Reassessing intergenerational mobility in Germany: some new estimation methods and a comparison of natives and immigrants

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Using the German Socio-Economic Panel (GSOEP), this paper investigates the correlation between lifetime earnings of fathers and sons. The used estimation strategy differs from that generally used in the literature in that we first estimate a Mincer wage equation and then in a second step use the results to obtain estimates on the intergenerational earnings elasticity. For all father-son couples in our sample we find elasticities in the range of 0.35-0.45 which is remarkably higher than the reported estimates in Couch and Dunn (1997). Distinguishing natives and migrants, we find that intergenerational earnings elasticities of first generation migrants are in the same range as that of Germans while elasticities of second generation immigrants are in the interval 0.4-0.5 and thus are slightly higher. **Keywords:** Intergenerational earnings elasticity, Mincer wage regression, immigration, second generation immigrants.
JEL Classification: J31, J61, J62.

1. INTRODUCTION

The view that intergenerational social mobility should be high is widely accepted. Of course, whether a society is "open" or whether its class boundaries are rather "tight" depends strongly on how one defines openness. Economists often want to find out how the capacity to earn a high income is transmitted within families. One way to approach this subject is to study directly the correlation between incomes of parents and children. The usual procedure in this literature is to estimate the intergenerational earnings elasticity β. According to this measure of openness, in a completely "open" society this elasticity is nil. That is, in an open society we cannot learn about the income of the offspring from observations of the income of the parents.

Following the famous Ramsey-Cass-Koopmans model in the theory of economic growth, we want to learn in particular about the correlation of lifetime earnings of parents and children. Lifetime earnings, however, are neither observed directly nor do we usually have complete information about annual earnings and the respective discount rates which would allow us to calculate it. Instead, researchers only have more or less short time intervals over which periodic incomes are reported. Observing only snapshots of the whole lifetime earnings profile of an individual, this person's lifetime earnings can only be imperfectly reproduced. Solon (1989, 1992) and Zimmerman (1992) show in detail how this measurement error of lifetime earnings leads to downward biased estimates of the intergenerational earnings elasticity in an otherwise standard regression framework. The most popular way to minimize this bias is to average annual earnings which reduces the noise-to-signal ratio (see the survey on studies on intergenerational earnings elastiscity in the US, some European countries, and some other non-European countries in Solon 2002).

Applying this method, studies on the US labour market usually estimate β at about 0.4. In Germany the intergenerational earnings elasticity was estimated to be 0.11 in Couch and Dunn (1997) and (as reported in Solon 2002) 0.34 in Wiegand (1997).

There are however two major shortcoming of this approach to simply average earnings to reduce this downward inconsistency of the estimates for β. First, when averaging earnings lifetime earnings of high-skilled workers are still overstated relative to lifetime earnings of low-skilled workers. The low skilled are younger on average than the high skilled when entering the labour market and thus earn their income over a longer period of time. This source of possible mismeasurement of lifetime earnings and hence of β is not removed by averaging observed annual incomes. A second shortcoming of this approach is that it is not flexible to make efficient use of the available data in order to control for the fact that individuals are observed at different stages of their lifecycle. Controlling for age in the standard regression framework (Solon 1992, Zimmerman 1992) takes account of changing annual incomes over the lifecycle, but correctly so only if earnings profiles are identical for all persons in the sample. For different skill groups this is however unlikely to be the case.

The present paper adds to the literature on intergenerational earnings elasticity by addressing these two issues. First, we add controls into a standard model of log real lifetime earnings to correct for the first point that relative lifetime earnings of low-skilled workers are underestimated when looking only at annual or an average of annual income data. In order to compute these controls we estimate detailed earnings profiles of all education groups as provided by the data. We do this by estimating first a standard Mincer wage equation. Combined with information on the average age of entry into the labour market for each skill group, we are able to obtain estimates for the skill-group specific discount factors. Second, the Mincer wage equation provides a flexible way to correct for skill-group specific age profiles. Moreover, making assumptions on total wage growth and the skill bias of technical change considerably increases the sample size compared with other studies on this topic. Our approach hence also yields more precise estimates—if the assumed functional form is correct.

Intergenerational earnings elasticities are measures for the general openness of a society. As previously discussed, they attempt to quantify how persons from certain social classes are integrated into the labour market. Earnings elasticities thus also provide a natural measure to quantify how immigrants are integrated into the labour market of their host country. To our knowledge, intergenerational earnings elasticities have not so far been estimated separately for natives and migrants. Both Gang and Zimmermann (2000) and Riphahn (2005) study the transmission of educational attainment among natives and migrants in Germany. For instance, Riphahn (2005) finds that immigrants do not seem to fully participate in the general upskilling of the German labour force. Complementary to studies like these on the links in educational attainment, this paper attempts to directly look at the correlation of incomes between parents and their children.

Using earnings data on fathers and sons from the German Socio-Economic Panel (GSOEP) we find that the intergenerational earnings elasticity in Germany is in the range of 0.35-0.45. Thus, we obtain estimates for β that are considerably higher than those previously reported in Couch and Dunn (1997) and Wiegand (1997). Moreover, we estimate the respective earnings elasticity of first generation immigrants, i.e., of foreigners born outside of Germany, to be about as large as that of native Germans. Second generation immigrants, i.e., persons born in Germany but of foreign nationality, however, have considerably higher estimated earnings elasticities than both Germans and first generation immigrants. In fact, intergenerational earnings elasticities are estimated to be in the range of 0.4-0.5. Finally, our results do not significantly change when explicitly distinguishing for Turkish men, the largest group of men in Germany with a migration background. The link between father and son—as measured by annual and lifetime earnings—appears to be equally strong among the group of Turkish men and the group of immigrant men with other foreign nationality.

The structure of the paper is as follows. Section 2 describes the main estimation strategy of this paper. Section 3 introduces the data (the GSOEP) and presents the basic summary statistic of the father-son sample we use in our estimation of β. Estimation results and their interpretation can be found in section 4.

2. ESTIMATION STRATEGY

When studying intergenerational mobility, economists are mainly interested in the intergenerational mobility of economic well-being, i.e. utility. If utility is exclusively derived from consumption and capital markets are perfect, we can in fact learn about the intergenerational mobility in lifetime utility in a society by studying the society's intergenerational mobility in lifetime incomes (also sometimes referred to as permanent status). Thus, we are ultimately interested in how lifetime income of parents affects lifetime incomes of their offspring. In the present paper we focus on the specific relationship between the incomes of fathers and their sons. Building on the theoretical model in Becker and Tomes (1979), Solon (1992) rationalizes the usually estimated log linear relationship between the lifetime incomes of parent and child (Solon 2004, see also). Let y_i^{father} and y_i^{son} denote lifetime earnings of father and, respectively, son of a given dynasty i. The relationship between both y_i^{father} and y_i^{son} is then usually given by the following first-order Markov process (see, for instance, Zimmerman 1992, Solon 1992, Couch and Dunn 1997):

$$\ln y_i^{\text{son}} = \alpha + \beta \ln y_i^{\text{father}} + \varepsilon_i \tag{1}$$

Here ε_i is a white-noise error term. The coefficient β measures the elasticity of son's permanent status with respect to father's status.

Our strategy to estimate (1) is closely related to that described in Zimmerman (1992). There are however two main differences: First, we model lifetime income explicitly as a discounted sum of annual income while in Zimmerman (1992) annual incomes are taken as proxy values for permanent status. This may lead to different results because low-skilled workers enter the labour market at an earlier stage than high-skilled workers and therefore receive their annual income over a longer period of time. Lifetime earnings of low-skilled workers would thus be underestimated (relative to high-skilled persons) when taking the proxy approach as in Zimmerman (1992) and others. This may lead to inconsistent estimates of β. Second, in order to fully exploit the information in our data we estimate lifetime earnings profiles using observations on real wages from all individuals and from all available waves. We next discuss these two crucial points in more detail.

Permanent status If capital markets are perfect, the lifetime income of a member of dynasty i, denoted as y_i, can be computed by discounting yearly earnings, denoted as y_{it}, with a common discount factor r:

$$y_i = \int_{t=0}^{T_i} e^{-rt} y_{it} dt \tag{2}$$

The length of the working life interval is denoted T_i. As (2) holds for both fathers and sons we drop the superscript. Both yearly incomes y_{it} and the discount factor r are measured in real units. Notice that in (2) we assume that r is stationary.

Rewriting yearly income y_{it} in terms of income in a base year τ and the *average* growth in real income over the period (t, τ), denoted as g_{it} yields $y_{it} = y_{i\tau} \times e^{g_{it}t}$. For convenience we set τ to 25. Inserting this expression into (2) and taking logs we obtain

$$\ln y_i = \ln y_{i\tau} + \ln \int_{t=0}^{T_i} e^{(g_{it}-r)t} dt \tag{3}$$

In general, both growth rates g_{it} and working life periods T_i can vary across individuals. From now on we however assume that both g_{it} and T_i may be different only *across* different skill groups and are constant *within* skill groups. Rewriting equation (3) then yields

$$\ln y_i = \ln y_{i\tau} + \phi_{j_i} \tag{4}$$

In (4) we indicate this possible non-stationarity of group-specific discount factors by using the subscript j. Insertion of (4) into (1) yields

$$\ln y_{i\tau}^{\text{son}} = \alpha - \phi_{j_i^{\text{son}}} + \beta\phi_{j_i^{\text{father}}} + \beta \ln y_{i\tau}^{\text{father}} + \varepsilon_i \tag{5}$$

Since $\ln y_{i\tau}$ can be expected to be correlated with both $\phi_{j_i^{\text{son}}}$ and $\phi_{j_i^{\text{father}}}$, ignoring these terms runs the risk of obtaining inconsistent estimates of β.

It should be emphasized that the just discussed possible inconsistency adds to the errors-in-variables problem that is so prominent in the literature on the estimation of intergenerational mobility (see in particular the excellent discussion in Solon 1989). So far we have silently assumed that we accurately measure yearly incomes y_{it}. Due to measurement error we may however only observe a noisy signal which would be an *additional* source for the possibility that β is being estimated inconsistently.

Measuring annual income We assume that log real annual income of individual l is described by the following Mincer-type model

$$\ln y_{lt} = \ln y_{l\tau} + g_t\,(t - \tau) + \gamma z + w_{lt} \tag{6}$$

where γ denotes overall average wage growth (say, due to technical progress), z measures the number of years since the year in which the first observation was made (in our data: 1983), and w_{lt} is a white-noise error term. Importantly, we assume this relationship to hold for *all* men who used to live in West Germany prior to the fall of the Berlin Wall in 1989, i.e., for fathers and sons as well as for all other males from the former West Germany for which no father-son link could established.

Equation (6) in principle acknowledges the fact that the individual earnings profile depends strongly on individual work experience. However, we make the assumption that age profiles are stationary over time and across skill groups. In other words, we assume that technical progress is skill-neutral. Finally, notice that in the above specification we effectively allow for fixed skill group effects. But we assume that incomes within all skill groups grow on average with the same rate.

Computing the discount factors Average real income growth due to experience over the interval $(\tau, t) = (25, t)$ is given by g_t which we assume to be a polynomial of fourth order:

$$g_t = \delta_1 (t - \tau) + \delta_2 (t - \tau)^2 + \delta_3 (t - \tau)^3 + \delta_4 (t - \tau)^4 \tag{7}$$

We use the estimates $\hat{\delta}_1$ to $\hat{\delta}_4$ and $\hat{\gamma}$ as well as an estimate $\hat{r}$ for the long-run real interest rate r to compute the discount factors ϕ_j. Since growth rates are identical for all skill groups by assumption, the ϕ_js are mainly used to adjust for the fact, that low-skilled persons enter the labour market earlier than high-skilled workers and thus receive their possibly lower annual income over a longer period of time.

3. THE DATA

We use data from the German Socio-Economic Panel (GSOEP). The GSOEP collects information on a wide range of topics. The survey started to interview individuals in selected households in 1984 and since then is conducted on a yearly basis. Immigrants from the guest worker countries Turkey, Greece, Yugoslavia, Spain, and Italy were oversampled in the first wave of the survey. In total 5,624 households were selected in the first wave in 1984. Since then the survey has been enlarged six times. In particular, in 1990 the survey was extended to households in former East Germany. In the most recent wave of 2004 which we use in our analysis the survey contains information on 22,019 persons living in 11,803 households. A more detailed description of the GSOEP can be found in Burkhauser, Butrica, Daly and Lillard (2001).

Once a person enters the survey he or she is followed up even when moving out of the originally selected household. This allows us to establish links between family members even when these do not live in the same household any more. As in Solon (1992) and Zimmerman (1992), in this paper we focus exclusively on the correlation of incomes of fathers and sons. For the same reasons discussed in Couch and Dunn (1997) data from individuals who used to live in former East Germany prior to the fall of the Berlin wall in 1989 are not used in the estimation.

As for the income information, we restrict ourselves to wage and salary payments of employed workers. There are two sources of wage information in the data: one is on recalled (average monthly) earnings and bonus payments in the *year* prior to the interview and one is on current (monthly) earnings. It turns out that observations on current earnings in a given year and the information on past earnings in the following year are highly correlated as we should expect them to be. In order to make our results as closely comparable as possible to the results in Couch and Dunn (1997) we however follow them in using only the recalled wage information. All nominal values are discounted to the year 2000 using the German consumer price index.

The GSOEP contains information on the country of birth of an individual and the present nationality at the time of the interview. In this paper we distinguish for Germans and first and second generation immigrants. Every person which was born in Germany and whose first observed nationality is German is classified as a native German. If a person was born abroad he is said to be a first generation immigrant. Persons born in Germany with non-German first observed nationality are referred to as second generation immigrants. Thus, nationalized Germans, i.e. individuals who only acquired German nationality once they entered the survey, are still classified as immigrants. Note that according to our classification, people of German nationality who are born abroad (Aussiedler) are also classified as (first generation) immigrants.

We also report results for immigrants who report to be of Turkish nationality. There are two reasons for taking a closer look at this immigrant group: The first is that people from this group are often suspected to be less integrated into the German labour market. The second reason is more pragmatic because immigrants from Turkey make up the only group of foreigners in Germany whose sample size allows are more thorough analysis.

Lifetime labour earnings depend crucially on the length of the working life period over which the wage income is received and the real interest rate used to discount annual incomes. We take the average of the inflation-adjusted German Treasury Bill rate of the years 1975-2004 as our measure of the long-run real interest rate.

As far as the age of entry into the labour market is concerned, we follow the International Standard Classification of Education (ISCED-1997) coding and distinguish for six different degrees of education qualifications. These are persons with no qualification, with only general elementary school (Haupt-, Realschule), with vocational training, with vocational training and higher elementary school (Abitur), with further higher education (Fachschule, Beamtenausbildung), and persons with a university degree or technical college. For each qualification we can then compute the mean age that a person can be expected to enter into the labour market. These are, respectively, 16, 18, 20, 23.5, 21, and 25 years of age.

To limit measurement error we only use observations from persons who are at least 25 years old. This leaves us with a total number of 1,321 father-son matches for which there is at least one valid observation on wages for both father and son. For some fathers there is valid wage information on more than one son because our data set contains only information on 1,042 different fathers. Table 1 summarizes the data we are using for the second step of our estimation for the whole sample and for natives and immigrants separately. The first and fifth row of the table report the first two moments of the age distribution of sons and, respectively, fathers.[1] In rows four and eight the total sample size is shown. In the remaining rows of the table we report summary statistics also for real earnings and log real earnings of both sons and fathers.

The figures in the first row of Table 1 show that the wage information in our sample comes from sons that are on average 29 years old and from fathers whose average age is about 52. Second generation immigrant sons in our sample are about two years younger than sons from both the German and the first generation immigrant distribution. One striking finding from Table 1 is that the average income of immigrant sons in our sample is almost equal to that of German sons. In contrast, immigrant fathers earn on average about 30 percent less than German fathers. Column six of the table suggests that in particular Turkish fathers seem to perform relatively poorly on the German labour market.

[1]In fact, we first compute for each individual the mean age during the time interval in which valid wage information is available for this person. The numbers in the table summarize the distribution of these means. Similarly, we first compute the median real earnings and median log real earnings for each person. The data in rows 2-3 and 6-7 summarize the distribution of the medians.

TABLE 1
Summary statistics

Variable	all	Germans	Immigrants		Turkish	
			1st gen.	2nd gen.	1st gen.	2nd gen.
Son's average age	29.1 (3.17) (25;43.5)	29.2 (3.15) (25;43.5)	29.2 (3.31) (25;43.5)	27.8 (2.58) (25;36.3)	29.8 (3.29) (25;43.5)	27.1 (2.26) (25;35)
Son's real earnings	2,302 (1,017) (115;10,202)	2,331 (1,111) (115;10,202)	2,199 (732) (152;5,345)	2,373 (938) (165;6,121)	2,259 (665) (244;4,787)	1,952 (680) (165;3,105)
Son's log real earnings	7.62 (0.56) (4.7;9.2)	7.61 (0.61) (4.7;9.2)	7.62 (0.42) (5.0;8.6)	7.67 (0.51) (5.1;8.7)	7.67 (0.33) (5.5;8.5)	7.46 (0.60) (5.1;8.0)
Number of observations	1,321	877	323	121	147	39
Father's average age	51.7 (6.08) (29.5,74.5)	52.1 (6.27) (29.5,74.5)	51.1 (5.69) (33.5,68)	- - -	49.4 (4.67) (37.8,63)	- - -
Father's real earnings	2,852 (1,713) (109;27,825)	3,224 (1,975) (192;27,825)	2,197 (748) (109;6,771)	- - -	2,013 (499) (255;3450)	- - -
Father's log real earnings	7.84 (0.49) (4.7;10.2)	7.95 (0.51) (5.3;10.2)	7.63 (0.37) (4.7;8.8)	- - -	7.56 (0.32) (5.5;8.1)	- - -
Number of observations	1042	664	378	-	128	-

Note: Numbers in parenthesis are standard deviations and, respectively, minimum and maximum values. Earnings are reported in prices of year 2000 (using the consumer price index).

4. EMPIRICAL RESULTS

As discussed in section 2 we first estimate the Mincer wage equation (6). The results of this first step are used twofold: On the one hand we obtain estimates of the individual effects $\ln y_{l\tau}$ of each individual l. These 'individual' effects also contain constant skill group effects. On the other hand, the estimates allow to compute the integrated discount factors ϕ_j for all skill groups j. Hence, we are interested in both the unobserved individual effect and the coefficients of the observed effects. Using estimates for both effects we can then proceed to estimate equation (5) in a second step.

Equation (6) is estimated using all available wage information in the GSOEP. That is, when estimating (6) we do not restrict ourselves to the father-son sample described in Table 1 but instead use recalled wage information from all full-time employed men who are at least 25 years old. Both random and fixed effects models were used to obtain estimates for the coefficients in the Mincer wage equation (6). Simple Hausman tests were then carried out. The test results suggest that the random effects model leads to inconsistent estimates. In the following we therefore only report and use the results from the fixed-effects model estimations.

Since in the second stage the estimation of intergenerational income elasticities critically depends on having accurate measures of the individual effects $\ln y_{i\tau}^{\text{son}}$ and $\ln y_{i\tau}^{\text{father}}$, we also estimate equation (6) using a further subsample. That is, we estimate fixed effects models of (6) using information on full-time employed men above 25 for which there are at least 5 or, respectively, 10 valid observation on annual income. Estimation results are reported in Table 2. Figure 1 plots the predicted earnings profile of an average male with vocational training in the (large) sample. As obvious from the figure are the estimates of individual growth rates very similar whether we use all observations or only observations from men for which there are at least five or, respectively, ten observations on annual income available.

The main earnings According to the estimated coefficients, for persons between 20 and 50 years of age annual income grows at a roughly constant rate after which annual income growth becomes negative.

Using the estimates in Table 2 we calculate estimates for ϕ_1 to ϕ_6 which

TABLE 2
Results Mincer wage regressions

	Minimal number of observations		
Coefficients	1	5	10
$\hat{\delta}_1$	0.25**	0.25**	0.23**
	(0.009)	(0.009)	(0.011)
$\hat{\delta}_2$	-0.004**	-0.004**	-0.003**
	($1.79*10^{-4}$)	($1.8*10^{-4}$)	($2.1*10^{-4}$)
$\hat{\delta}_3$	$1.16*10^{-4}$**	$1.14*10^{-4}$**	$1.01*10^{-4}$**
	($7.32*10^{-6}$)	($7.43*10^{-6}$)	($8.47*10^{-6}$)
$\hat{\delta}_4$	$-1.55*10^{-6}$**	$-1.53*10^{-6}$**	$-1.36*10^{-6}$**
	($9.83*10^{-8}$)	($9.97*10^{-8}$)	($1.13*10^{-7}$)
$\hat{z}$	-0.19**	-0.19**	-0.16**
	(0.008)	(0.009)	(0.011)
# obs.	78,005	63,561	41,739
# persons	12,874	6387	2,929
∅ obs. per person	6.1	10.0	14.3

Note: Standard errors are reported in parenthesis.

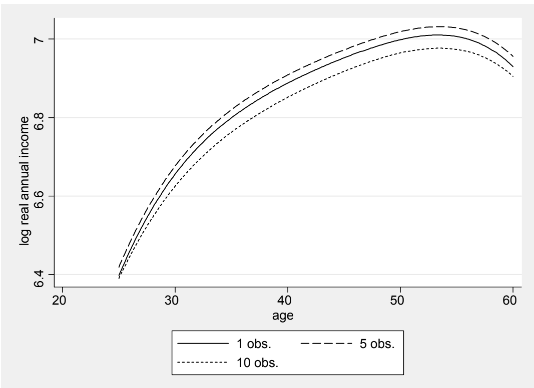

FIG. 1 Real earnings profile of an average male with vocational training (ISCED class 3)

TABLE 3
Estimated discount factors

	Minimal number of obs.		
Coefficient	1	5	10
$\hat{\phi}$	8.26	8.28	7.30

Note: Values are identical up to the second digit for all six ISCED classes of education qualifications. Age of entry into the labour market used in the calculation are 16, 18, 20, 23.5, 21, and 25 for ISCED 1 to 6, respectively. For example: $\phi_5 = \ln \int_{21-25}^{60} e^{(g_t+\gamma-r)t} dt \approx 7.30$ in the case that we use the estimates in the last column of Table 2 (minimum number of observations is 10).

are reported in Table 3. As it turns out the discount factors are almost identical for all six education groups. That is, the additional income of low-skilled workers due to their earlier entry into the labour market is completely dominated by the incomes made at later stages of the individual working life. This gives gives support to the estimation strategy prevalent in the empirical literature on intergenerational income elasticities that use observations on annual incomes (possibly corrected to limit measurement error) as proxies for lifetime incomes.

Finally, the predicted individual effects of the sons in the father-son sample are regressed on the predicted individual effects of the respective fathers using standard ordinary least-squares. Robust standard errors are estimated because for some fathers in the father-son sample there is more than one match and error terms of brothers are expected to be correlated.

Table 4 reports the estimates of the intergenerational income elasticities of fathers and sons for all individuals in the father-son sample. For better comparison of our results with that reported in the literature, the first row of Table 4 reports $\hat{\beta}$ without correcting for the possible effect on the estimation results of the discount factors ϕ_j. In fact, we find an intergenerational income elasticity of 0.46 when using all fathers and sons in the sample for which there is at least one valid income observation. This number drops to 0.37 when we restrict ourselves to those fathers and sons for each of which there are at least five wage observations available. This

TABLE 4
Father-Son Earnings Correlations

		Minimal number of observations		
Coefficients	ϕ_j	1	5	10
$\hat{\beta}$	no	0.45 (0.021)	0.37 (0.030)	0.38 (0.079)
	yes	0.45 (0.021)	0.37 (0.030)	0.38 (0.076)
Observations		(1107,875)	(518,418)	(160,135)

Note: Robust standard errors are reported in parenthesis. The couple of numbers in parenthesis is the number of children and, respectively, fathers used in the regression.

restriction, unfortunately, forces us to drop the information contained in more than half of our sample. Even more so, we are left with only about 15 percent of the original sample size when only using estimated individual effects of persons for which we have at least ten observations of annual earnings. The estimated intergenerational income elasticity in this case is 0.38. These estimates, though, are still more than twice as large as the reported estimates in Couch and Dunn (1997).

The second row of Table 4 shows the estimates of the intergenerational income elasticity that are corrected for the possible bias due to the discount factors ϕ_j. Since the ϕs are roughly identical for all skill groups j inclusion of the discount factors in the estimated equation only affects the estimated constant terms but leaves the estimated coefficients $\hat{\beta}$ unchanged. Summarizing, the results in Table 4 suggest that 0.35-0.45 is a reasonable estimate of the intergenerational elasticity of earnings in Germany.

We next allow the coefficient β in equation (5) to be different for natives and first and second generation immigrants. Table reports the corrected estimation results. The uncorrected estimates are almost identical and therefore not reported here.

As the results in the first row of Table 5 show is the estimate of the intergenerational income elasticity of Germans very close to the respective estimates when not distinguishing between natives and migrants. Hence,

TABLE 5
Father-Son Earnings Correlations: Distinguishing natives and immigrants

	Minimal number of observations					
Coefficients $\hat{\beta}$	1		5		10	
Germans	0.45 (0.020)	0.45 (0.020)	0.37 (0.029)	0.37 (0.029)	0.36 (0.075)	0.36 (0.075)
1st gen. immigrants	0.44 (0.022)	0.44 (0.023)	0.36 (0.031)	0.35 (0.031)	0.34 (0.075)	0.33 (0.077)
2n gen. immigrants	0.51 (0.022)	0.51 (0.022)	0.44 (0.031)	0.42 (0.031)	0.39 (0.078)	0.39 (0.077)
Turkish (1st gen.)		0.43 (0.022)		0.31 (0.036)		0.34 (0.076)
Turkish (2nd gen.)		0.50 (0.026)		0.45 (0.034)		0.39 (0.081)

Note: Robust standard errors of stage two of the estimation are reported in parenthesis.

the elasticity of native Germans can be expected to be in the same 0.35-0.45 interval which we have previously stated to be a reasonable estimate of the intergenerational income elasticity for all men in Germany.

Only distinguishing first and second generation migrants (but not distinguishing Turkish and other foreign men), the results in the second and third row of the table show quite different results for migrants born in Germany (2nd generation migrants) and migrants born abroad (1st generation migrants). The intergenerational income elasticity of the former group is very close to that of Germans, that is, in the range 0.30-0.45. In contrast, the elasticity of second generation immigrants is between five and seven percentage points higher than that of first generation immigrants. Immigrants born in Germany are thus more likely to follow in their fathers' footsteps than are Germans or migrants born abroad.

Finally, explicitly distinguishing between immigrants of Turkish nationality and all other immigrants does not affect this general conclusion. The estimates for Turkish men are very close to the respective estimates of migrants from other countries than Turkey. As is the case for all migrants, the

German labour market is less open for Turkish men than it is for German men.

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