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Immigration to Germany in the Seventies and Eighties - The Role of Family Reunification

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Immigration to Germany in the Seventies and Eighties - The Role of Family Reunification

by
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Abstract

Family reunification was virtually the only way for non-EC-foreigners to immigrate to Germany after the recruitment stop in 1973. However, empirical knowledge on the relative size, the reasons and the accompanying circumstances of family reunification is limited.

In the paper, the reunification of foreign families whose head lives in Germany is considered using data from the German Socio-Economic Panel 1984-1989. Family reunification is identified in two different ways. Whereas the retrospective approach looks backward from 1985 using information about the year of migration, the year of marriage, and the position in the household, the approach on a year-to-year base uses the panel design of the SOEP identifying family reunification by the reason of movement into the household and out of the household, respectively. The relative size of family reunification in proportion to total immigration as well as the linkage to the business cycle fluctuations is determined. Family reunification is analyzed within the framework of a discrete hazard rate model. The relative importance of several factors reflecting the economic and social situation of the family's head on the decision to have spouse and children come to Germany is examined. It turns out that besides nation-specific differences, years since migration, years since marriage, the degree of social integration in Germany, income and unemployment status by the individual and in the economy, as well as the family background are important determinants for the decision to reunite the family.

Acknowledgement

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1. Introduction

Family reunification captures an extraordinary place in the migration policies of most immigration countries. Like asylum policy it is mainly driven by humanitarian rather than economic reasons. Nevertheless, family reunification counts for a high proportion of yearly immigration. In Canada, family reunification is about one third of total immigration, in the U.S. the number is about the same, but including also "close relatives" 80 percent of all visa is given to this category compared with only 5 percent which is given to persons having qualified by their skills[1]. In Europe, the situation differs from the situation in the overseas countries. First, there is free movement of labour between the EC countries which includes also spouses and children. Second, most countries do not keep track, which category the immigrant falls into. Hence, there cannot be a migration policy directed towards family reunification due to the lack of a statistical base.

In Germany, the yearly raised numbers on immigration and emigration flows do not provide any information on the magnitude of family reunification. Nevertheless, it is not disputed that family reunification has played and still plays an important role in immigration. Thus, it is widely assumed that much if not most of the immigration after the recruitment stop in 1973 is due to the immigration of family members which moved to the person already residing in Germany (Höhn et. al. 1990, Franz 1991, Schmidt und Zimmermann 1992). Since it was not possible for non-EC foreigners to move back to their family in the home country without losing their permit of residence, most of these foreigners decided upon having their family come to Germany rather than the other way around.

Looking at the change in the age pyramid of foreigners between 1970 and 1987 in Figure 1 might demonstrate the importance of family reunification workers in Germany. The shift in the age distribution of male and female foreigners do strongly confirm the hypothesis of a significant role of family reunification in the seventies and early eighties. Nevertheless, the evidence of Figure 1 can only be used for a first insight since it contains not only guest workers nationalities and captures also other kinds of fluctuations in the stock of foreigners than those caused by family reunification.

Family reunification is a subject which has not been investigated very much so far. There are some theoretical studies which deal with family migration decisions. Mincer (1978) shows in his seminal work that the family's decision to migrate is not automatically optimal for both the husband and the wife. If one spouse moves only to stay together with his spouse, he is called a tied mover since he is worse off as before. If no move occurs although one spouse had favoured a move, this spouse is called a tied stayer. Sandell (1977) extends these considerations on the labour market outcomes for both spouses. Borjas/Bronars (1990) derive a theoretical framework for an investigation of Mexican family immigration to the U.S. based on Mincer's approach. However, those studies emphasize the family tie and not the family reunification after a spatial separation. Stark (1991, ch. 15) considers the

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[1] The numbers are taken from Canada Immigration Centre (1991) for Canada and from Borjas (1990, pp. 30/31).

effect of risk diversion with respect to income by different locations of the working family's members. Thereby, he is interested in the circumstances of family separation but not of family reunification. Hence, the theoretical foundation of an analysis of family reunification can be regarded as rather small.

Also empirical studies on the subject are rare. Mehrländer (1974) and Münzenmaier und Walter (1983) investigate questions of family reunification for West Germany. Mehrländer finds that mainly children of the age group six to fifteen years have moved to their parent(s) in Germany. She attributed waiting until children are that old to the lower need of care for older children. Münzenmaier and Walter (1983) study the intension of spouse reunification versus child-parent reunification on the ground of data from the 1981 microcensus for the federal state Baden-Württemberg[2]. They find that nearly double as many household heads intend to have their children come to Germany compared to the intension of spouse reunification (23% to 14%). Futhermore, a higher income and the ownership of an apartment or house in Germany increases the desire for family reunification. Finally, Italian, Greeks and Turks are the groups with the highest proportion of household heads with intensions of family reunification.

With the exception of Borjas/Bronars (1990), I am not aware of studies from other countries. Borjas and Bronars investigate family migration and reunification for Mexicans in the U.S. However, their analysis cannot really identify family reunification using data of the U.S. Census, because years since migration is only asked on a five-year-base.

In the present study, a thorough investigation of family reunification of guest workers in Germany is carried out. Based on data of the socioeconomic panel (SOEP), family reunification is defined according to two different concepts. The first approach uses retrospective data on the variables "years since migration", "duration of marriage" , and "position in the household" in order to identify all households in 1985 who had family reunifications in the past. The second approach uses the panel property of the SOEP to identify family reunifications between two consecutive years (section 2). Based on the retrospective approach, the role of family reunifications with respect to total immigration of guest workers until 1985 is considered. Particular weight is put on the linkage between immigration by family reunification and the business cycle (section 3). In section 4, the econometric framework for the empirical analysis is established. A discrete hazard rate model with a logistic distribution function is derived . The empirical analysis in section 5 is divided in a separate analysis for either approach. Whereas the retrospective approch is more suited for an investigation of spouse reunification, the approach on a year-to-year base considers child-parent as well as total family reunification. Both approaches are discussed with their advantages and disadvantages in detail.

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2 The microcensus is a one percent representative sample of the German population. Mainly questions on employment status und behavior are asked on a yearly base. In 1981, however, the microcensus included some specific questions on duration of stay in 1981 for Baden-Württemberg.

2. Family Reunification in the Socio-Economic Panel

The empirical analysis is based on the first six waves of the Socio-Economic Panel (SOEP) for West Germany. In the first wave some 12,000 individuals in about 6,000 households were interviewed on a large number of personal and household characteristics as well as on education, training and labour market experience (for a description of the SOEP see Wagner/Schupp/Rendtel, 1991). Foreigners from the main source countries for guest-workers, i.e. Turkey, Yugoslavia, Italy, Greece and Spain, have deliberately been oversampled in the SOEP. This way, there are around 3,100 individuals in 1,300 foreign housesholds covered. This provides an unique opportunity to analyse family reunification of citizens from these countries in some detail.

For the identification of family reunification I stick to the legal definition which was valid in the period under investigation (s. Schmid 1991). Until the first alien law was passed in 1965, there was no restriction on any kind of family reunification. The first restriction on family reunification were introduced shortly after the passing of the alien law. After 1965 only spouses and children under 18 could move to the family member already living in Germany from abroad. A further requirement was that this family member has lived in Germany for at least three years (one year for guest workers from recruitment countries), had a job and an apartment which was large enough to accommodate his family. A hardship clause permitted under certain circumstances family reunification, anyway. In 1981, family reunification was tightened up. The age limit for children was reduced to 16 years, additionally, child-parent reunification would not have been possible if only one parent lives in Germany. This regulation was not changed very much during the eighties.

For one home country under investigation the regulation is somewhat different. Italy as a foundation member of the EC took part of the regulation concerning the free movement of labour from its beginning. This regulation was extended to family members (in the close definition) in 1968. Although Greece also became a member of the EC in 1981, Greek people did not benefit from free movement within the EC before 1988. The peculiar situation for Italians would usually justify a different approach for Italians. However, the EC-regulations on family reunifications are not that different from the German ones. The most important exception is the age limit for children which is 21 years in this case.

Having this legal framework in mind, there are two possibilities to identify family reunification in the SOEP. The identification of family reunification by the retrospective approach[3] is based on three main variables, the "position in the household" (head, spouse or child), the "year of marriage" for spouse reunification, and the "year of migration" for all three groups. Spouse reunification and child-parent reunification demand a somewhat different way of determination. Beginning

[3] The retrospective approach is comparable to an approach which is sometimes chosen by studies on regional migration behaviour - the so called *residence history analysis* (see e.g. Wagner 1989).

with spouse reunification, the following condition has to be fulfilled that spouse reunification has taken place:

$$ysma \geq ysmi(1.\ \text{spouse}) > ysmi(2.\ \text{spouse})$$

$$\text{or} \qquad (1)$$

$$ysmi(1.\ \text{spouse}) > ysma \geq ysmi(2.\ \text{spouse})$$

where *ysma* is "years since marriage" and *ysmi* is "years since migration". Note that the cases are excluded where the married guest worker takes his/her spouse with him as he/she migrates to Germany and where the marriage takes place as both spouses have moved to Germany. Furthermore, it does not matter whether the household head migrated first to Germany, or whether the spouse was the first migrant giving up his/her position as household head at the time of spouse reunification.

Child-parent reunification is unfortunately only incompletely covered in the SOEP for two reasons. First, only those children are identifiable in the SOEP which still live in the parents' household. Especially older children have possibly moved out of their parents' home and founded an own household. Second, children are only interviewed in the SOEP when they are at least sixteen years old. That means that the variable "years since migration" which gives the date of reunification is not known for children who are less than sixteen years old at the date of interview. This drawback can be partly compensated by taking the statement of a later wave when the child is interviewed the first time. Since the base year of the retrospective analysis is 1985 (the only year when "year of marriage" is asked), this way it is possible to include further children which were at least thirteen years old in 1985. However, this kind of amendment will only work if the child is still contained in later waves. If the child moves out of the household or the total household is lost e.g. due to remigration, there is no way of covering the child in a later wave. Anyway, child-parent reunification is only identified if the child is at least thirteen years old in 1985.

Child-parent reunification has taken place if the following is valid:

$$\max(ysmi(1.\text{parent}), ysmi(2.\text{parent})) > ysmi(\text{child}) \qquad (2)$$

where the variables are abbreviated as above. Again the case where the child migrates to Germany together with its parents is excluded. However, it will be sufficient if only one parent has moved to Germany before the year of reunification.

The retrospective approach has one important drawback. Only those households are covered which still live in Germany in 1985. This way, all family reunification is excluded which takes place in the home country of the guest worker. In fact, the guest worker has three possible choices with respect to family reunification:

1) He stays in Germany and his family stays in the home country. This is the case where nothing happens.

2) He stays in Germany and has his family (or at least part of the family) coming to Germany.

3) He remigrates to his home country to his family.

The third case cannot be considered by looking backwards in 1985. A selection has taken place since all guest workers who have chosen the third alternative are not in the SOEP by definition. This selection must be kept in mind when the results of the retrospective analysis are interpreted. In the analysis in section 5.1 it is therefore assumed, that making the analysis conditional on the exclusion of the remigration case does not change the results for the comparison of the other two cases (this assumption is McFadden's *Independence from Irrelevant Alternatives* (IIA)[4]).

The second approach which is based on a year-to-year analysis does allow for the third possibility. For each member of the household which leaves the household or moves into the household between two consecutive waves the adress protocoll in the SOEP provides information on the corresponding reasons. A person having left the household must be allocated the statement "moved abroad" in order to be identified as remigrating to his family. Correspondingly, a person having moved into the household must have the record "moved from abroad" that family reunification takes place. In the second case the person must additionally have the position of the "spouse of household head" or "child" within the household that it can be spoken of family reunification.

The second approach has many advantages over the first one. First, it does not so heavily depend on the IIA-assumption. Secondly, child-parent reunification can be identified without limitation. Finally, can be used a much richer specification due to the higher number of variables which can be included. Nevertheless, since the number of cases is quite low for the year-to-year analysis, the estimation is much less robust than the estimation based on the retrospective approach, which also gives rise to a restriction of the number of variables included.

3. The Role of Family Reunification in the Sixties, Seventies and Early Eighties - Some Patterns

The data from the retrospective approach can be used to shed some light on the role family reunification played for total immigration within the period from 1962 to 1984.[5] The purpose of this section is threefold. First it is supposed to demonstrate the dependency of family reunification on the business cycle. Secondly, it shall show which part of total gross immigration can be attributed to family reunification in the period under investigation. Finally, the decreasing importance of family reunification at the end of the period is investigated.

Before the descriptive analysis is carried out, the corrections in the data which had to be made have to be explained. The composition of the foreign sample in the SOEP is somewhat distorted compared to the real composition in the population. Especially the Turkish and Greek people are heavily underrepresented whereas the proportion of the Spaniards is much too high in comparison with their proportion in the population. For this reason, I took weights correspondingly to the guestworker

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4 The IIA-assumption is tested in section 5.2. According to the Hausman-McFadden test, the IIA-assumption cannot be rejected.

5 The analysis has been based on this period because there were only very few immigrants having migrated before 1962 in the SOEP, and 1985 is the base year of the retrospective approach.

population at September 30, 1984, which was the closest date to the 1985 wave[6]. This way, I could avoid the bias having been caused by a wrong weight (e.g. the Italians were the first guest workers to come to Germany; an overrepresentation of this nationality would bias the trajectory towards early immigration).

There are many studies which show empirically the linkage between immigration and the business cycle. The theoretical argument underlying an examination of this linkage is that, as the chances of getting a job decreases in recession times, there are fewer people deciding on immigration for employment reasons. An early study of the topic is that of Easterlin (1968) who explained the cyclical pattern of immigration to the U.S. in the last century with fluctuations of the business cycle. Since then, there have been many other studies in the U.S. confirming this linkage for later periods which are summarized in Chapman, Pope and Withers (1985). Thon (1987, p. 13/14) confirms the decisive role of the business cycle on immigration for Germany. Franz (1991) shows that the domestic unemployment as an indicator for the business cycle plays an important role for immigration.

The distribution of the "year of migration" which is shown in Figure 2a confirms the linkage between gross immigration and unemployment which has been found by the cited studies. Actually, the trajectory of gross immigration is nearly the inverted trajectory of the unemployment rate. The institutional shifts in 1965, 1973, and 1981 did not seem to affect this linkage very much.

The spouse and child-parent pattern of reunification in Figure 2b is somewhat different from the total immigration pattern[7]. Especially the peaks happen in different years. Also the decrease in immigration at the end of the seventies is somewhat smaller than the one of total immigration. Nevertheless, also in this case a linkage between immigration by family reunification and the business cyle can be established, even if this linkage does not seem to have the same intensity as the one between total immigration and unemployment.

What is the role of family reunification in the context of total gross immigration now? In Figure 3 the proportion of total gross immigration which is due to family reunification is depicted for the years 1962 to 1984. The trajectories show that the proportion of family reunification with respect to total immigration has increased over time flattening slightly in the early eighties. Particularly salient is the increase in the proportion following the recruitment stop in 1973. According to Figure 3, around 65% of total gross immigration were due to family reunification. There are three alternative ways how this percentage is driven that high. First, the propensity of having spouse and children come to Germany has increased as the option of returning home and coming back later was not longer valid after the recruitment stop in 1973. Secondly, the possibility that both spouses could come together to Germany both looking for a job had been curtailed with the recruitment stop. If one spouse could manage to get around the recruitment stop somehow he/she would probably choose the way of family reunification to have his/her spouse come to

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6 The calculation of the weights is based on publicly available numbers of the "Statistisches Bundesamt" which has been established on counts of the foreign central register. The weights are .60 for Turkey, .90 for Yugoslavia, .43 for Greece, 1.06 for Italy, and 1.43 for Spain.

7 The footnote in Figure 2.b indicates a possible bias which is contained in the trajectory of the child-parent reunification. As the coverage of children depends on their age, it can be assumed that the numbers in the early years and in the last years of the period under investigation are underestimated.

Germany rather than trying to get a permit of residence for the spouse by the spouse's employment status as before[8]. However, thirdly, also the number of people coming to Germany without having relatives here decreased due to the recruitment stop which leads to less "rest immigration". In order to disentangle these reasons further analyses have to be made.

Figure 4 shows an indicator for the propensity of the guest worker to have his/her spouse come to Germany. The indicator is a hazard rate as it is the number of spouse reunifications in proportions of all possible spouse reunification at that time. In the first years the trend is quite erratic which is possibly due to the low numbers of observations in the SOEP for this period before it stabilizes after 1967. Again the linkage to the fluctuations of the business cycle catches the eye. However, the similarity to Figure 2a is even more remarkable, especially for the period after 1973. The propensity of spouse reunification in Germany seem to follow the same pattern as total immigration. An interesting feature is also the high level of the rate of spouse reunification prior to 1973. This finding confirms the statement of Höhn et al. (1990) who say "it is commonly assumed that particularly the recruitment stop has triggered a family reunification which could not have been foreseen in its extent; but we know ... that the inflow of family members of foreign workers has started in the mid-seventies und has been amplified by the recruitment stop the most."

From 1979 on there is a sharp drop in the rate of couple reunification. A first reason could be the recession of 1981/82. However, it might also be that simply almost all household heads have already fetched their spouses to Germany. This conjecture is supported by the time pattern in Figure 5. The curve in Figure 5 is most comparable to a "survival function" where each period the stock of household heads is increased by new arrivals in Germany with the spouse still living abroad (or those guest workers who married after having come to Germany but left their spouse back in the home country for the time being). Figure 5 shows that the potential of immigration by family reunification has clearly decreased over time without interruption after 1969. This finding can be explained also by the high number of stock and inflow of foreigners around 1969. If most spouse reunification take place shortly after being separated from each other, the high stock and inflow in 1969 could be the main reason for the falling trajectory in Figure 5. Table 1a and 1b confirm this conjecture. The highest number of spouse reunification takes place a short time after the marriage; and the household head does not wait very long after his immigration before he has his family come to Germany as is shown in Table 1b.

One important fact which has to be taken into account while interpreting the results is that the potential of family reunification per person is not fixed but can change after immigration to Germany. Thereby I do not mean the possibility of divorce (which I exclude in my analysis) but a marriage of a foreigner living in Germany to someone living abroad. This possibility is certainly influenced by culture but also by the integration into the German society. Especially, the members of the second generation are more inclined to take partners having grown up in Germany rather than travelling to the home country of their parents to find a spouse there. In the analysis based on the retrospective approach, around one fifth of all spouse

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[8] This second consideration is confirmed by data of the SOEP. Whereas prior to 1974 48% came the same year to Germany as the spouse, this percentage dropped to 22% after the recruitment stop (258 out of 532 compared to 46 out of 207).

reunification can be attributed on marriages taken place as one spouse is already living in Germany (see Table 2)[9]. A more careful analysis is needed to account for this consideration.

4. Econometric Specification

In this section I present the econometric model which is used to analyse the impact of important determinants on the propensity to reunite with the family in Germany or abroad. The model will be established in a rather general way in order to embed both approaches described in section 2. Whereas the retrospective approach has only two transition possibilities, the approach on a year-to-year base adds a third one of remigration to the home country.

The appropriate model which can be used for the analysis is a discrete hazard rate model. This model has the advantage of allowing flexible functional forms. It can also be interpreted as the reduced form of a discrete choice model where the choice of transition is made in each period until the transition is made into an absorbing state (see Kiefer 1988, also Licht/Steiner 1991)[10].

As I am interested in the determinants of the propensity of reunification, the central variable of the model is this propensity which corresponds to the hazard rate in the model framework chosen. The hazard rate $\lambda_{ij}(.)$ gives the conditional probability for the i-th individual of a transition into the state j within the time interval t_i, given individual i has been in the sample until t_i. That is,

$$\lambda_{ij}(t_i / x_i(t_i)) = \mathrm{P}(T_i = t_i, Y = j / T_i \geq t_i, x_i) \tag{3}$$

with $i = 1, 2, ..., n$ and $j = 1, 2$ where $x_i(t_i)$ is the vector of covariables of the i-th individual in interval t_i and Y is the set of all possible final states. In the application of family reunification this hazard rate can be interpreted as the probability of family reunification either in Germany ($j = 1$) or in the home country ($j = 2$) given the family still lives separately at the beginning of year t. T_i is the individual's year of change into one of the absorbing states which is not known in the case of right-censoring.

The conditional probability that nothing changes for individual i in period t (the index i is dropped for convenience) is given by

$$\mathrm{P}(T > t / T \geq t, x) = 1 - \lambda_1(t / x) - \lambda_2(t / x) \tag{4}$$

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9 This kind of spouse reunification has a very strong impact on the immigration multiplier - that is the immigration following a first immigration by one family member - as is described by Borjas (1990, Ch. 11). It plays a major role with respect to the Indians residing in Great Britain who have the habit to look for a spouse back in India (see Coleman1992, pp. 24-27).

10 Under the assumption of independency between observations for an individual, the model could also be regarded as a three-state Markov model with exogenous variables where the possibility of transition from the two absorbing states to the non-absorbing state and to each other is equal to zero. Also this approach would yield the same likelihood function as is established here (see Amemiya 1985, ch. 11).

The probability still to be in the sample in the interval t, the survivor function, is then

$$P(T > t / x) \equiv S(t / x) = \prod_{\tau=1}^{t-1} (1 - \lambda(\tau / x)) \tag{5}$$

where $\lambda(.) = \lambda_1(.) + \lambda_2(.)$. The unconditional hazard rate into the j-th state can be written in terms of the conditional hazard rate and the survival function as

$$P(T = t, Y = j / x) = \lambda_j(t / x) \prod_{\tau=1}^{t-1} (1 - \lambda(\tau / x)) \tag{6}$$

Under the assumption of a "random censoring" as it is usually made in the literature the likelihood function can be written as

$$L = \prod_{i=1}^{n} \prod_{j=1}^{2} [\lambda_i(t_i / x_i(t_i))]^{\delta_{ij}} \prod_{\tau=1}^{t_i - 1} (1 - \lambda_i(\tau / x_i(\tau))) \tag{7}$$

where

$$\delta_{ij} = \begin{cases} 1, & \text{if individual i changes to state j} \\ 0, & \text{otherwise} \end{cases}$$

For the specification of the hazard function I choose a multinomial logit model (see, e.g. Maddala 1983, pp. 34). The hazard rate is then given by

$$\lambda_{ij}(t_i / x_i(t_i)) = \frac{\exp(\alpha_j(t_i) + \beta_j' z_i(t_i))}{1 + \sum_{k=1}^{2} \exp(\alpha_k(t_i) + \beta_k' z_i(t_i))} \tag{8}$$

and the survivor function by

$$S(t_i / x) = \prod_{\tau=1}^{t-1} \frac{1}{1 + \sum_{k=1}^{2} \exp(\alpha_k(\tau_i) + \beta_k' z_i(\tau_i))} \tag{9}$$

where z_i is the vector of covariables excluding t_i. With the assumption that all observations are independent for both a given individual and between different individuals, the likelihood function reduces to the one of a pooled multinomial logit model which is the underlying function of the empirical analysis to follow[11][12]. In the

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11 It would have been desirable to control for individual heterogeneity by using a random effects model rather than simple pooling for estimation. However, the usual estimation of a non-linear random effects model as suggested by Chamberlain (1984) is not feasible here since it requires a subestimation of the model for each wave which does not work with the few number of cases falling into the family reunification categories in some waves (for an application of the Chamberlain-method, however, see Steiner/Velling 1993).

12 An alternative approach which does not rely on the IIA-assumption is a nested multinominal logit model (see Börsch-Supan, 1987) where the first level of the decision tree is family reunification versus no family reunification. However, it can be shown that the coefficients

retrospective approach the model reduces to a binominal model which can be embeded into the model framework having been derived before by using only one *j*.

5. Empirical Analysis of the Determinants of Family Reunification

5.1 The Retrospective Approach

The retrospective approach refers to the year 1985 and looks backwards to what has happened before that year (see section 2). This way all foreigners are included who still live in Germany and have or had family abroad. Hence, the question is which reason have caused the individual to take action somewhen in the past, or which factors have hindered him doing so.

The regression analysis will be based on the variables described in Table 2. As the child-parent reunification identified in the SOEP might be subject to some distortion (see footnote 7), I restrict myself to an analysis of spouse reunification which does not have those problems. The variables in Table 2 were chosen on the ground of the theoretical and empirical family migration studies of the literature (see also section 5.2) and on the ground of availability. Beside an explanation of the variables, Table 2 also contains summary statistics as the mean/proportion and the standard deviation. Additional information on the distribution of some variables is depicted in Table 1a to 1d which bear also information on descriptive statistics of child-parent reunification. All variables in Table 2 as well as in Table 1a to 1d are evaluated at the time of reunification.

While most of the variables in Table 2 are self-explanatory some may warrant some further comments.

- The variable YSFPR indicates the years which have elapsed between the first opportunity of spouse reunification and the realisation. As explained in section 2, this variable is the minimum value of the variables YSMA and YSMI. The variable YSFPR can best be interpreted as the duration within the hazard rate model described in section 4.
- MARAFTER is a dummy variable which takes the value one if the marriage has taken place after the immigration of the first spouse. This variable can help to detect different behaviour of the two different kinds of spouse reunification.
- As the individual employment status is not known retrospectively, the unemployment rate of the year under consideration was used since it reflects the risk of getting unemployed to a certain extent. UNEMPL also captures the linkage of spouse reunification and the business cycle as was argued in section 3.
- The institutional change coming along with the recruitment stop in 1973 was covered by the inclusion of a dummy variable which takes the value one if the reunification were after 1973. The importance of this aspect has been emphasized in section 3.

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of the nested model can be derived from a usual multinominal logit model as long as there are no choice-specific variables included (as it will be the case in the estimations to follow).

The estimation procedure is carried out based on the econometric model outlined in the previous section. Since I do not observe remigration, I use the binominal logit model in the regression analysis. As long as the alternatives are independently from each other as it is assumed in the model sketched out before, this restriction should not harm the interpretation of the results. The estimation results are shown in Table 3. Table 3 contains three different specifications. Two of the three specifications are based on a model with right-censoring whereas the first one leaves out all individuals who did not have a reunification within the period considered. There are two reasons for this proceeding. First, the distinction has been done for the sake of comparision of the two methods. Secondly, the approach with right-censoring which should normally be the more favourable since it does not leave out observations in a systematic way, has a slight drawback. All individuals still having the spouse abroad in 1985 have the option to remigrate to their home country after 1986. This possibility of changing the state is excluded by definition for the individuals having a spouse reunification before 1985. However, under the assumption of the *Independence from Irrelevant Alternatives* the estimation results should not be affected.

One other important distinction can be made between the two general specification. Since only persons are interviewed in the SOEP who live in Germany, characteristics on the spouse living abroad will only be available if spouse reunification has already taken place. For this reason the specifications with censoring cannot include the age of the spouse living abroad. Eventually, the distinction of specification 2 and 3 lies in the inclusion of the variable "education". Since this variable bears some missing values, there is a tradeoff between a richer specification and a higher number of observations.

Table 3 shows the estimated coefficient and the corresponding t-values for each variable. The estimated coefficient of a particular explanatory variable indicates the relative effect of this variable on the propensity to have one's spouse come to Germany. The estimation results depending on the censoring show some difference with respect to a few variables, however, the inclusion of the education variables does not change the outcome significantly. The latter observation is probably due to the insignificance of education in the regression.

To start with the personal characteristics, not much difference can be established between the two general specifications. The effect of gender is always negative and significant. This finding supports a patriarchal structure of most guestworker households where the wife is more likely to follow her husband than the other way around. The age effect is always positive but insignificant for both the first and the second moving spouse. The systematic age distribution of Table 1c seems to be picked up by some other variables in the model. Education does not play a role in family reunification. Neither high nor low education changes the propensity of spouse reunification significantly. Compared to Turks national differences are only significant for Greeks in specification 1 and Spaniards in specification 2 and 3. Whereas Greeks tend to have their spouse earlier come to Germany, Spaniards seem to wait a longer time.

The longer ago the day of the wedding has been, the less likely is a reunification. In all specification the impact of this variable is quite strong for low values and weakens as values of the upper region of Table 1a are reached. The variable "years since migration" has the opposite effect. The shorter the guest worker is in Germany

the less likely is a spouse reunification. This is a surprising result and seems to contradict the picture in Table 1c. It seems that controlling for some other factors closely related to YSMI does produce this pattern. Such a variable is the dummy MARAFTER which coefficient has a positive sign and is significant. A marriage after one spouse is already living abroad does make spouse reunification more likely as expected.

The duration variable in the estimation - "years since first year of possible spouse reunification" - is one variable where the chosen specification has an impact on the results. Whereas this variable is insignificant in the specification with censoring, it has a significantly negative effect on the propensity of spouse reunification in the specification censoring as should be expected.

The unemployment rate has a negative effect on having one's spouse come to Germany, as expected. However, only the coefficients in specification 2 and 3 are significant. One explanation might be the relatively low fluctuation of the unemployment rate until 1973. The specification without censoring puts a much greater weight on the period after 1973 with higher fluctuation and produces more variation in the data this way. Finally, the institutional dummy PAST73 has a positive effect on the propensity of spouse reunification which is significant in the specification without censoring. This result confirms the considerations being made at the end of section 3: The recruitment stop has indirectly made family reunification more attractive for guest workers.

5.2 Analysis on a Year-to-Year Base

The alternative approach on the investigation of family reunification is grounded on information which uses the panel design of the SOEP. Based on all household heads living in Germany in one particular year, it is investigated under which circumstances these people have their families come, remigrate to the family in the home country themselves, or just do nothing.

Table 4 gives a first insight into the quantative dimension of family reunification in the SOEP on a year-to-year base. Its first section shows how many househead have been in each wave, how many of those have family abroad, and how the family abroad is distributed among spouse and children. Note that spouse and children have not to add up to total family abroad since there are some household heads who have both spouse and children abroad. It can be seen that the number of household heads with family abroad decreases both in absolute and relative terms with time which is due to family reunification in Germany and remigration.

The second section in Table 4 provides information on the incidence of remigration and family reunification between adjacent waves. Since some household heads left the sample due to other reasons than remigration, the absolute numbers of all three possibilities are slightly less than the second totals in the line of the table. Whereas the proportion of those having their family come to Germany is relatively constant over the years, the magnitude of remigration to family in 1984 catches the eye. This year, remigration behaviour was affected by the "return-promotion act" of 1983 which ruled that claimants of benefits paid for early re-migration had to leave Germany by September 1984 (see Hönekopp, 1987 and Steiner/Velling, 1993).

Total family reunification in Germany can be distributed among spouses and children moving to Germany. The relative share of either family member is shown in the third section of the table. Again, the numbers add up to more than 100% as some household have both spouse and child(ren) move. Over the total period covered by the SOEP, there are more households who have their children come to Germany than those whose spouse moves in. This result is consistent with Münzenmaier/Walter (1983) who found that 23% of all household heads in their sample with child(ren) abroad intended to have their children come but the corresponding rate for spouses was only 14%. Another reason is that only half the number of households have their spouses abroad compared to those with children abroad (see lines 3 and 4 in section 1 of the table).

The values in Table 4 are the basis that follow for the dependent variables in the regressions. They are depicted together with all explanatory variables of the model in Table 5. The variable choice in Table 5 is based on the small literature on family migration behavior as well as on the much larger literature on (re)migration behavior of guest workers (see e.g. DeJong/Fawcett, 1981 for a general survey, and Steiner/Velling, 1993 for a survey on the remigration literature). Table 5 shows the variable definition as well as mean/proportion and standard deviation of each variable. The summary statistics are depicted for all identifiable child-parent reunification and all total family reunification including all cases with child(ren)/family abroad. Spouse reunification is left out for the reasons given below. There has been some grouping of the variables to indicate which variable addresses which aspect of family reunification. Besides the personal characteristics I include several variables which reflect the family situation in the home country, some indicators of social integration of the household head in Germany, and finally some indicators for economic incentives for choosing one of the three alternatives.

Some of the variables in Table 5 still need some further explanations:

- The variable TRAIN_A indicates whether the household head has had a vocational training in the home country. Those households with vocational training do probably have less problems to find an adequate job after remigration.
- The variable group *family abroad* is supposed to cover the maintained family links to the home country and the disruption of these links, respectively. The variable MOTHER_A also accounts for the possibility that the mother takes care of children left in the home country. The inclusion of SPOUSE_A captures the following idea: If the spouse lives in Germany, the care for the children left behind must already have been arranged somehow. Having the children come to Germany would probably mean for one spouse (usually the wife) to stop working, thus leading to a substantial financial loss. NCHILD_A - the number of the children in the home country - stands for a further tie to the home country making separate spouse reunification more difficult. Finally the age of the children is supposed to capture some considerations as finishing children's education before they could come to Germany and the age restriction of the institutional regulations.
- Net household income is divided into household head´s net labour income and other income of the household to allow for differences in behaviour with respect to this variable. The latter variable also contains interest income on savings and thus acts as a proxy for household wealth.

- The household head's cumulated duration of unemployment is calculated by adding the duration of all unemployment spells within the twelve months before the date of interview in each wave, where spells may be both left and right censored. This variable is interacted with an individual's employment status at the date of interview. Thus, past unemployment duration has only an effect on an individual's expected duration of stay if he or she is unemployed at the date of interview.

As having been outlined in section 4, the econometric analysis is based on a multinomial logit model which has the interpretation of a discrete hazard rate model with left and right censoring. As before, the assumption of *Independence from Irrelevant Alternatives* is used in order to justify this approach over alternative specifications. The IIA-assumption is tested in either of the specifications using the test suggested by Hausman/McFadden (1984)[13]. It turns out, that the IIA assumption cannot be rejected in either specification.

The results of the maximum likelihood estimations are presented in Table 6a and 6b. Whereas Table 6a is based on child-parent reunification, Table 6b refers to total family reunification. A separate estimation on spouse reunification did not perform very well since the number of cases was too low both in absolute and relative forms in the two reunification categories (see Table 4). This way, an estimation specified rich enough to have sufficient explanatory power was not possible. I therefore decided to consider spouse reunification only in the context of total family reunification. All tables contain the usual inference statistics as well as the percent of correctly predicted cases which should be compared to the proportion of those doing nothing in the first row of Table 5.

As a first look at Table 6a and 6b suggests, there is not much difference between the estimation results in each table. Beginning with the personal characteristics, the gender does not have a significant effect on the transition process. Its irrelevance for child-parent reunification does not surprise, but the insignificance for family reunification which includes also spouse reunification is against intuition. Also, the estimation results of the retrospective approach indicated that men are more likely to move to their husband than the other way around. One possible explanation for this result is that the synopsis of child-parent and spouse reunfication in the second specification wipes out the single negative effect of gender on spouse reunification. This explanation seems quite plausible comparing the estimation results in Table 6a and 6b[14].

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[13] This test is a modification of the usual Hausman test. The IIA assumption is tested by comparing the estimation results of the unrestricted multinominal model versus the one of a restricted model which leaves out one alternative for the estimation (here: Remigration). The test statistic is constructed like the usual Hausman test statistic (see Hausman, 1978). If the IIA assumption holds, the test statistic follows a χ^2-distribution. Since the weighing matrix is only asymptotically positive semidefinite, but is frequently negative semidefinite in finite samples (like in my application, too), I modify the covariance matrix for the parameters of the restricted estimation by the method suggested by Hausman and McFadden (1984, p. 1226). The test statistic is reported at the bottom of Table 6a and 6b.

[14] It would have been desirable to separate the effect of gender on child-parent and on spouse reunification. However, the low number of cases falling into the second category did not admit a separate consideration of the two aspects.

The age effect is positive and significant. Whereas the propensity to have the family/child(ren) come to Germany increases with age, remigration to the family is less likely the older the household head is. Relative to guestworkers from Turkey, only Yugoslavians and Spaniards differ in their behavior. According to the estimation results, guest workers from Yugoslavia have their children less likely come to Germany than Turks. On the contrary, Spaniards prefer family and child-parent reunification much more than Turks, but tend to remigrate less often than the reference group. The differences of the nationality effect to the results in the previous section might indicate a possible change over time in the behaviour of the different nationalities. Different education levels do not have a significant effect on family reunification as before. Also vocation training in the home country does not change the decision of family reunification in Germany or abroad significantly. Nevertheless, the signs of the coefficients are as expected.

The family background in the home country does have a significant effect on family reunification. Having the mother living in the home country does significantly lower the chances to fetch children and spouse. However, as the remigration coefficient of this variable is negative and insignificant, it can be assumed that it is the potential child care that drives that first coefficient negatively rather than family linkage.

The variable "spouse abroad" has to be interpreted with care within the second specification. For the spouse reunification, this dummy variable bears always the value of one, thus not distinguishing from the intercept. Therefore, "spouse abroad" can only be interpreted with respect to child-parent reunification in Table 6b. If the spouse still lives abroad, it is more likely that the children come to Germany. This finding seems to contradict the statement by Münzenmaier/Walter (1983) who assumed a division of tasks between household head and spouse in Germany and abroad for some households. It rather confirms the view that the couple's urge of giving up a separate living is reinforced as children live abroad. On the other hand, if the spouse does not live abroad but in Germany, presumably both spouses work in Germany achieving a higher total income. This higher income will most likely exceed the cost of child care and accommodation abroad due to a higher average income in Germany. In contrast to its effect on having the children come to Germany, the foreign residence of the spouse does not have a significant affect on the remigration behaviour of the household head to the children. This result fits to the finding of Steiner/Velling (1993) that having children in the home country affects the remigration propensity whereas the place of living of the spouse does not matter significantly.

The number of children abroad has a negative but insignificant impact on both re-unification decisions. The age of children abroad does not seem to have a significant impact on family reunification even if the signs are as expected. However, the estimation results are affected by a high degree of multicollinearity between the age variable and the number of children variable. Leaving the latter variable out leads to a higher t-statistic for each coefficient lifting the coefficient for remigration to children above 18 above the significance level. Therefore a careful interpretation of the age coefficients seems appropriate. The younger the child the greater the urge of family reunification - in Germany or abroad. Children in school age are more likely to come to Germany than that the household head moves back to them which corresponds to the findings of Mehrländer (1974). Finally, children between 16 and 18 years old reduces the chances of family reunification. This might

be due to the institutional framework for family reunification in Germany, but could also be attributed to their expected loosening from home.

Coming to the integration indicators, a higher number of years since migration does lowers the propensity to have the family come to Germany. Since this variable is the only duration variable in the model, it captures all of the effect that family reunification is less likely, the longer the household head has lived separated from his family (see also section 5.1). The significant coefficients for the other integration variables are approximately as expected. Feeling good in Germany does improve the chances of having the family come, whereas feeling bad promotes the remigration ambitions. If the household head transfers money to the family back home, his propensity to return to the family is higher which appears quite plausible.

Looking at the effect of income on family reunification, a higher labour income decreases the propensity to return home. There are two possible explanations for this finding: If the level of income reflects the place of the individual in the income hierarchy, a higher income attenuates the urge of migration in order to improve social standing (see Stark 1991, Ch. 7-10 to this aspect). Also a positive selection process on migration could explain the result. The successful migrants stay in Germany whereas the less successful migrants return home first. In contrast to Münzenmaier/Walter (1983) I did not find a positive and significant effect of income on having one's family come to Germany.

The findings on unemployment reflect the importance of distinction between the individual concern and the total unemployment level in the economy. As in section 5.1, the effect of an increase in the overall unemployment rate on reunification in Germany is negative and significant whereas the coefficient for remigration is insignificant. The duration of the individual unemployment does not seem to matter. The personal destiny of being unemployed however has a positive and significant effect on having the family come to Germany which is attenuated when spouse reunification is included. A possible explanation is that we measure the employment status at the day of the interview, the reunification decision, however, is within the year after the interview. This way, the employment status could have changed in the meanwhile. Employees who have become unemployed during the year might have dispensed with the family reunification whereas unemployed household heads might have found a job again (the average duration of unemployment in the sample is about six months). It may also be that the break in employment has also helped to prepare the family reunification in Germany although this explanation might be somewhat speculative. Nevertheless, the results show that the individual unemployment status cannot be used for explanation of a deference of family reunification. However, one has to be careful to draw conclusions out of this findings for newly arrived foreign workers. Most of the guest workers included in the underlying sample have lived in Germany for many years. Their status of residence is consolidated so that they do not lose their permit when they are unemployed - which is not true for those foreigners who have recently arrived. Anyway, it can be concluded that the personal destiny of being unemployed must be sharply separated from the unemployment level in the economy. Whereas the former stands for the actual employment status of the individual, the latter rather captures the risk of becoming unemployed and the chances of finding a new job.

6. Summary and Conclusion

The family reunification of guest workers in Germany has been analyzed in two different aspects. First, family reunification was examined with respect to its share in total immigration flows and with respect to its linkage to the business cycle. Secondly, the circumstances of family reunification were the subject of interest. Family reunification was thereby split into spouse and child-parent reunification using different concepts on either subject.

In the sixties, seventies and early eighties, family reunification has constantly played a considerable role for total immigration. Whereas its proportion of total gross immigration was still low in the sixties, it rose after the recruitment stop significantly reaching intermediately a peak of 65% before flattening in the beginning of the eighties. Spouse reunification as well as child-parent reunification has been quite sensitive to business cycle fluctuations during the total period of investigation. However, family reunification was not as sensitive to the swings of total unemployment rate as total gross immigration did since the fluctuations over time had a somewhat smaller amplitude. The potential of family reunification decreased almost without interruption in the period considered. That means that most of the household heads have already had their family come to Germany by 1985.

Two caveats still have to be recalled for a correct interpretation of the data transferred to the aggregate level. First, the sample might not to be sufficiently representative for the foreign population with respect to family reunification even if the aggregate gross immigration figures do not support this apprehension. Second, the selection process by remigration could harm this property of representativeness since we have only those migrants in the sample who did not remigrate. As the assumption of *Independence from Irrelevant Alternatives* has been tested in the last section and has not been rejected, the omission of remigrated foreigners should not disturb the results fundamentally.

The underlying factors for family reunification have been investigated using two different approaches. The retrospective approach was used to examine spouse reunification by looking backwards from 1985. Since this approach was restricted by definition to guest workers who are still living in Germany by 1985, only the decision to have the spouse come or not could be analyzed. It turned out that the rate of spouse reunification increases with "years since migration" and when the spouse already living in Germany is female or is Greek. It decreased with higher values for the "duration of marriage" and "years since spouse reunification was first possible". A higher unemployment rate led to a lower propensity of reunification as well as a base year after 1973 or a marriage while already being in Germany did. Finally, Spaniards seem to be less inclined to have their spouses come.

The alternative approach was carried out exploiting the panel design of the SOEP. Family reunification could be identified when spouse and/or children moved into the household the following year. In contrast, if the household head with family abroad had left the SOEP the following wave because of "moving abroad", this could be identified as remigration back to the family. Based on a multinomial logit

estimation with the interpretation of a discrete hazard rate model, the effect of a large set of variables on the decision upon child-parent and total family reunification was examined. For the decision upon having children and total family come to Germany, the age had a positive effect whereas the effect of "years since migration" was negative. The Spaniards tended more to family reunification as the other nationalities did. Also the feeling of satisfaction with the situation in Germany influenced this propensity positively. In contrast, having the mother of household head or spouse still living in the home country made a family reunification in Germany more unlikely which could be attributed to the potential child care of the grandmother. Being unemployed positively influenced the rate of family reunification whereas an increase in the overall unemployment level decreased the probability of reunification in Germany. It seems that the individual unemployment status and the unemployment rate in the economy affect family reunification in different ways where the latter picks up particularly the risk of getting unemployed and the chance of finding a new job.

For the remigration decision, the indicators of social integration had the best explanatory power. The remigration to the family in the home country was more likely when the household head was not satisfied with his situation in Germany and transfered money to his relatives back home. The propensity to remigrate decreased with increasing household income, higher age of the household head and Spanish nationality. Also the older the children back home were, the less likely was a remigration back to the family in the home country.

In view of the small empirical evidence on family reunification, this study can contribute to a better understanding of the mechanism underlying the decision of family reunification. This appears quite necessary in order to be able to give an accurate forecast of immigration flows which are caused by family reunification for the future - a neccessity to formulate an active migration policy as it is discussed in these days.

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Fig. 1: Age Structure of Foreigners in the Federal Republic of Germany as of 27 May 1970 and 25 May 1987

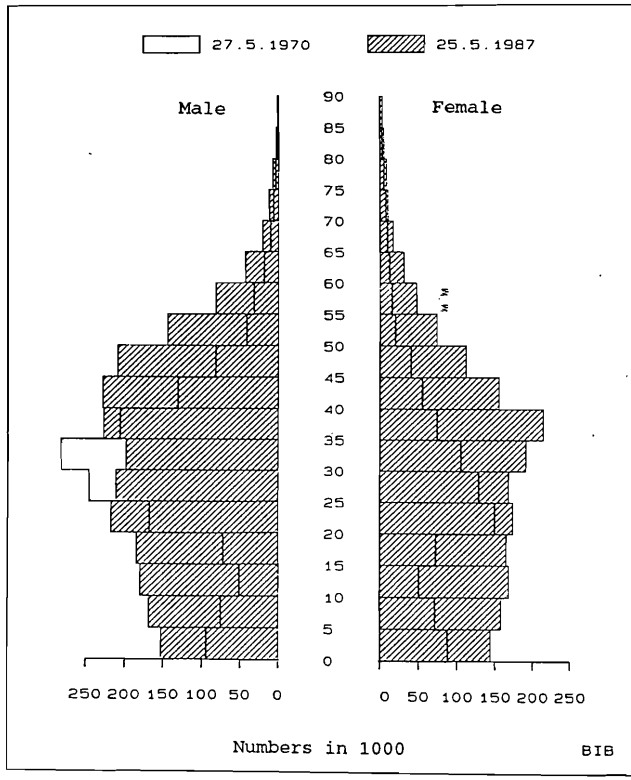
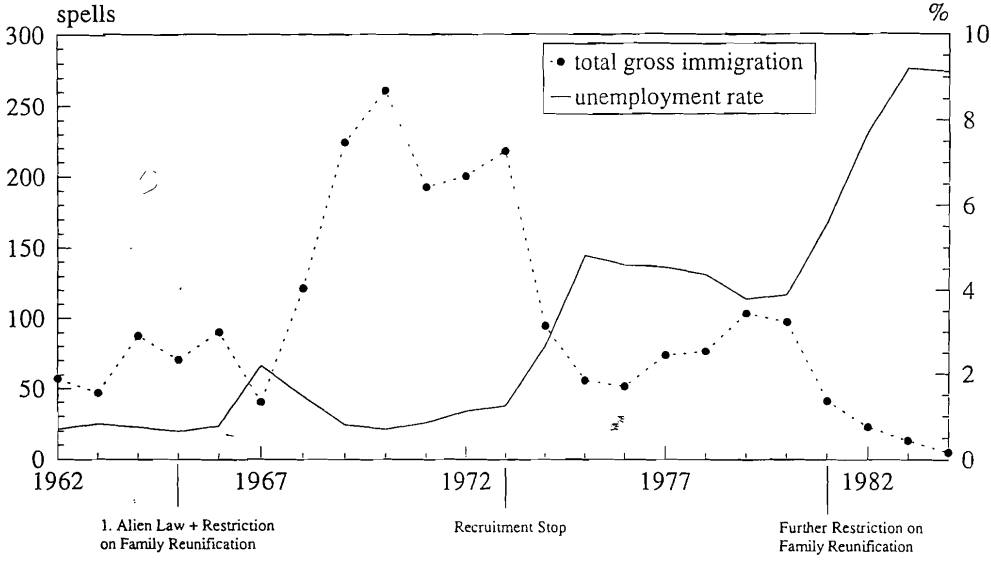


Fig. 2a. Total Gross Immigration and Unemployment Rate 1962-1984

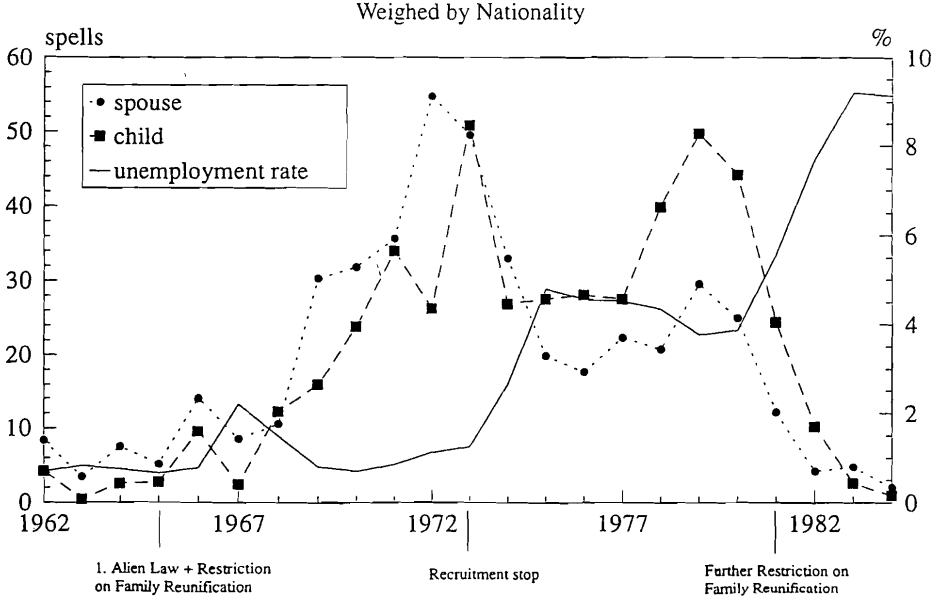
Weighed by Nationality



Gross immigration identifiable in the SOEP-B-wave by year of immigration; unemployment rate taken from OECD-data.

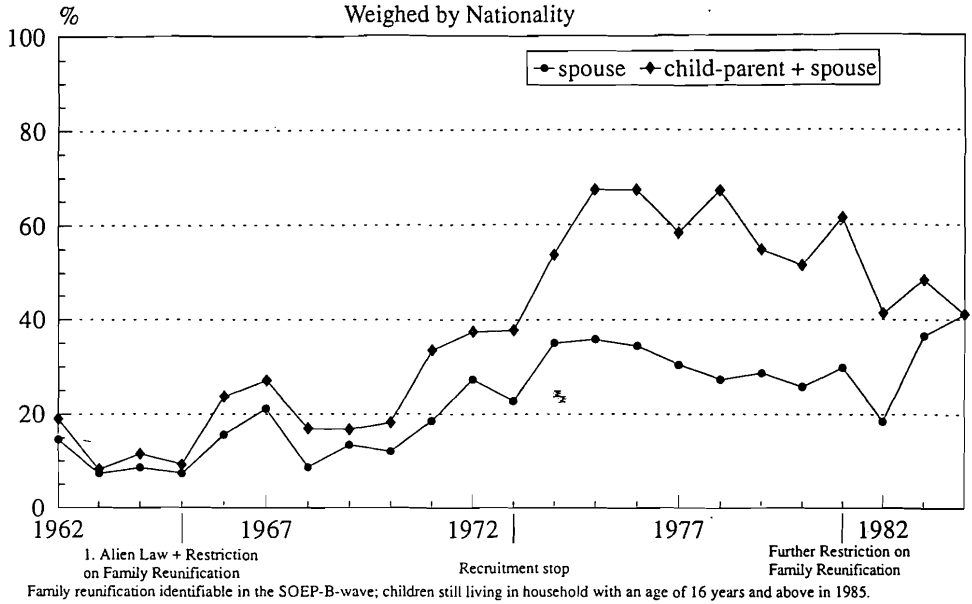
Fig. 2b. Family Reunification and Unemployment Rate 1962-1984

Weighed by Nationality



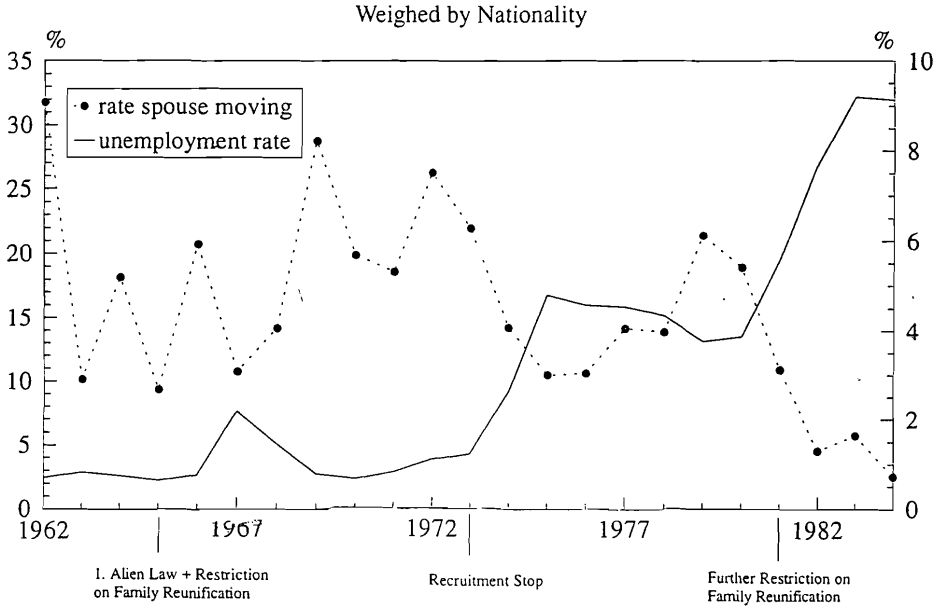
Family reunification identifiable in the SOEP-B-wave; children having been living in household between 1984 and 1989 and aged 13 years and above in 1985.

g. 3. Total Family Reunification in Proportion to Total Gross Immigration 1962-1984



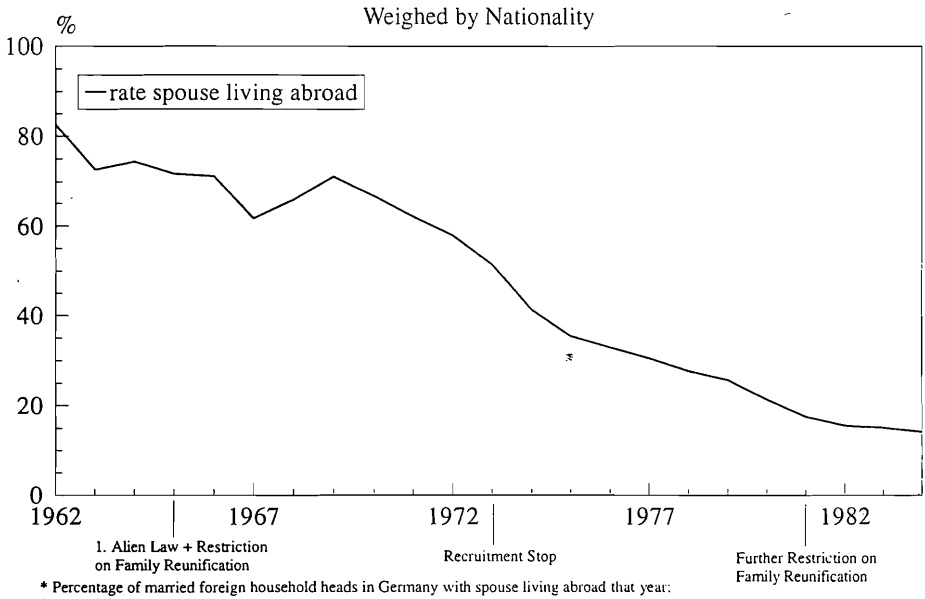
Family reunification identifiable in the SOEP-B-wave; children still living in household with an age of 16 years and above in 1985.

Fig. 4. Rate of Couple Reunification* and Unemployment Rate 1962-1984



* Percentage of married foreign people in Germany with the spouse moving from abroad that year; Source: SOEP-B-wave (1985).

Fig. 5. Rate of Married Foreign Household Heads with Spouse abroad 1962-1984



* Percentage of married foreign household heads in Germany with spouse living abroad that year.
Source: SOEP-B-wave (1985).

Table 1a: Duration of Marriage at Spouse Reunification 1985 Retrospective		
Years	Duration of Marriage	
	Spells	%
0	124	28,3
1	44	10,0
2	20	4,6
3-4	34	7,7
5-7	33	7,5
8-10	34	7,7
11-14	62	14,1
15-19	44	10,0
20-24	31	7,1
>24	13	3,0
Sum	439	100,0
Mean (Years) (Std. dev.)	7,46 (7,97)	

Table 1b: Years since Migration at Reunification 1985 Retrospective				
Years	Spouse Reunification		Child/Parent Reunification	
	Spells	%	Spells	%
1	91	20,7	48	8,4
2	68	15,5	61	10,6
3-4	99	22,5	110	19,2
5-7	83	18,9	131	22,8
8-10	66	15,0	131	22,8
11-14	22	5,0	69	12,0
15-19	6	1,4	17	3,0
20-24	2	0,5	5	0,9
≥24	2	0,5	2	0,3
Sum	439	100,0	574	100,0
Same Year*	304	69,25	66	11,5
Mean (Years) (Std. dev.)	4,87 (4,52)		6,63 (4,62)	

* Joint migration to Germany by household head and spouse (child)

Table 1c: Age at Spouse Reunification 1985 Retrospective				
Age	Moving Spouse		Spouse Living in Germany	
	Spells	%	Spells	%
13-17	58	13,2	5	1,1
18-20	67	15,3	10	2,3
21-24	81	18,5	63	14,4
25-29	86	19,6	112	25,5
30-34	66	15,0	104	23,7
35-39	41	9,3	73	16,6
40-44	29	6,6	43	9,8
≥45	11	2,5	29	6,6
Sum	439	100,0	439	100,0
Mean (Age) (Std. dev.)	26,54 (8,27)		31,76 (7,47)	

Table 1d: Age at Child-Parent Reunification 1985 Retrospective					
Age	Moving Child		Age	Parent Living in Germany	
	Spells	%		Spells	%
0-2	74	11,0	13-17	1	0,1
3-5	102	15,0	18-20	2	0,3
6-10	213	31,6	21-24	14	2,1
11-15	177	26,3	25-29	53	7,9
15-17	75	11,1	30-34	164	24,3
≥18	33	5,0	35-39	194	28,8
			40-44	151	22,4
			≥45	95	14,1
Sum	674	100,0	Sum	674	100,0
Mean (Age) (Std. dev.)	9,21 (14,33)		Mean (Age) (Std. dev.)	37,49 (6,67)	

Table 2 Definition of Variables and Summary Statistics
Retrospective 1985 - Evaluated at Year of Spouse Reunification

Variable	Variable Definition	Mean/ *Proportion*	Standard deviation
SEX	Spouse already living in Germany is female = 1	11.24	-
AGE	Age of spouse already living in Germany	31.71	7.45
AGESP	Age of spouse moving to Germany	28.45	8.28
EDUC_LOW	Low education *1	36.75	-
EDUC_HIGH	High education *1	7.83	-
NATY	Nationality = Yugoslavia	20.61	-
NATG	= Greece	13.55	-
NATI	= Italy	14.99	-
NATS	= Spain (base category = Turkey)	9.13	-
YSMA	Years since marriage	7.44	7.94
YSMI	Years since migration of spouse already living in Germany	4.77	3.98
MARAFTER	Marriage after having migrated to Germany = 1	19.02	-
YSFPR	Years since first year of possible spouse reunification	2.66	3.37
UNEMPL	Unemployment rate at year [in %] under consideration	2.28	1.88
PAST73	Spouse moving to Germany after 1973 = 1	37.94	

Number of individuals = 427

*1 since missing values are occuring at "education", the number of individuals reduces to 410 for this variable

Table 3: Determinants of Spouse Reunification.
Maximum Likelihood Estimation - Retrospective 1985

Variable	Without Censoring	With Censoring	
CONSTANT	-1,4969	-0,3640	-0,4250
	(-2,81)*	(-0,93)	(-1,05)
SEX	0,7766	0,5334	0,5014
	(2,85)*	(2,44)*	(2,24)*
AGE	0,0207	0,0022	0,0043
	(1,13)	(0,15)	(0,28)
AGESP	0,0262	--	--
	(1,39)	--	--
EDUC_LOW	--	--	0,0128
	--	--	(0,10)
EDUC_HIGH	--	--	0,0693
	--	--	(0,32)
NATY	0,0026	-0,0822	-0,0961
	(0,01)	(-0,51)	(-0,58)
NATG	0,7046	0,2382	0,2159
	(2,97)*	(1,14)	(1,00)
NATI	-0,0554	-0,0137	-0,0209
	(-0,26)	(-0,07)	(-0,11)
NATS	-0,3312	-0,7040	-0,6946
	(-1,38)	(-3,28)*	(-3,14)*
YSMA	-0,1754	-0,0455	-0,0463
	(-4,12)*	(-1,76)**	(-1,75)**
YSMASQ/100	0,3749	0,0212	0,0215
	(2,88)*	(0,48)	(0,48)
YSMI	0,1050	0,1367	0,1306
	(1,74)**	(2,48)*	(2,32)*
YSMISQ/100	-0,1607	-0,4167	-0,3985
	(-0,76)	(-1,70)**	(-1,60)
MARAFTER	0,5650	0,5233	0,5281
	(1,83)**	(2,10)*	(2,10)*
YSFPR	-0,0291	-0,2688	-0,2706
	(-0,35)	(-4,02)*	(-3,98)*
YSFPRSQ/100	-0,2336	0,9636	0,9630
	(-0,48)	(2,65)*	(2,61)*
UNEMPL	-0,0568	-0,2747	-0,2624
	(-0,70)	(-4,42)*	(-4,12)*
PAST73	0,1374	0,4373	0,3961
	(0,47)	(1,86)**	(1,65)
Statistics:			
Likelihood-Ratio-χ^2 (d.o.f)	202,67 (16)	345,80 (15)	333,14 (17)
Percent Correctly Predicted	73,25	82,43	82,81
Mc Fadden's pseudo R^2	0,1216	0,1594	0,1588
Number of observations	1327	2208	2158

Note: Test statistics are marked by one (two) asterisk(s) if significant at the 5% (10%) level.
T-values are in parenthesis.

Table 4: Family Reunification

Year-to-Year Base

Lines		1984	1985	1986	1987	1988	1989
1	Household Heads Total	1396	1180	1123	1113	1065	1037
2	thereof: with Family Abroad	228	214	178	168	137	100
3	with Spouse Abroad	90	67*2	60	58	43	39
4	with Children Abroad	196	186	146	139	117*2	81
5	thereof:*1 Nothing Happened	85,5%	89,8%	87,8%	89,6%	85,8%	--
6	Remigrated to Family	7,5%	3,1%	6,4%	3,9%	4,7%	--
7	Part of Family Moved to Germany	7,0%	7,1%	5,8%	6,5%	9,5%	--
8	thereof: Spouse Moved to G.	46,7%	50,0%	50,0%	30,0%	14,3%	--
9	Child(ren) Moved to Germany	80,0%	71,4%	60,0%	80,0%	85,7%	--

*1 Only those with family abroad who are still in the SOEP in the consecutive wave or have remigrated.

*2 Statement of previous wave since question was not asked that wave.

Table 5 Definition of Variables and Summary Statistics
Year-to-Year Base - Evaluated for All Family Reunification

Variable	Variable Definition	Child-Parent Reunification		Family Reunification	
		Mean/ Proportion	Standard deviation	Mean/ Proportion	Standard deviation
	Dependent Variable				
NOTH_HA	Family reunification did not happen = 0	*90.7*	-.-	*89.6*	-.-
FAM_GERM	Family moved to Germany = 1	*4.3*	-.-	*5.8*	-.-
REM_FAM	Remigration to family abroad = 2	*5.0*	-.-	*4.6*	-.-
	Personal Characteristics				
SEX	Female = 1	*6.3*	-.-	*8.6*	-.-
AGE	Years of age	42.3	7.3	43.6	8.2
NATY	Nationality = Yugoslavia	*31.3*	-.-	*30.0*	-.-
NATG	= Greece	*10.1*	-.-	*10.7*	-.-
NATI	= Italy	*14.0*	-.-	*14.1*	-.-
NATS	= Spain (base category = Turkey)	*13.1*	-.-	*12.7*	-.-
EDUC_LOW	Low education	*34.6*	-.-	*36.2*	-.-
EDUC_HIGH	High education (base category = no degree)	*12.3*	-.-	*11.5*	-.-
TRAIN_A	Training in home country = 1	*43.9*	-.-	*44.6*	
	Family Abroad				
MOTHER_A	Mother living in home country = 1	*58.3*	-.-	*55.5*	-.-
SPOUSE_A	Spouse living abroad = 1	*24.8*	-.-	*36.9*	-.-
NCHILD_A	Number of children living in home country	1.8	1.1	1.5	1.2
CHILD_5	Child up to 5 years living abroad = 1	*14.2*	-.-	*11.9*	-.-
CHILD_15	Child between 6 and 15 years = 1	*76.4*	-.-	*64.1*	-.-
CHILD_18	Child between 16 and 18 years = 1	*30.2*	-.-	*25.3*	-.-
	Integration Indicators				
YSMI	Years since migration to Germany	16.4	4.5	16.6	4.7
GSPEAK_B	Knowlege of spoken German = bad	*20.8*	-.-	*21.6*	-.-
GSPEAK_G	= good; (base category = sufficient)	*36.5*	-.-	*34.8*	-.-
FEEL_B	Subjective evaluation of well-being in Germany = bad	*8.0*	-.-	*8.1*	-.-

Table 5 continued.

FEEL_G	= good (base category = indifferent)	*60.4*	-.-	*60.3*	-.-
TRANSF	Transfers to home country = 1	*78.0*	-.-	*77.2*	-.-
	Economic Indicators				
HHLINC	Monthly net labour income of household head (1000 Marks)	1767.3	1100.1	1714.3	1054.4
RHINC	Other monthly net household income (1000 Marks)	807.7	919.5	771.6	1281.0
UNEMP	Household head unemployed at date of interview= 1	*6.1*	-.-	*6.2*	-.-
UNEMP_DUR	UNEMP interacted with cumulated unemployment duration within last year, DUR	0.4	1.9	0.4	1.8
UNEMP_RAT	Unemployment rate in Germany 1984-1989 [%]	9.0	0.2	9.0	0.2
Number of individuals		636		758	

Table 6a Determinants of Child-Parent Reunification

Maximum Likelihood Estimation - Year-to-Year Base

Variable	Transition to: Child(ren) coming to Germany		Remigration to child(ren) abroad	
	Parameter	t-value	Parameter	t-value
CONSTANT	23.8106	1,94**	18.9438	1.65
Personal Characteristics				
SEX	0.0908	0.07	-0.1279	-0.16
AGE	0.1133	2.61*	-0.0839	-1.97*
NATY	-1.3639	-1.92**	-0.1684	-0.30
NATG	-0.0128	-0.01	-0.5176	-0.65
NATI	-0.2990	-0.40	-0.3911	-0.53
NATS	1.4455	2.30*	-2.4253	-2.01*
EDUC_LOW	-0.2416	-0.51	0.1579	0.32
EDUC_HIGH	-0.6431	-0.52	-0.3871	-0.52
TRAIN_A	-0.1790	-0.37	0.4634	0.85
Family abroad				
MOTHER_A	-2.3832	-3.97*	-0.5765	-1.20
SPOUSE_A	0.9071	1.60	-0.5785	-0.84
NCHILD_A	-0.1375	-0.53	-0.2788	-0.85
CHILD_5	0.3617	0.46	0.9690	1.32
CHILD_15	0.9536	1.30	-0.2171	-0.31
CHILD_18	-0.7434	-1.15	-1.5502	-1.67
Integration Indicators				
YSMI	-0.2975	-4.21*	0.1066	1.48
GSPEAK_B	0.7695	1.33	0.4003	0.69
GSPEAK_G	0.5213	0.91	-0.3868	-0.72
FEEL_B	-0.7861	-0.70	1.3831	1.84**
FEEL_G	1.1348	2.03*	0.8794	1.57
TRANSF	1.1777	1.57	1.4503	2.17*
Economic Indicators				
HHLINC/1000	0.1353	0.38	-1.0043	-2.58*
RHINC/1000	0.1286	0.46	-0.0606	-0.21
UNEMP	3.0893	2.64*	-1.0475	-0.81
UNEMP_DUR	-0.2438	-1.31	-0.1223	-0.70
UNEMP_RATE*100	-3.2416	-2.37*	-2.1248	-1.68
Statistics:				
Likelihood-Ratio-χ^2 (d.o.f)	123.37 (54)			
Percent Correctly Predicted	91.51			
Mc Fadden's pseudo R^2	0.2601			
Hausman-Mc Fadden IIA-Test	0.8683 (27)			
Number of observations	636			

Note: Test statistics are marked by one (two) asterisk(s) if significant at the 5% (10%) level.

Table 6b Determinants of Family Reunification

Maximum Likelihood Estimation - Year-to-Year Base

Variable	Transition to: Family coming to Germany		Transition to: Remigration to family abroad	
	Parameter	t-value	Parameter	t-value
CONSTANT	13.9815	1.45	13.2813	1.37
	Personal Characteristics			
SEX	-1.0432	-0.93	-0.5803	-0.84
AGE	0.0791	2.31*	-0.0839	-2.49*
NATY	-0.6693	-1.23	0.0047	0.01
NATG	-0.1093	-0.15	-0.2187	-0.32
NATI	0.6430	1.18	-0.1506	-0.24
NATS	1.4117	2.68*	-1.9797	-1.80**
EDUC_LOW	-0.4218	-1.09	-0.0007	-0.00
EDUC_HIGH	-0.7283	-0.67	-0.1476	-0.24
TRAIN_A	0.1930	0.49	0.2450	0.57
	Family abroad			
MOTHER_A	-1.8458	-3.91*	-0.6331	-1.55
SPOUSE_A	0.8866	1.99*	-0.2219	-0.47
NCHILD_A	-0.1163	-0.48	-0.2294	-0.80
CHILD_5	0.6755	0.95	0.5349	0.83
CHILD_15	0.7257	1.29	-0.1984	-0.34
CHILD_18	-0.3642	-0.69	-0.7432	-1.12
	Integration Indicators			
YSMI	-0.1782	-3.46*	0.0377	0.67
GSPEAK_B	0.4501	1.04	0.1831	0.36
GSPEAK_G	-0.0046	-0.00	-0.3044	-0.69
FEEL_B	-0.0435	-0.06	0.9770	1.55
FEEL_G	0.6950	1.56	0.5249	1.19
TRANSF	0.4491	0.79	0.8520	1.69**
	Economic Indicators			
HHLINC/1000	-0.1822	-0.58	-0.7857	-2.47*
RHINC/1000	-0.0317	-0.28	-0.0026	-0.01
UNEMP	1.7058	1.76**	-0.3486	-0.33
UNEMP_DUR	-0.1028	-0.80	-0.1360	-0.87
UNEMP_RATE*100	-2.0312	-1.92**	-1.3332	-1.27
Statistics:				
Likelihood-Ratio-χ^2 (d.o.f)	119.06 (54)			
Percent Correctly Predicted	89.71			
Mc Fadden's pseudo R^2	0.1935			
Hausman-McFadden IIA-Test	0.6075 (27)			
Number of observations	758			

Note: Test statistics are marked by one (two) asterisk(s) if significant at the 5% (10%) level.