0073)	(0.0072)	(0.0090)
in % of $\widehat{\Delta}^{Tobit}$	0.2611	0.1974	0.5295	0.9756	0.4251*
	(0.2871)	(0.2795)	(5.3021)	(6.0556)	(0.2376)
Unexplained Part	0.0186***	0.0164**	0.0022	-0.0003	0.0226**
	(0.0064)	(0.0068)	(0.0093)	(0.0068)	(0.0106)
in % of $\widehat{\Delta}^{Tobit}$	0.7388***	0.8025***	0.4704	0.0243	0.5748**
	(0.2871)	(0.2795)	(5.3021)	(6.0556)	(0.2376)
σ_A	0.152	0.152	0.180	0.152	0.225
σ_B	0.176	0.180	0.176	0.225	0.177
Part B: 1996-2004					
$\widehat{\Delta}^{Tobit}$	0.0339***	0.0202***	0.0137***	-0.0410***	0.0749***
	(0.0024)	(0.0031)	(0.0033)	(0.0083)	(0.0095)
Explained Part	0.0198***	0.0057**	0.0110***	-0.0279**	0.0478***
	(0.0022)	(0.0028)	(0.0032)	(0.0113)	(0.0110)
in % of $\widehat{\Delta}^{Tobit}$	0.5837***	0.2860**	0.8051**	0.6807***	0.6379***
	(0.0560)	(0.1359)	(0.3346)	(0.1992)	(0.0906)
Unexplained Part	0.0141***	0.0144***	0.0026	-0.0130**	0.0271***
	(0.0022)	(0.0033)	(0.0040)	(0.0055)	(0.0058)
in % of $\widehat{\Delta}^{Tobit}$	0.4162***	0.7139***	0.1948	0.3192	0.3620***
	(0.0560)	(0.1359)	(0.3346)	(0.1992)	(0.0906)
σ_A	0.143	0.143	0.168	0.143	0.255
σ_B	0.146	0.168	0.146	0.255	0.146
Part C: 1993, 1995-2004					
$\widehat{\Delta}^{Tobit}$	0.0320***	0.0191***	0.0129***	-0.0355***	0.0676***
	(0.0025)	(0.0025)	(0.0032)	(0.0065)	(0.0080)
Explained Part	0.0175***	0.0045*	0.0111***	-0.0265***	0.0416***
	(0.0022)	(0.0024)	(0.0032)	(0.0091)	(0.0087)
in % of $\widehat{\Delta}^{Tobit}$	0.5464***	0.2381**	0.8622***	0.7473***	0.6152***
	(0.0589)	(0.1195)	(0.2740)	(0.1712)	(0.0792)
Unexplained Part	0.0145***	0.0145***	0.0017	-0.0089*	0.0260***
	(0.0022)	(0.0028)	(0.0035)	(0.0050)	(0.0048)
in % of $\widehat{\Delta}^{Tobit}$	0.4535***	0.7618***	0.1377	0.2526	0.3847***
	(0.0589)	(0.1195)	(0.2740)	(0.1712)	(0.0792)
σ_A	0.145	0.145	0.171	0.145	0.252
σ_B	0.151	0.171	0.151	0.252	0.151

Notes: Bootstrapped (100 replications) standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 4: Decomposition Analysis by Region of Origin, 1993, 1995-2004

	Savings			Savings and Remittances	
	(1) Natives vs. Permanent	(2) Natives vs. Temporary	(3) Temporary vs. Permanent	(4) Natives vs. Temporary	(5) Temporary vs. Permanent
OECD					
$\widehat{\Delta}^{Tobit}$	0.0202***	0.0124***	0.0077	-0.0297***	0.0501***
	(0.0039)	(0.0038)	(0.0048)	(0.0114)	(0.0138)
Explained Part	0.0104***	0.0073***	0.0007	-0.0266	0.0307*
	(0.0024)	(0.0028)	(0.0037)	(0.0175)	(0.0181)
in % of $\widehat{\Delta}^{Tobit}$	0.5166***	0.5909*	0.0963	0.8968**	0.6118***
	(0.1650)	(0.3350)	(4.1963)	(0.4130)	(0.2274)
Unexplained Part	0.0097***	0.0051	0.0070	-0.0030	0.0194***
	(0.0039)	(0.0040)	(0.0051)	(0.0084)	(0.0071)
in % of $\widehat{\Delta}^{Tobit}$	0.4833***	0.4090	0.9036	0.1031	0.3881*
	(0.1650)	(0.3350)	(4.1963)	(0.4130)	(0.2274)
σ_A	0.145	0.145	0.144	0.145	0.234
σ_B	0.135	0.144	0.135	0.234	0.135
CEE					
$\widehat{\Delta}^{Tobit}$	0.0274***	0.0056	0.0218***	-0.0956***	0.1231***
	(0.0042)	(0.0062)	(0.0081)	(0.0196)	(0.0189)
Explained Part	0.0188***	-0.0045	0.0219***	-0.0540***	0.0749***
	(0.0039)	(0.0052)	(0.0077)	(0.0192)	(0.0152)
in % of $\widehat{\Delta}^{Tobit}$	0.6853***	-0.8148	1.0068***	0.5651***	0.6082***
	(0.1336)	(8.8971)	(0.3867)	(0.1535)	(0.0982)
Unexplained Part	0.0086**	0.0101*	-0.0001	-0.0416***	0.0482***
	(0.0038)	(0.0062)	(0.0084)	(0.0123)	(0.0136)
in % of $\widehat{\Delta}^{Tobit}$	0.3146**	1.8148	-0.0068	0.4348***	0.3917***
	(0.1336)	(8.8971)	(0.3867)	(0.1535)	(0.0982)
σ_A	0.145	0.145	0.183	0.145	0.311
σ_B	0.144	0.183	0.144	0.311	0.145
Turkey					
$\widehat{\Delta}^{Tobit}$	0.0428***	0.0337***	0.0090*	-0.0057	0.0486***
	(0.0036)	(0.0038)	(0.0053)	(0.0062)	(0.0066)
Explained Part	0.0227***	0.0124***	0.0084	0.0052	0.0160**
	(0.0032)	(0.0043)	(0.0059)	(0.0057)	(0.0064)
in % of $\widehat{\Delta}^{Tobit}$	0.5304***	0.3690***	0.9342	-0.9041	0.3310***
	(0.0761)	(0.1269)	(2.8556)	(11.9488)	(0.1176)
Unexplained Part	0.0201***	0.0213***	0.0005	-0.0109**	0.0325***
	(0.0040)	(0.0051)	(0.0061)	(0.0050)	(0.0062)
in % of $\widehat{\Delta}^{Tobit}$	0.4695***	0.6309***	0.0657	1.9041	0.6689***
	(0.0761)	(0.1269)	(2.8556)	(11.9488)	(0.1176)
σ_A	0.145	0.145	0.179	0.145	0.197
σ_B	0.158	0.179	0.158	0.197	0.158

Notes: See Notes to Table 3.

Transfers from Relatives and Social Assistance: Natives and Immigrants above 64 Years − Probit Model, Mikrozensus 2003

	Transfers from Relatives		Social Assistance	
	(1a)	(1b)	(2a)	(2b)
	dF/dx	dF/dx	dF/dx	dF/dx
Age 65-70	0.0048**	0.0050**	0.0024**	0.0010
	(0.0019)	(0.0020)	(0.0012)	(0.0008)
Age 71-80	0.0018	0.0021	0.0005	-0.0005
	(0.0017)	(0.0017)	(0.0011)	(0.0009)
Married	-0.0032**	-0.0031**	-0.0027***	-0.0026***
	(0.0013)	(0.0013)	(0.0010)	(0.0009)
Female	0.0064***	0.0063***	0.0004	-0.0003
	(0.0013)	(0.0013)	(0.0006)	(0.0005)
Number of children in household	0.0009	0.0009	0.0006	0.0006
	(0.0010)	(0.0010)	(0.0009)	(0.0006)
High education	0.0023	0.0022	0.0001	0.0004
	(0.0025)	(0.0026)	(0.0012)	(0.0015)
University degree	-0.0010	-0.0012	0.0065*	0.0005
	(0.0019)	(0.0019)	(0.0035)	(0.0017)
Small city	0.0007	0.0006	-0.0023***	-0.0018***
	(0.0012)	(0.0011)	(0.0008)	(0.0006)
Big city	-0.0013	-0.0014	0.0024***	0.0017**
	(0.0011)	(0.0010)	(0.0009)	(0.0008)
Immigrant	0.0040	0.0239	0.1652***	0.1443**
	(0.0039)	(0.0217)	(0.0177)	(0.0701)
Immigrant ×				
Age 65-70		-0.0030		0.0050
		(0.0019)		(0.0057)
Age 71-80		-0.0034**		0.0070
		(0.0014)		(0.0075)
High education		0.0012		0.0009
		(0.0070)		(0.0027)
University degree		0.0020		0.0070
		(0.0079)		(0.0087)
Years since migration		-0.0003		-0.0001
		(0.0003)		(0.0002)
Years since migration$^2 \times 10^5$		0.5682		-0.1179
		(0.5099)		(0.3887)
Pseudo R^2	0.0528	0.0558	0.3786	0.4346

Notes: Robust standard errors in parenthesis. * significant at 10%; ** significant at 5%; *** significant at 1%. Number of observations: 17,354.

Appendix

<div align="center">TABLE 1: Definition of Variables</div>

Variable	Description
SOEP	
Savings (in Germany)	Monthly amount of savings (in real 2000 Euro) for larger purchases, emergencies or wealth accumulation.
No Savings	1 if respondent does not save money; 0 otherwise.
Savings Home Country	Immigrant: Average monthly amount of savings (in real 2000 Euro) in the home country (1993 and 1995).
Other Transfers to Home Country	Immigrant: Average monthly amount of other transfers (not including altruistic transfers) to the home country (1993 and 1995).
Savings in Home and Host Country	Savings (in Germany) + Savings of immigrants in their home country (1993 and 1995).
Savings and Remittances	Savings (in Germany) + Transfers of immigrants to their home country (1996-2004).
Savings Rate	Savings (in Germany)/Net Income.
Savings Rate Home Country	Immigrant: Savings Home Country/Net Income.
Rate of other Transfers	Immigrant: Other Transfers to Home Country/Net Income.
Savings Rate Home and Host Country	Savings in Home and Host Country/Net Income.
Savings and Remittances Rate	Savings and Remittances/Net Income.
Age 55-64	1 if age of respondent between 55 and 64 years; 0 otherwise.
Age 45-54	1 if age of respondent between 45 and 54 years; 0 otherwise.
Age 35-44	1 if age of respondent between 35 and 44 years; 0 otherwise.
Age 16-34	Reference group: 1 if age of respondent between 35 and 44 years; 0 otherwise.
Immigrant	1 if respondent immigrated to Germany since 1948; 0 otherwise.
Return Migration	Intended return migration: 1 if immigrant wishes to return to the country of origin; 0 otherwise.
YOM < 1964	1 if year of migration before 1964; 0 otherwise.
YOM 1964-1973	1 if year of migration between 1964 and 1973; 0 otherwise.
YOM 1974-1983	1 if year of migration between 1974 and 1983; 0 otherwise.
YOM 1984-2004	Reference group: 1 if year of migration between 1984 and 2004; 0 otherwise.
Upper Secondary	1 if respondent completed upper secondary degree; 0 otherwise.
College	1 if respondent completed college education (University/Technical College/Engeneering, Technical School (East)); 0 otherwise.
Net Income	Current monthly household net income (in real 2000 Euro).
Permanent Income	Average monthly household net income (in real 2000 Euro) over the last five years.
Owner of House	1 if respondent owns house or apartment; 0 otherwise.
Children below 5 Years	1 if children below 5 years in household; 0 otherwise.
Children below 15 Years	1 if children below 15 years in household; 0 otherwise.
Household Size	Number of persons in household.
Employed	1 if respondent currently works full-time or part-time; 0 otherwise.
Single Parent Household	1 if respondent is not married and number of children in household > 0; 0 otherwise.
Mikrozensus	
Transfers from Relatives	1 if individual receives transfers from relatives; 0 otherwise.
Social Assistance	1 if individual receives social assistance; 0 otherwise.
Married	1 if individual is married; 0 otherwise.
Residing in East Germany	1 if household resides in East Germany; 0 otherwise.
Age	Age of individual in years (above 54 years).
Female	1 if individual is female; 0 otherwise.
High Education	1 if individual has a high schooling degree (Hochschul- or Fachhochschulreife); 0 otherwise.
(Technical) University Degree	1 if individual has (technical) university degree; 0 otherwise.
Inhabitant of a Small City	1 if individual lives in a city with less than 20,000 inhabitants; 0 otherwise.
Inhabitant of a Big City	1 if individual lives in a city with more than 100,000 inhabitants; 0 otherwise.
Immigrant	1 if individual has foreign nationality and was born outside Germany; 0 otherwise.

TABLE 2: **Descriptive Statistics**

Variable	Natives Mean	S.E.	Immigrants Mean	S.E.	Permanent Migrants Mean	S.E.	Temporary Migrants Mean	S.E.
1993, 1995								
Age	43.461	0.241	45.982	0.437	45.684	0.695	46.224	0.555
Upper School	0.187	0.008	0.007	0.002	0.008	0.003	0.007	0.003
College	0.165	0.007	0.041	0.009	0.041	0.012	0.041	0.012
Single Parent Household	0.059	0.004	0.039	0.008	0.038	0.013	0.040	0.010
Children below 5 Years	0.114	0.006	0.175	0.015	0.196	0.026	0.158	0.018
Children below 15 Years	0.273	0.008	0.436	0.020	0.444	0.031	0.430	0.026
Household Size	2.381	0.023	3.232	0.064	3.146	0.095	3.303	0.086
Employed	0.736	0.009	0.742	0.018	0.740	0.028	0.744	0.023
Net Income	2224.135	29.250	1911.937	34.852	1840.978	50.881	1969.581	47.467
Permanent Income	2117.011	21.001	1918.633	30.224	1842.543	46.770	1980.444	39.125
YOM < 1964			0.552	0.020	0.154	0.020	0.115	0.014
YOM 1964-1973			0.133	0.012	0.673	0.029	0.674	0.024
YOM 1974-1983			0.674	0.019	0.138	0.023	0.189	0.021
Return Migration			0.166	0.015				
Observations	5111		1368		623		745	
1996-2004								
Age	44.018	0.100	45.572	0.258	44.684	0.335	47.149	0.392
Upper School	0.223	0.004	0.061	0.006	0.060	0.008	0.063	0.011
College	0.194	0.003	0.184	0.009	0.190	0.012	0.174	0.016
Single Parent Household	0.071	0.002	0.052	0.005	0.058	0.006	0.042	0.006
Children below 5 Years	0.112	0.003	0.169	0.009	0.181	0.011	0.149	0.012
Children below 15 Years	0.271	0.003	0.420	0.011	0.458	0.015	0.353	0.017
Household Size	2.338	0.010	3.189	0.036	3.203	0.045	3.165	0.059
Employed	0.712	0.004	0.652	0.011	0.649	0.014	0.657	0.017
Net Income	2252.574	10.700	1983.018	24.320	1925.432	28.333	2085.260	44.812
Permanent Income	2180.608	9.754	1958.407	21.903	1898.175	25.367	2065.348	40.767
YOM < 1964			0.360	0.011	0.090	0.008	0.096	0.010
YOM 1964-1973			0.092	0.006	0.351	0.013	0.509	0.018
YOM 1974-1983			0.408	0.011	0.238	0.013	0.164	0.013
Return Migration			0.211	0.010				
Observations	34053		5330		3315		2015	

The following Tables are not intended to be published.

TABLE 3: **Estimates for Decomposition Analysis: German Natives and Permanent Migrants – 1993, 1995**

| | Natives | | | | | Permanent Migrants | | | | |
| | (1) OLS | (2) Tobit | (2a) Uncond. Exp. | (2b) Prob. Uncens. | (2c) Cond. Uncens. | (3) OLS | (4) Tobit | (4a) Uncond. Exp. | (4b) Prob. Uncens. | (4c) Cond. Uncens. |
			Marginal Effects					Marginal Effects		
Age 35-44	-0.0251***	-0.0402***	-0.0244***	-0.1019***	-0.0172***	-0.0467**	-0.0919**	-0.0344***	-0.1960**	-0.0276**
	(0.0063)	(0.0102)	(0.0058)	(0.0260)	(0.0041)	(0.0215)	(0.0418)	(0.0129)	(0.0830)	(0.0112)
Age 45-54	-0.0289***	-0.0424***	-0.0256***	-0.1075***	-0.0180***	-0.0211	-0.0463	-0.0195	-0.1028	-0.0150
	(0.0070)	(0.0108)	(0.0061)	(0.0278)	(0.0044)	(0.0320)	(0.0527)	(0.0212)	(0.1181)	(0.0165)
Age 55-64	0.0004	0.0024	0.0015	0.0059	0.0011	-0.0126	-0.0130	-0.0056	-0.0291	-0.0042
	(0.0089)	(0.0124)	(0.0079)	(0.0306)	(0.0055)	(0.0227)	(0.0401)	(0.0169)	(0.0891)	(0.0129)
Upper Secondary	-0.0032	0.0019	0.0012	0.0048	0.0009	0.0041	0.0433	0.0210	0.0981	0.0154
	(0.0087)	(0.0132)	(0.0084)	(0.0328)	(0.0059)	(0.0163)	(0.0410)	(0.0217)	(0.0936)	(0.0156)
College	0.0055	-0.0028	-0.0018	-0.0070	-0.0012	-0.0119	0.0094	0.0042	0.0211	0.0031
	(0.0095)	(0.0141)	(0.0089)	(0.0350)	(0.0062)	(0.0235)	(0.0447)	(0.0204)	(0.1012)	(0.0152)
Permanent Income/1000	0.0352***	0.0719***	0.0456***	0.1785***	0.0320***	-0.0092	0.0502	0.0220	0.1126	0.0166
	(0.0087)	(0.0117)	(0.0074)	(0.0300)	(0.0052)	(0.0306)	(0.0656)	(0.0286)	(0.1489)	(0.0216)
Permanent Income^2/1000	-0.0005	-0.0036*	-0.0023*	-0.0090*	-0.0016*	0.0038	-0.0044	-0.0019	-0.0098	-0.0014
	(0.0015)	(0.0019)	(0.0012)	(0.0047)	(0.0008)	(0.0065)	(0.0134)	(0.0059)	(0.0302)	(0.0044)
Children below 5 Years	0.0086	0.0123	0.0079	0.0301	0.0056	-0.0085	-0.0054	-0.0023	-0.0120	-0.0018
	(0.0070)	(0.0113)	(0.0074)	(0.0272)	(0.0052)	(0.0200)	(0.0424)	(0.0182)	(0.0952)	(0.0139)
Children below 15 Years	-0.0028	-0.0031	-0.0019	-0.0076	-0.0014	-0.0270	-0.0538	-0.0231	-0.1198	-0.0176
	(0.0068)	(0.0108)	(0.0068)	(0.0269)	(0.0048)	(0.0210)	(0.0422)	(0.0176)	(0.0907)	(0.0135)
Household Size	-0.0139***	-0.0192***	-0.0122***	-0.0476***	-0.0085***	-0.0047	-0.0073	-0.0032	-0.0163	-0.0024
	(0.0030)	(0.0045)	(0.0029)	(0.0114)	(0.0020)	(0.0108)	(0.0175)	(0.0077)	(0.0390)	(0.0058)
Employed	0.0181***	0.0439***	0.0267***	0.1109***	0.0188***	0.0749***	0.1992***	0.0690***	0.3971***	0.0574***
	(0.0062)	(0.0098)	(0.0056)	(0.0247)	(0.0040)	(0.0162)	(0.0388)	(0.0117)	(0.0536)	(0.0101)
Single Parent Household	-0.0267***	-0.0654***	-0.0366***	-0.1689***	-0.0261***	-0.0007	-0.0172	-0.0072	-0.0383	-0.0055
	(0.0077)	(0.0162)	(0.0078)	(0.0424)	(0.0057)	(0.0129)	(0.0469)	(0.0189)	(0.1030)	(0.0147)
Constant	0.0518***	-0.0484***				0.0619*	-0.1679***			
	(0.0102)	(0.0164)				(0.0362)	(0.0620)			
R^2	0.106					0.125				
Observations	5393	5393	5393	5393	5393	690	690	690	690	690

Notes: * significant at 10%; ** significant at 5%; *** significant at 1%. Weighted OLS and weighted Tobit using weights provided by the SOEP. Standard errors, which are reported in parentheses, are adjusted in order to take repeated observations of households into account. The regression further includes a year dummy.

TABLE 4: **Estimates for Decomposition Analysis: Temporary Migrants − 1993, 1995**

	Savings Rate					Savings Rate including Remittances				
	(1) OLS	(2) Tobit	(2a) Marginal Effects	(2b) Marginal Effects	(2c) Marginal Effects	(3) OLS	(4) Tobit	(4a) Marginal Effects	(4b) Marginal Effects	(4c) Marginal Effects
			Uncond. Exp.	Prob. Uncens.	Cond. Uncens.			Uncond. Exp.	Prob. Uncens.	Cond. Uncens.
Age 35-44	-0.0164	-0.0078	-0.0036	-0.0173	-0.0027	-0.0279	-0.0254	-0.0130	-0.0450	-0.0094
	(0.0184)	(0.0398)	(0.0182)	(0.0878)	(0.0136)	(0.0274)	(0.0462)	(0.0231)	(0.0823)	(0.0168)
Age 45-54	-0.0090	0.0021	0.0010	0.0046	0.0007	-0.0031	0.0104	0.0055	0.0184	0.0039
	(0.0224)	(0.0418)	(0.0196)	(0.0923)	(0.0145)	(0.0340)	(0.0516)	(0.0273)	(0.0909)	(0.0196)
Age 55-64	-0.0015	0.0321	0.0156	0.0711	0.0114	-0.0312	-0.0193	-0.0100	-0.0342	-0.0072
	(0.0201)	(0.0413)	(0.0208)	(0.0910)	(0.0151)	(0.0305)	(0.0499)	(0.0254)	(0.0887)	(0.0184)
Upper Secondary	-0.0062	0.0065	0.0031	0.0143	0.0023	-0.0451	-0.0520	-0.0250	-0.0920	-0.0183
	(0.0340)	(0.0891)	(0.0428)	(0.1971)	(0.0315)	(0.0348)	(0.1042)	(0.0453)	(0.1823)	(0.0343)
College	-0.0404**	-0.0903*	-0.0342**	-0.1889**	-0.0273**	-0.0540**	-0.1229**	-0.0525**	-0.2117**	-0.0401**
	(0.0200)	(0.0502)	(0.0150)	(0.0935)	(0.0132)	(0.0237)	(0.0614)	(0.0204)	(0.0963)	(0.0172)
Permanent Income/1000	0.0347	0.1220**	0.0570**	0.2694**	0.0422**	0.1056***	0.2393***	0.1257***	0.4237***	0.0903***
	(0.0260)	(0.0568)	(0.0258)	(0.1251)	(0.0192)	(0.0350)	(0.0734)	(0.0364)	(0.1204)	(0.0264)
Permanent Income^2/1000	-0.0011	-0.0098	-0.0046	-0.0217	-0.0034	-0.0114*	-0.0277**	-0.0145**	-0.0490**	-0.0105**
	(0.0054)	(0.0108)	(0.0050)	(0.0240)	(0.0037)	(0.0066)	(0.0133)	(0.0068)	(0.0226)	(0.0049)
Children below 5 Years	0.0174	0.0623*	0.0319	0.1374*	0.0231	0.0282	0.0828*	0.0474	0.1436*	0.0336
	(0.0155)	(0.0367)	(0.0206)	(0.0792)	(0.0146)	(0.0328)	(0.0496)	(0.0301)	(0.0805)	(0.0213)
Children below 15 Years	-0.0102	-0.0123	-0.0057	-0.0272	-0.0042	0.0152	0.0165	0.0087	0.0293	0.0063
	(0.0127)	(0.0295)	(0.0137)	(0.0651)	(0.0102)	(0.0222)	(0.0371)	(0.0196)	(0.0647)	(0.0141)
Household Size	-0.0159***	-0.0352***	-0.0164***	-0.0777***	-0.0122***	-0.0263***	-0.0468***	-0.0246***	-0.0828***	-0.0176***
	(0.0058)	(0.0118)	(0.0055)	(0.0242)	(0.0040)	(0.0084)	(0.0147)	(0.0076)	(0.0232)	(0.0055)
Employed	0.0497***	0.1196***	0.0482***	0.2525***	0.0376***	0.0215	0.0596*	0.0297*	0.1054*	0.0216*
	(0.0094)	(0.0241)	(0.0089)	(0.0478)	(0.0071)	(0.0187)	(0.0337)	(0.0160)	(0.0609)	(0.0118)
Single Parent Household	-0.0246	-0.0450	-0.0190	-0.0976	-0.0145	-0.0579**	-0.0973	-0.0434*	-0.1697*	-0.0327*
	(0.0149)	(0.0485)	(0.0184)	(0.1019)	(0.0146)	(0.0227)	(0.0600)	(0.0222)	(0.0978)	(0.0179)
Constant	0.0336	-0.1929**				0.0302	-0.2164**			
	(0.0336)	(0.0757)				(0.0407)	(0.0938)			
R^2	0.117					0.092				
Observations	811	811	811	811	811	822	822	822	822	822

Notes: See Notes to Appendix-Table 3.

TABLE 5: Estimates for Decomposition Analysis: German Natives and Permanent Migrants – 1996-2004

| | Natives | | | | | Permanent Migrants | | | | |
| | | | Marginal Effects | | | | | Marginal Effects | | |
	(1) OLS	(2) Tobit	(2a) Uncond. Exp.	(2b) Prob. Uncens.	(2c) Cond. Uncens.	(3) OLS	(4) Tobit	(4a) Uncond. Exp.	(4b) Prob. Uncens.	(4c) Cond. Uncens.
Age 35-44	-0.0125***	-0.0205***	-0.0123***	-0.0553***	-0.0087***	-0.0098	-0.0324*	-0.0117*	-0.0832*	-0.0095*
	(0.0033)	(0.0054)	(0.0032)	(0.0148)	(0.0022)	(0.0080)	(0.0174)	(0.0060)	(0.0427)	(0.0050)
Age 45-54	-0.0215***	-0.0343***	-0.0201***	-0.0928***	-0.0142***	-0.0217**	-0.0582**	-0.0199***	-0.1459***	-0.0166***
	(0.0049)	(0.0076)	(0.0042)	(0.0211)	(0.0030)	(0.0106)	(0.0234)	(0.0072)	(0.0543)	(0.0063)
Age 55-64	0.0027	0.0062	0.0038	0.0165	0.0027	-0.0024	-0.0183	-0.0067	-0.0474	-0.0054
	(0.0042)	(0.0063)	(0.0040)	(0.0168)	(0.0028)	(0.0123)	(0.0235)	(0.0084)	(0.0596)	(0.0068)
Upper Secondary	0.0002	0.0033	0.0020	0.0087	0.0014	0.0148	0.0254	0.0104	0.0678	0.0081
	(0.0053)	(0.0081)	(0.0050)	(0.0217)	(0.0035)	(0.0140)	(0.0241)	(0.0106)	(0.0658)	(0.0080)
College	0.0159**	0.0153*	0.0096*	0.0404*	0.0067*	0.0277**	0.0482***	0.0202**	0.1289***	0.0155***
	(0.0062)	(0.0090)	(0.0057)	(0.0235)	(0.0040)	(0.0110)	(0.0173)	(0.0079)	(0.0454)	(0.0059)
Permanent Income/1000	0.0412***	0.0799***	0.0490***	0.2132***	0.0344***	0.0518***	0.1729***	0.0657***	0.4522***	0.0522***
	(0.0039)	(0.0068)	(0.0042)	(0.0186)	(0.0029)	(0.0127)	(0.0219)	(0.0080)	(0.0555)	(0.0064)
Permanent Income^2/1000	-0.0020***	-0.0053***	-0.0033***	-0.0143***	-0.0023***	-0.0033	-0.0172***	-0.0065***	-0.0450***	-0.0052***
	(0.0006)	(0.0010)	(0.0006)	(0.0027)	(0.0004)	(0.0026)	(0.0036)	(0.0013)	(0.0091)	(0.0011)
Children below 5 Years	0.0090**	0.0133**	0.0083*	0.0350**	0.0058*	-0.0031	-0.0051	-0.0019	-0.0134	-0.0015
	(0.0038)	(0.0067)	(0.0043)	(0.0174)	(0.0030)	(0.0071)	(0.0167)	(0.0062)	(0.0432)	(0.0050)
Children below 15 Years	-0.0065*	-0.0090	-0.0055	-0.0241	-0.0038	0.0006	0.0067	0.0025	0.0174	0.0020
	(0.0039)	(0.0064)	(0.0038)	(0.0172)	(0.0027)	(0.0069)	(0.0155)	(0.0059)	(0.0406)	(0.0047)
Household Size	-0.0165***	-0.0232***	-0.0142***	-0.0618***	-0.0100***	-0.0104***	-0.0267***	-0.0102***	-0.0699***	-0.0081***
	(0.0019)	(0.0029)	(0.0018)	(0.0076)	(0.0013)	(0.0031)	(0.0068)	(0.0026)	(0.0177)	(0.0021)
Employed	0.0200***	0.0470***	0.0276***	0.1270***	0.0195***	0.0199***	0.0647***	0.0230***	0.1642***	0.0188***
	(0.0032)	(0.0051)	(0.0028)	(0.0136)	(0.0020)	(0.0054)	(0.0139)	(0.0045)	(0.0343)	(0.0038)
Single Parent Household	-0.0217***	-0.0599***	-0.0325***	-0.1646***	-0.0233***	-0.0138**	-0.0352*	-0.0120**	-0.0885*	-0.0100*
	(0.0033)	(0.0075)	(0.0035)	(0.0204)	(0.0026)	(0.0055)	(0.0198)	(0.0061)	(0.0472)	(0.0053)
Constant	0.0297***	-0.0779***				-0.0179	-0.2505***			
	(0.0053)	(0.0091)				(0.0195)	(0.0457)			
R^2	0.126					0.201				
Observations	37007	37007	37007	37007	37007	3962	3962	3962	3962	3962

Notes: See Notes to Appendix-Table 3. The regression includes eight year dummies.

TABLE 6: **Estimates for Decomposition Analysis: Temporary Migrants − 1996-2004**

| | Savings Rate | | | | | Savings Rate including Remittances | | | | |
| | | | Marginal Effects | | | | | Marginal Effects | | |
	(1) OLS	(2) Tobit	(2a) Uncond. Exp.	(2b) Prob. Uncens.	(2c) Cond. Uncens.	(3) OLS	(4) Tobit	(4a) Uncond. Exp.	(4b) Prob. Uncens.	(4c) Cond. Uncens.
Age 35-44	-0.0375** (0.0146)	-0.0867*** (0.0258)	-0.0344*** (0.0088)	-0.1972*** (0.0533)	-0.0270*** (0.0073)	-0.0256 (0.0219)	-0.0750** (0.0345)	-0.0386*** (0.0160)	-0.1168** (0.0531)	-0.0279** (0.0119)
Age 45-54	-0.0229 (0.0160)	-0.0411 (0.0265)	-0.0110 (0.0110)	-0.0964 (0.0600)	-0.0136 (0.0085)	0.0185 (0.0355)	0.0155 (0.0469)	0.0086 (0.0263)	0.0240 (0.0721)	0.0061 (0.0187)
Age 55-64	-0.0281* (0.0144)	-0.0522** (0.0247)	-0.0225** (0.0100)	-0.1221** (0.0544)	-0.0171** (0.0078)	0.0108 (0.0274)	0.0049 (0.0381)	0.0027 (0.0211)	0.0075 (0.0590)	0.0019 (0.0150)
Upper Secondary	0.0397** (0.0194)	0.0816*** (0.0299)	0.0437** (0.0185)	0.1917*** (0.0675)	0.0314** (0.0130)	0.0144 (0.0307)	0.0312 (0.0445)	0.0177 (0.0264)	0.0480 (0.0690)	0.0126 (0.0186)
College	0.0352** (0.0152)	0.0553** (0.0240)	0.0275** (0.0132)	0.1311** (0.0573)	0.0201** (0.0094)	0.0344* (0.0193)	0.0544* (0.0279)	0.0313* (0.0167)	0.0835** (0.0421)	0.0221* (0.0118)
Permanent Income/1000	0.0482*** (0.0140)	0.1367*** (0.0251)	0.0625*** (0.0109)	0.3236*** (0.0565)	0.0466*** (0.0082)	0.0557** (0.0236)	0.1635*** (0.0361)	0.0898*** (0.0180)	0.2538*** (0.0577)	0.0640*** (0.0130)
Permanent Income^2/1000	-0.0033 (0.0021)	-0.0122*** (0.0034)	-0.0056*** (0.0015)	-0.0288*** (0.0078)	-0.0041*** (0.0011)	-0.0054* (0.0030)	-0.0169*** (0.0046)	-0.0093*** (0.0024)	-0.0262*** (0.0073)	-0.0066*** (0.0017)
Children below 5 Years	0.0180 (0.0116)	0.0547*** (0.0264)	0.0276* (0.0146)	0.1297** (0.0630)	0.0200* (0.0104)	0.0446** (0.0179)	0.0973*** (0.0356)	0.0586*** (0.0228)	0.1463*** (0.0486)	0.0414*** (0.0160)
Children below 15 Years	-0.0155 (0.0125)	-0.0241 (0.0231)	-0.0108 (0.0102)	-0.0568 (0.0539)	-0.0081 (0.0077)	-0.0090 (0.0175)	-0.0186 (0.0286)	-0.0101 (0.0155)	-0.0289 (0.0450)	-0.0072 (0.0111)
Household Size	-0.0120** (0.0047)	-0.0268*** (0.0087)	-0.0122*** (0.0039)	-0.0633*** (0.0204)	-0.0091*** (0.0029)	-0.0346*** (0.0090)	-0.0620*** (0.0154)	-0.0340*** (0.0080)	-0.0962*** (0.0208)	-0.0242*** (0.0058)
Employed	0.0320*** (0.0080)	0.0804*** (0.0178)	0.0342*** (0.0072)	0.1863*** (0.0402)	0.0262*** (0.0056)	0.0529*** (0.0196)	0.0999*** (0.0313)	0.0523*** (0.0156)	0.1551*** (0.0445)	0.0377*** (0.0114)
Single Parent Household	-0.0155 (0.0121)	-0.0568** (0.0269)	-0.0226** (0.0093)	-0.1301** (0.0588)	-0.0177** (0.0077)	-0.0449** (0.0183)	-0.0933*** (0.0334)	-0.0451*** (0.0143)	-0.1450*** (0.0487)	-0.0331*** (0.0109)
Constant	0.0108 (0.0182)	-0.1843*** (0.0411)				0.0533* (0.0282)	-0.1527*** (0.0548)			
R^2	0.180					0.110				
Observations	2338	2338	2338	2338	2338	2361	2361	2361	2361	2361

Notes: See Notes to Appendix-Table 5.

TABLE 7: **Determinants of the Savings Rate – Natives and Immigrants, 1993, 1995**

| | Savings Rate | | | | | Savings Rate including Remittances | | | | |
	(1) OLS	(2) Tobit	(2a) Marginal Effects Uncond. Exp.	(2b) Marginal Effects Prob. Uncens.	(2c) Marginal Effects Cond. Uncens.	(3) OLS	(4) Tobit	(4a) Marginal Effects Uncond. Exp.	(4b) Marginal Effects Prob. Uncens.	(4c) Marginal Effects Cond. Uncens.
Age 35-44	-0.0223***	-0.0360***	-0.0216***	-0.0913***	-0.0152***	-0.0223***	-0.0362***	-0.0217***	-0.0905***	-0.0153***
	(0.0064)	(0.0104)	(0.0059)	(0.0265)	(0.0042)	(0.0064)	(0.0104)	(0.0060)	(0.0263)	(0.0042)
Age 45-54	-0.0264***	-0.0400***	-0.0239***	-0.1017***	-0.0168***	-0.0264***	-0.0402***	-0.0241***	-0.1007***	-0.0170***
	(0.0072)	(0.0111)	(0.0063)	(0.0284)	(0.0044)	(0.0072)	(0.0111)	(0.0063)	(0.0282)	(0.0045)
Age 55-64	0.0035	0.0056	0.0035	0.0140	0.0025	0.0035	0.0057	0.0036	0.0141	0.0025
	(0.0090)	(0.0126)	(0.0080)	(0.0312)	(0.0056)	(0.0090)	(0.0127)	(0.0080)	(0.0309)	(0.0056)
Upper Secondary	-0.0050	-0.0012	-0.0008	-0.0031	-0.0005	-0.0051	-0.0012	-0.0007	-0.0029	-0.0005
	(0.0090)	(0.0134)	(0.0084)	(0.0336)	(0.0059)	(0.0090)	(0.0135)	(0.0084)	(0.0333)	(0.0059)
College	0.0063	-0.0011	-0.0007	-0.0027	-0.0005	0.0064	-0.0012	-0.0007	-0.0029	-0.0005
	(0.0099)	(0.0145)	(0.0090)	(0.0363)	(0.0063)	(0.0099)	(0.0146)	(0.0091)	(0.0360)	(0.0064)
Permanent Income/1000	0.0349***	0.0719***	0.0449***	0.1798***	0.0315***	0.0349***	0.0725***	0.0454***	0.1785***	0.0319***
	(0.0089)	(0.0119)	(0.0075)	(0.0307)	(0.0052)	(0.0089)	(0.0120)	(0.0075)	(0.0304)	(0.0053)
Permanent Income^2/1000	-0.0004	-0.0036*	-0.0023*	-0.0091*	-0.0016*	-0.0004	-0.0037*	-0.0023*	-0.0090*	-0.0016*
	(0.0015)	(0.0019)	(0.0012)	(0.0047)	(0.0008)	(0.0015)	(0.0019)	(0.0012)	(0.0047)	(0.0008)
Children below 5 Years	0.0097	0.0131	0.0083	0.0324	0.0059	0.0096	0.0131	0.0083	0.0318	0.0058
	(0.0071)	(0.0114)	(0.0074)	(0.0279)	(0.0052)	(0.0071)	(0.0115)	(0.0075)	(0.0277)	(0.0053)
Children below 15 Years	-0.0026	-0.0036	-0.0022	-0.0090	-0.0016	-0.0026	-0.0036	-0.0023	-0.0089	-0.0016
	(0.0070)	(0.0110)	(0.0068)	(0.0275)	(0.0048)	(0.0070)	(0.0110)	(0.0069)	(0.0273)	(0.0048)
Household Size	-0.0139***	-0.0190***	-0.0119***	-0.0474***	-0.0083***	-0.0139***	-0.0190***	-0.0119***	-0.0469***	-0.0084***
	(0.0031)	(0.0046)	(0.0029)	(0.0116)	(0.0020)	(0.0031)	(0.0046)	(0.0029)	(0.0115)	(0.0021)
Employed	0.0175***	0.0423***	0.0253***	0.1074***	0.0179***	0.0175***	0.0428***	0.0257***	0.1069***	0.0181***
	(0.0064)	(0.0100)	(0.0057)	(0.0251)	(0.0040)	(0.0064)	(0.0100)	(0.0057)	(0.0249)	(0.0040)
Single Parent Household	-0.0280***	-0.0688***	-0.0376***	-0.1779***	-0.0269***	-0.0279***	-0.0693***	-0.0380***	-0.1767***	-0.0271***
	(0.0078)	(0.0165)	(0.0076)	(0.0428)	(0.0057)	(0.0078)	(0.0166)	(0.0077)	(0.0426)	(0.0057)
Immigrant	-0.0347	-0.1504**	-0.0687***	-0.3774***	-0.0518***	-0.0663**	-0.1789***	-0.0771***	-0.4321***	-0.0593***
	(0.0255)	(0.0636)	(0.0189)	(0.1397)	(0.0169)	(0.0285)	(0.0638)	(0.0161)	(0.1249)	(0.0156)
Immigrant × Return($t-1$)	0.0118	0.0142	0.0091	0.0349	0.0064	0.0261**	0.0395**	0.0265**	0.0925**	0.0186**
	(0.0101)	(0.0175)	(0.0115)	(0.0423)	(0.0081)	(0.0112)	(0.0177)	(0.0127)	(0.0393)	(0.0089)

TABLE 7 CONTINUED: **Determinants of the Savings Rate – Natives and Immigrants, 1993, 1995**

| | Savings Rate | | | | | Savings Rate including Remittances | | | | |
| | (1) OLS | (2) Tobit | (2a) Uncond. Exp. | (2b) Prob. Uncens. | (2c) Cond. Uncens. | (3) OLS | (4) Tobit | (4a) Uncond. Exp. | (4b) Prob. Uncens. | (4c) Cond. Uncens. |
			Marginal Effects					Marginal Effects		
Immigrant × Age 35-44	0.0013	0.0133	0.0085	0.0327	0.0060	-0.0006	0.0100	0.0064	0.0244	0.0045
	(0.0175)	(0.0324)	(0.0213)	(0.0785)	(0.0149)	(0.0216)	(0.0339)	(0.0220)	(0.0815)	(0.0154)
Immigrant × Age 45-54	0.0174	0.0373	0.0249	0.0890	0.0175	0.0231	0.0434	0.0293	0.1011	0.0206
	(0.0218)	(0.0373)	(0.0265)	(0.0842)	(0.0187)	(0.0268)	(0.0400)	(0.0289)	(0.0871)	(0.0204)
Immigrant × Age 55-64	-0.0070	0.0151	0.0097	0.0371	0.0068	-0.0187	-0.0082	-0.0051	-0.0204	-0.0036
	(0.0208)	(0.0364)	(0.0240)	(0.0878)	(0.0168)	(0.0250)	(0.0387)	(0.0234)	(0.0967)	(0.0165)
Immigrant × Upper Secondary	0.0089	0.0223	0.0145	0.0543	0.0102	-0.0008	-0.0001	-0.0000	-0.0002	-0.0000
	(0.0251)	(0.0553)	(0.0376)	(0.1305)	(0.0264)	(0.0271)	(0.0555)	(0.0347)	(0.1366)	(0.0244)
Immigrant × College	-0.0286	-0.0290	-0.0170	-0.0742	-0.0120	-0.0407**	-0.0439	-0.0251	-0.1116	-0.0178
	(0.0190)	(0.0330)	(0.0182)	(0.0859)	(0.0129)	(0.0193)	(0.0341)	(0.0175)	(0.0880)	(0.0126)
Immigrant × Permanent Income/1000	-0.0141	0.0141	0.0088	0.0352	0.0062	0.0285	0.0685	0.0428	0.1685	0.0301
	(0.0220)	(0.0421)	(0.0263)	(0.1050)	(0.0184)	(0.0263)	(0.0453)	(0.0283)	(0.1110)	(0.0199)
Immigrant × Permanent Income²/1000	0.0008	-0.0033	-0.0021	-0.0083	-0.0015	-0.0056	-0.0123	-0.0077	-0.0303	-0.0054
	(0.0044)	(0.0081)	(0.0050)	(0.0201)	(0.0035)	(0.0051)	(0.0085)	(0.0053)	(0.0209)	(0.0037)
Immigrant × Children below 5 Years	-0.0065	0.0099	0.0063	0.0246	0.0044	-0.0025	0.0140	0.0090	0.0339	0.0063
	(0.0143)	(0.0288)	(0.0186)	(0.0703)	(0.0131)	(0.0237)	(0.0352)	(0.0232)	(0.0839)	(0.0163)
Immigrant × Children below 15 Years	-0.0170	-0.0307	-0.0180	-0.0785	-0.0127	-0.0066	-0.0180	-0.0109	-0.0451	-0.0077
	(0.0144)	(0.0272)	(0.0150)	(0.0708)	(0.0107)	(0.0176)	(0.0289)	(0.0168)	(0.0731)	(0.0119)
Immigrant × Household Size	0.0018	-0.0034	-0.0021	-0.0085	-0.0015	-0.0029	-0.0061	-0.0038	-0.0151	-0.0027
	(0.0069)	(0.0117)	(0.0073)	(0.0292)	(0.0051)	(0.0082)	(0.0126)	(0.0079)	(0.0310)	(0.0055)
Immigrant × Employed	0.0386***	0.0889***	0.0637***	0.1953***	0.0453***	0.0233	0.0492**	0.0334*	0.1140**	0.0235*
	(0.0108)	(0.0212)	(0.0170)	(0.0389)	(0.0125)	(0.0145)	(0.0249)	(0.0182)	(0.0537)	(0.0129)
Immigrant × Single Parent Household	0.0145	0.0497	0.0340	0.1161	0.0239	-0.0037	0.0255	0.0167	0.0609	0.0117
	(0.0141)	(0.0353)	(0.0261)	(0.0756)	(0.0186)	(0.0178)	(0.0390)	(0.0267)	(0.0898)	(0.0188)
Immigrant × YOM before 1964	0.0112	0.0342	0.0227	0.0818	0.0160	0.0257	0.0578	0.0400	0.1311	0.0282
	(0.0207)	(0.0552)	(0.0389)	(0.1255)	(0.0274)	(0.0226)	(0.0535)	(0.0404)	(0.1093)	(0.0288)
Immigrant × YOM 1964-1973	0.0194	0.0360	0.0239	0.0863	0.0168	0.0299	0.0524	0.0357	0.1208	0.0252
	(0.0187)	(0.0522)	(0.0367)	(0.1187)	(0.0258)	(0.0203)	(0.0507)	(0.0373)	(0.1074)	(0.0265)
Immigrant × YOM 1974-1983	0.0351*	0.0693	0.0488	0.1564	0.0345	0.0652***	0.1133**	0.0846**	0.2300***	0.0609*
	(0.0190)	(0.0515)	(0.0400)	(0.1009)	(0.0289)	(0.0215)	(0.0500)	(0.0425)	(0.0752)	(0.0321)
Constant	0.0509***	-0.0496***				0.0510***	-0.0512***			
	(0.0103)	(0.0164)				(0.0103)	(0.0165)			
R²/Wald statistic (χ²)	0.110	369.10				0.106	340.15			

Notes: See notes to Appendix-Table 3. Number of Observations: 6,479.

TABLE 8: **Determinants of the Savings Rate – Natives and Immigrants, 1996-2004**

| | Savings Rate | | | | | Savings Rate including Remittances | | | | |
	(1) OLS	(2) Tobit	(2a) Marginal Effects Uncond. Exp.	(2b) Prob. Uncens.	(2c) Cond. Uncens.	(3) OLS	(4) Tobit	(4a) Marginal Effects Uncond. Exp.	(4b) Prob. Uncens.	(4c) Cond. Uncens.
Age 35-44	-0.0122***	-0.0196***	-0.0116***	-0.0533***	-0.0082***	-0.0120***	-0.0197***	-0.0116***	-0.0518***	-0.0082***
	(0.0034)	(0.0056)	(0.0032)	(0.0153)	(0.0023)	(0.0034)	(0.0057)	(0.0033)	(0.0150)	(0.0023)
Age 45-54	-0.0217***	-0.0340***	-0.0196***	-0.0927***	-0.0139***	-0.0216***	-0.0344***	-0.0198***	-0.0909***	-0.0140***
	(0.0052)	(0.0079)	(0.0043)	(0.0221)	(0.0031)	(0.0052)	(0.0080)	(0.0044)	(0.0216)	(0.0031)
Age 55-64	0.0027	0.0061	0.0037	0.0165	0.0026	0.0027	0.0062	0.0038	0.0163	0.0027
	(0.0044)	(0.0066)	(0.0040)	(0.0177)	(0.0028)	(0.0044)	(0.0067)	(0.0041)	(0.0173)	(0.0029)
Upper Secondary	-0.0001	0.0032	0.0019	0.0086	0.0014	0.0000	0.0034	0.0021	0.0090	0.0015
	(0.0057)	(0.0086)	(0.0053)	(0.0232)	(0.0037)	(0.0057)	(0.0088)	(0.0053)	(0.0228)	(0.0037)
College	0.0171***	0.0168*	0.0104*	0.0449*	0.0073*	0.0169***	0.0166*	0.0102*	0.0430*	0.0072*
	(0.0066)	(0.0095)	(0.0060)	(0.0250)	(0.0042)	(0.0066)	(0.0096)	(0.0060)	(0.0246)	(0.0042)
Permanent Income/1000	0.0399***	0.0773***	0.0466***	0.2083***	0.0328***	0.0400***	0.0788***	0.0474***	0.2058***	0.0333***
	(0.0040)	(0.0069)	(0.0041)	(0.0189)	(0.0029)	(0.0040)	(0.0070)	(0.0042)	(0.0186)	(0.0029)
Permanent Income^2/1000	-0.0019***	-0.0051***	-0.0030***	-0.0136***	-0.0021***	-0.0019***	-0.0052***	-0.0031***	-0.0135***	-0.0022***
	(0.0006)	(0.0010)	(0.0006)	(0.0027)	(0.0004)	(0.0006)	(0.0010)	(0.0006)	(0.0026)	(0.0004)
Children below 5 Years	0.0093**	0.0141**	0.0087**	0.0376**	0.0061**	0.0093**	0.0142**	0.0087**	0.0367**	0.0061**
	(0.0039)	(0.0068)	(0.0043)	(0.0178)	(0.0030)	(0.0039)	(0.0069)	(0.0043)	(0.0176)	(0.0031)
Children below 15 Years	-0.0067*	-0.0093	-0.0055	-0.0251	-0.0039	-0.0066*	-0.0092	-0.0055	-0.0242	-0.0039
	(0.0039)	(0.0063)	(0.0037)	(0.0172)	(0.0026)	(0.0039)	(0.0064)	(0.0038)	(0.0170)	(0.0027)
Household Size	-0.0165***	-0.0233***	-0.0141***	-0.0629***	-0.0099***	-0.0166***	-0.0237***	-0.0143***	-0.0619***	-0.0100***
	(0.0020)	(0.0030)	(0.0019)	(0.0080)	(0.0013)	(0.0020)	(0.0031)	(0.0019)	(0.0078)	(0.0013)
Employed	0.0206***	0.0475***	0.0273***	0.1294***	0.0194***	0.0205***	0.0483***	0.0278***	0.1276***	0.0197***
	(0.0033)	(0.0053)	(0.0029)	(0.0144)	(0.0021)	(0.0033)	(0.0054)	(0.0029)	(0.0141)	(0.0021)
Single Parent Household	-0.0218***	-0.0599***	-0.0319***	-0.1654***	-0.0229***	-0.0217***	-0.0610***	-0.0324***	-0.1630***	-0.0233***
	(0.0035)	(0.0077)	(0.0035)	(0.0209)	(0.0026)	(0.0035)	(0.0078)	(0.0036)	(0.0207)	(0.0027)
Immigrant	-0.0381***	-0.1255***	-0.0576***	-0.3372***	-0.0432***	-0.0288*	-0.0941***	-0.0466***	-0.2497***	-0.0341***
	(0.0137)	(0.0291)	(0.0094)	(0.0703)	(0.0081)	(0.0157)	(0.0289)	(0.0114)	(0.0745)	(0.0090)
Immigrant $\times$ Return($t-1$)	0.0140**	0.0169	0.0106	0.0448	0.0074	0.0468***	0.0671***	0.0457***	0.1609***	0.0322***
	(0.0062)	(0.0106)	(0.0069)	(0.0276)	(0.0048)	(0.0092)	(0.0127)	(0.0095)	(0.0266)	(0.0068)

TABLE 8 CONTINUED: **Determinants of the Savings Rate – Natives and Immigrants, 1996-2004**

| | | | Savings Rate | | | | | Savings Rate including Remittances | | | |
| | (1) OLS | (2) Tobit | (2a) Uncond. Exp. | (2b) Prob. Uncens. | (2c) Cond. Uncens. | (3) OLS | (4) Tobit | (4a) Uncond. Exp. | (4b) Prob. Uncens. | (4c) Cond. Uncens. |
			Marginal Effects					Marginal Effects		
Immigrant × Age 35-44	-0.0059	-0.0204	-0.0118	-0.0559	-0.0083	-0.0083	-0.0221	-0.0126	-0.0585	-0.0089
	(0.0096)	(0.0177)	(0.0097)	(0.0490)	(0.0069)	(0.0103)	(0.0177)	(0.0096)	(0.0474)	(0.0069)
Immigrant × Age 45-54	-0.0012	-0.0140	-0.0082	-0.0381	-0.0058	-0.0000	-0.0095	-0.0056	-0.0250	-0.0039
	(0.0114)	(0.0204)	(0.0115)	(0.0559)	(0.0082)	(0.0138)	(0.0216)	(0.0125)	(0.0571)	(0.0088)
Immigrant × Age 55-64	-0.0176	-0.0393*	-0.0217**	-0.1083*	-0.0154*	-0.0158	-0.0338	-0.0188*	-0.0900	-0.0134*
	(0.0114)	(0.0206)	(0.0103)	(0.0574)	(0.0075)	(0.0131)	(0.0210)	(0.0108)	(0.0565)	(0.0078)
Immigrant × Upper Secondary	0.0286*	0.0383	0.0250	0.0986	0.0175	0.0142	0.0137	0.0085	0.0353	0.0060
	(0.0165)	(0.0255)	(0.0178)	(0.0618)	(0.0126)	(0.0173)	(0.0265)	(0.0169)	(0.0674)	(0.0118)
Immigrant × College	0.0045	0.0174	0.0109	0.0460	0.0076	0.0065	0.0222	0.0140	0.0568	0.0098
	(0.0111)	(0.0180)	(0.0117)	(0.0467)	(0.0082)	(0.0112)	(0.0172)	(0.0113)	(0.0428)	(0.0079)
Immigrant × Permanent Income/1000	0.0078	0.0636***	0.0384***	0.1715***	0.0270***	0.0109	0.0563***	0.0339***	0.1472***	0.0238***
	(0.0111)	(0.0190)	(0.0114)	(0.0511)	(0.0081)	(0.0131)	(0.0204)	(0.0123)	(0.0534)	(0.0086)
Immigrant × Permanent Income^2/1000	-0.0009	-0.0074***	-0.0045***	-0.0201***	-0.0032***	-0.0014	-0.0070**	-0.0042**	-0.0184**	-0.0030**
	(0.0020)	(0.0028)	(0.0017)	(0.0076)	(0.0012)	(0.0021)	(0.0029)	(0.0018)	(0.0077)	(0.0012)
Immigrant × Children below 5 Years	-0.0054	0.0084	0.0052	0.0225	0.0036	-0.0005	0.0127	0.0079	0.0329	0.0055
	(0.0080)	(0.0166)	(0.0104)	(0.0440)	(0.0073)	(0.0091)	(0.0168)	(0.0106)	(0.0428)	(0.0075)
Immigrant × Children below 15 Years	-0.0023	-0.0047	-0.0028	-0.0128	-0.0020	-0.0019	-0.0065	-0.0038	-0.0170	-0.0027
	(0.0086)	(0.0164)	(0.0097)	(0.0446)	(0.0068)	(0.0096)	(0.0165)	(0.0097)	(0.0435)	(0.0068)
Immigrant × Household Size	0.0066	-0.0002	-0.0001	-0.0007	-0.0001	0.0020	-0.0047	-0.0029	-0.0124	-0.0020
	(0.0040)	(0.0072)	(0.0043)	(0.0194)	(0.0031)	(0.0045)	(0.0077)	(0.0046)	(0.0200)	(0.0032)
Immigrant × Employed	0.0045	0.0227*	0.0143*	0.0597*	0.0100*	0.0094	0.0207	0.0129	0.0530	0.0091
	(0.0060)	(0.0123)	(0.0080)	(0.0315)	(0.0056)	(0.0084)	(0.0141)	(0.0092)	(0.0354)	(0.0064)
Immigrant × Single Parent Household	0.0041	0.0098	0.0060	0.0262	0.0042	-0.0022	0.0059	0.0036	0.0154	0.0025
	(0.0072)	(0.0197)	(0.0124)	(0.0521)	(0.0087)	(0.0083)	(0.0194)	(0.0120)	(0.0501)	(0.0084)
Immigrant × YOM before 1964	-0.0134	-0.0243	-0.0138	-0.0666	-0.0098	-0.0043	-0.0067	-0.0039	-0.0175	-0.0028
	(0.0105)	(0.0224)	(0.0120)	(0.0622)	(0.0086)	(0.0119)	(0.0216)	(0.0126)	(0.0569)	(0.0089)
Immigrant × YOM 1964-1973	-0.0002	-0.0017	-0.0010	-0.0046	-0.0007	0.0151*	0.0247	0.0156	0.0630*	0.0109
	(0.0070)	(0.0140)	(0.0084)	(0.0379)	(0.0059)	(0.0092)	(0.0151)	(0.0100)	(0.0373)	(0.0070)
Immigrant × YOM 1974-1983	0.0041	0.0032	0.0019	0.0086	0.0014	0.0078	0.0149	0.0092	0.0383	0.0065
	(0.0082)	(0.0149)	(0.0091)	(0.0400)	(0.0064)	(0.0088)	(0.0149)	(0.0095)	(0.0378)	(0.0067)
Constant	0.0312***	-0.0744***				0.0307***	-0.0793***			
	(0.0056)	(0.0096)				(0.0056)	(0.0100)			
R^2/Wald statistic (χ^2)	0.135	1117.90				0.127	1057.88			

Notes: See notes to Appendix-Table 3. Number of Observation: 39,383.