Immigrants and the Public Coffer: The Case of Germany

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the U.S. He excluded those families from the analysis who immigrated before 1950, because they "... must now be seen as part of an ongoing system" (Simon, 1984, p. 59). After all, these families made up about half of all immigrant families. If they entered the U.S. before 1950, it is obvious that they represent mainly the older age groups among the immigrants. Simon hence compares one group of natives representing all age groups with several groups of immigrants together representing the younger half of the immigrants.

Data on important transfer payments was included in the SIE sample, as well as income data. Simon roughly estimated the tax payments of various groups by multiplying their income with a "mean" tax rate of 29 percent. The effects of progressive taxation are therefore excluded. According to the SIE data the income of immigrants grew with the length of their stay in the U.S. Immigrants who had been in the U.S. longer than four years and less than 25 had a higher income than the average natives. The cohorts that Simon excluded from the analysis had an average income below the average of natives. This is not surprising, since a great part of native families were in the pension age. According to Simons results the use of transfer payments by immigrants grows with the length of their stay in the U.S. The highest transfer payments were received from families who came to the U.S. before 1950.

Julian Simon's analysis comes to the result that immigrants contribute more to public households than they take from them. However, this result is only valid for the younger half of the immigrants that came to the U.S. after 1950. In some way this result was already determined by the question Simon asked. If he considered on the immigrant side only the younger half while including on the natives side also the older half (with lower tax payments and higher use of transfer payments) no calculations were necessary to predict the result. This could be avoided by controlling for age.

Francine Blau (1984) used the same data set as Simon to compare transfer payments of immigrants and natives in the U.S. Blau differentiates between welfare payments and social insurance payments. The first are financed by tax payments, the second by fees. These two categories are also different in terms of eligibility requirements. Blau calculates the average use of transfer payments for all immigrants. Then the average transfers received by immigrant households are higher than those received by native households. Immigrant households with a male head received 50 percent more transfer payments than native households with a male head. In case of households headed by females the difference is not that large, but comparable.
3 Method of Analysis

The discussion of previous studies is leading to the basic approach of this paper. Obviously the analysis of macro-data has to be supported by the use of micro-data. This will allow a deeper insight into the differences between natives and foreigners with regard to contributions to the social security system on one side and the use of benefits on the other side. Studies for the U.S. and other countries have shown the advantages of this approach. It had been not applied to Germany so far. Ideally, we would like to have a set of micro-data available for a longer time period to see things in development. The German Socio-Economic Panel seems to be such a data set. As will be shown later this does not apply to a significant comparison over time for this specific question. Therefore the SOEP data are used for a detailed analysis for one year only. This analysis will identify major determinants. Once the impact of these factors has been shown with micro-data it is easier to make indirect estimates for a period of time based on macro-data.

Several problems in methodology and data availability have to be discussed in advance. An important determinant for the impact of immigration are legal regulations on the immigrants' entitlement to welfare transfers, on their contributions to the social security system and on their tax payments. Concerning these regulations there are three groups of immigrants in Germany.

- A first group are foreigners in Germany are refugees. Most of them came in, search of political asylum. A legal decision on their application can take years. A foreign population of 1.5 million refugees in different legal categories is estimated to live in Germany in the end of 1992. In the past the access of asylum seekers to the German labor market has been delayed for several years. After July 1991 asylum seekers can enter the labor market without any delay. But actually their labor force participation rate is very low. They are entitled to certain social welfare benefits, which are the basic source of their subsistence. Applicants for political asylum are clearly a burden for the public household, since they generally do not pay taxes or fees.

- A second group of immigrants are labor migrants. They constitute a foreign population of about 5 million people currently. Foreign workers are generally entitled to most of the social services which are available for Germans. On the other hand they pay taxes and social security fees like German citizens. The impact of this large group on public finances can only be evaluated by empirical estimates. The following part of this paper mainly concentrates on this group.

- A third group of immigrants are ethnic Germans from Eastern Europe (Aussiedler). They are German citizens and have the same rights and obligations as German "natives" after their arrival. This group is sup-
The Socio-Economic Panel is a longitudinal sample survey conducted annually in Germany. It contains representative micro-data on persons, families and households. The panel started in 1984, questioning about 6,000 households with more than 12,000 persons in Germany. Immigrants from the main "guest"-worker nationalities (Turkish, Greek, Italian, Yugoslav and Spanish) were over-represented in the panel, with together 1,415 households in 1984. The intention was to allow conclusions not only for foreign workers as a group but also for the main nationalities themselves. Foreigners with other nationalities like American, Austrian or Polish were included in the "Germans" group. There are no representative data for these nationalities in the panel.

Ideally, we would like to compute results for all eight years covered by the SOEP so far. This would allow conclusions about some changes in this period. Most panels have the problem of panel mortality: during the years the number of continuing respondents is declining. There are some estimation techniques available to control for this problem. But the number of cases should be always large enough to get significant results. Unfortunately this is not given in our case.

Social security fees are paid only by a fraction of households, for example not by most students or pensioners. So, the number of valid cases is here much smaller than the total number of respondents. For some transfer payments (like unemployment benefits) the absolute number of cases is even much lower. For the first year a test of ONEWAY variance had shown that averages for the natives and foreigners subgroups were significantly different. Unfortunately this has been proved to be not given for the following years. The number of responding households in some categories became very small in the years after 1984. For the later years the average for some categories of transfer payments would have to be calculated on the base of only a few dozen households. ONEWAY calculations showed that the averages for natives and foreigners were not significantly different. The standard deviation within the subgroups was higher than within the entire dataset. Calculations for the later years of SOEP would not lead to serious results for the different types of transfers. Therefore this analysis had to be limited to the year 1984, with the maximum number of respondents. The results have been successfully tested for significance.

The questions of the panel cover a wide area: composition of households, labor force participation, occupational structure and mobility, income, education, health, use of disposable time, etc. Questions on different sources of income and different transfer payments received were included. There was a good coverage for some kinds of transfer payments, while for other types there was a rather high incidence of missings, or "not available" answers. The explicit responses to questions on tax payments have been shown to be partly inconsistent. Many
Table 1: Contributions to the social security insurance, tax payments and transfers, DM per average household, 1984

<table>
<thead>
<tr>
<th></th>
<th>Germans</th>
<th>Foreigners</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social security contributions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment insurance</td>
<td>560</td>
<td>874</td>
</tr>
<tr>
<td>Health insurance</td>
<td>1,435</td>
<td>2,159</td>
</tr>
<tr>
<td>Pension insurance</td>
<td>2,254</td>
<td>3,517</td>
</tr>
<tr>
<td><strong>Selected transfers received:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment benefits</td>
<td>463</td>
<td>1,140</td>
</tr>
<tr>
<td>Pensions</td>
<td>5,917</td>
<td>365</td>
</tr>
</tbody>
</table>

**Memo:**

Tax payments:

- Income tax: 6,033
- Value added tax: 2,018

**Calculations based on SOEP data**

Figure 1 controls for the effect of age and employment status since it shows contributions to the social security system for five-year age groups of fully employed persons. It is obvious that the differences between Germans and foreigners are very small in this view. The differences in each age group are within the range of 8 percent.

In order to estimate the isolated effect of the difference in age and employment structure another set of calculations have been done (Table 2). This time transfers were calculated on the personal level. By calculating average transfers for five-year age groups it was possible to standardise foreigners transfer payments to the age structure of Germans. The values in the third column of table 2 have to be read for the example of unemployment insurance fees as:

\[
UBF_o = \frac{\sum UBF_i \times PG_i}{PG_{total}}
\]

where \(UBF_G\) is the average unemployment fee paid by foreigners if they would have the age structure of Germans, \(UBF_i\) is the unemployment contribution of foreigners in the five-year age group \(i\), \(PG_i\) is the size of the age group \(i\) among Germans and \(PG_{total}\) is sum of population in all German age groups.
Average payments have been calculated for the following groups:

- fully employed
- part time employed
- unemployed
- not gainfully employed.

Table 2 shows main results. The contributions of foreigners to the social security system would have been substantially lower in 1984, if they had the age structure of Germans. This effect is even stronger if the employment structure of Germans would have been applied. As expected the average pensions received by foreigners would be much higher if they had the age structure of Germans.

These calculations confirm for Germany the important effect of age and employment structures of immigrants for the host country. Unfortunately the standardization method can control only for each factor individually and not for both factors together. On the other hand age and employment structure are interrelated.

It is mainly their juvenile age structure and the higher labor force participation of foreigners what made them an asset for the social security system. These factors overcompensate the lower average income of foreigners up to now. Since it was not possible to include all kinds of transfers this picture is far from complete. But the transfers included in this analysis constitute a major part of all transfers.

5 MAJOR COMPONENTS AND DETERMINANTS — A DYNAMIC PERSPECTIVE

In the following section of this paper the three main parts of social security insurance are discussed on the base of macro-data. The main aim is to get an idea how important factors determining the impact of foreigners have changed in the past and how they might change in the future.

As already mentioned macro-data allow only indirect estimates. In the parts of the social security system the net balance for each subgroup (natives/immigrants) depends obviously on the following factors:

- the share of households paying fees or taxes or receiving benefits compared with all households in the subgroup. In other words: the average probability to pay fees or to receive benefits among Germans and foreigners.
- the average amount of fees or benefits per paying or receiving household.

The average risk to pay fees or to receive benefits is determined by different factors in the parts of the social security system respectively, as is the average amount of fees or payments.
unemployment of foreigners reflects their gradual displacement from the German labor market.

Figure 2: Unemployment Rate for All Employees and for Foreigners in West Germany

The boom induced by the German unification has only for a short moment modified the picture. Foreigners' unemployment rate decreased from 12.2 percent in 1989 to 10.9 percent in 1990, but reached again 12.2 percent in 1992. The absolute number of registered unemployed foreigners climbed by 22.2 percent from 1991 to 1992.

The higher unemployment among foreigners after 1973 suggests that the share they receive from the unemployment insurance is larger than that of the Germans. This has been concluded by Miegel (1984) and Wehrmann (1989). But it is not necessarily true, since the risk to be unemployed is not identical with the probability to receive unemployment benefits. Employees are entitled to receive unemployment benefits only after a certain period of contribution payments before unemployment, usually one year. For Germans this is only relevant at the beginning of their professional career. Because of the high fluctuation of foreign workers, the proportion of people paying contributions but still being not entitled to receive benefits in the case of unemployment is large. Actually the share of unemployed who don't receive benefits is much higher among foreigners than among Germans. In 1984 it was 28 percent of unemployed among Germans, but 37 percent among foreigners (Bach, 1987, p. 171).

It is obvious that until 1973 foreign workers paid more contributions to the unemployment insurance than they took benefits from it — because their unemployment rate was lower than the Germans'. The SOEP micro-data showed for 1984 foreigners took more from the unemployment insurance than they paid in

- 12 -
For Germany Camphausen (1983) has shown that the costs of medical treatment are highly age-dependent. If older people get ill, their treatment is on average much more expensive than in the case of younger people. Since the foreign population in Germany is much younger than the German one, this should have an effect on the utilization of health services. Figure 5 shows age-specific shares of the overall costs in the health system and the share of the foreign population in the respective age groups. Foreigners are over-represented in younger groups which cause only a small share of the overall costs. Among those age-groups with the higher cost share foreigners are under-represented. If the costs in the health system were distributed only according to the age structure, the average foreigner would cause costs of 964 DM, an average German 1,470 DM in 1984.

Figure 3: Share of Foreigners in Total Population, Employees and Persons Paying Contributions to the health insurance

Data: Wehrmann, 1989; Stat. Bundesamt

Figure 4: Share of Employees who are Unfit to Work

Data: Wehrmann, 1989; AOK Bundesverband
jections do not differentiate between Germans and foreigners. The paper on the future growth of foreign population in Germany (in this volume) gives an idea on the inevitable process of the aging of foreign population. If these projections become reality the age structure of foreigners in the year 2030 would come very close to the age structure of Germans in 1984. This can be seen in Figure 6.

This picture is changed not very much if the future immigration is higher. Another scenario has been calculated with 200 thousand net immigration annually with the result of only a slightly younger age structure. Inevitably the foreign population in Germany will grow older in the future — if there is no exponential increase in immigration. The very young age structure of foreigners in the sixties and seventies was a unique situation, a kind of windfall profit.

Figure 6: Age Structure: Germans and Foreigners

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>20-24</th>
<th>25-29</th>
<th>30-34</th>
<th>35-39</th>
<th>40-44</th>
<th>45-49</th>
<th>50-54</th>
<th>55-59</th>
<th>60-64</th>
<th>65-70</th>
<th>&gt; 70</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germans 1984 *)</td>
<td></td>
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<tr>
<td>Foreigners 1984 *)</td>
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<tr>
<td>Foreigners 2030 **)</td>
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<tr>
<td>Germans 1984 *)</td>
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</tr>
</tbody>
</table>

*) SOEP
**) projections according to Ulrich 1992

The growing share of foreigners among pensioners can already be seen today. At the beginning of 1991 the share of foreigners among all pensioners was 5.3 percent, while their share among new pensioners in 1990 was 9.4 percent (Rehfeld, 1991, p. 487).

The simulations show that the positive effect of foreigners on the pension insurance system is of a temporary nature. It will be gradually reduced in the next years. This would even be the case if there were a continued net immigration on
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