

## Do Immigrants Improve Their Housing Quality When They Move? Evidence from the German Socio-Economic Panel\*

By William A. V. Clark and Anita I. Drever

### Summary

*Previous research using the German Socio-Economic Panel showed that immigrants moved slightly more frequently than native-born Germans. The research in this paper extends that work and examines the extent to which this increased mobility is translated into improved housing quality. Overall, we find that all sample households have improved their housing status over time, and that both the immigrant and native-born German households gain additional housing space when they move. At the same time, immigrant households have yet to achieve parity in the number of rooms, square meters, or levels of satisfaction. Interestingly, even though both immigrants and native-born Germans have increased the amount of space they consume, they are both less satisfied than a decade ago. The logit models emphasize that the classic dimensions — age, tenure choice and household size — explain the likelihood of increasing space with mobility. The models are much less accurate predictors of levels of satisfaction or degree of building renovation.*

### 1. Introduction

Research on immigrant mobility in Germany can be divided into those studies which emphasize lower rates of immigrant mobility generated by the constraints of discrimination and language barriers, and more recent research from the German Socio-Economic Panel, which finds that immigrants actually move more frequently than native-born Germans. The question, which is not answered by either segment of this research, is whether immigrant mobility translates into improved housing quality. When immigrant households move, do they make significant gains in housing space and quality? We are interested in improvements in housing quality, as measured both by changes in the amount of space available (in essence a measure of whether or not households are crowded) and in the condition of the housing units.

In the broader context, the research offers insights into the question of whether or not immigrants have equal access to the German housing stock or if instead they are circulating within limited areas of poor quality housing. Immigrants entering developed western economies in Europe, as in the United States, are low-skilled and provide a significant proportion of the low-cost labor. As a result, immigrants tend to receive modest incomes that translate

into limited resources for housing. In addition, previous research has found the housing opportunities of the foreign-born to be more limited than those for native-born Germans because of discrimination on the part of private and social landlords (Kaplan 1999). How are immigrants doing in the housing market, in absolute terms and in comparison with the native-born? If the mobility of the foreign-born is higher, is there evidence of churning — moving but standing still in terms of housing quality?

In this initial examination of the outcomes of mobility, we focus on the most significant measure of housing consumption — the amount of space in number of rooms and square meters for immigrant households. We examine subjective levels of satisfaction with the amount of space and the need for housing unit renovations. The research adds to the overall understanding of the way in which immigrant households progress in the housing market, and the use of both cross-sectional and longitudinal results is an invaluable addition to the overall understanding of the outcomes of residential moves.

### 2. Previous Work and the Research Context

The research on residential mobility has placed housing consumption at the core of understanding residential behavior. In brief, households move in order to match their housing needs with their housing space. As households progress through the life course, they move up the housing career ladder, purchase larger housing units, and change tenure to ownership to provide a better match between the household members and their housing (Clark, Deurloo, and Dieleman 1984; Clark and Dieleman 1996; Hanushek and Quigley 1978). The specific studies of residential mobility have demonstrated a close link between age, household size, space consumption, and mobility behavior. Clark, Deurloo, and Dieleman (1984) showed that square meters per person was a consistently good predictor of the propensity to move in The Netherlands.

The German housing market is structured differently than in the United States. The German government directly and indirectly subsidizes a large proportion of the housing market and as a result Germany has one of the lowest rates of homeownership even within Europe. Only about 38 percent of the market is owner-occupied compared with 54 percent in France and 66 percent in the

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United Kingdom. The market is predominantly rental, and entry to the homeowner sector occurs later than in other European countries ( Borsch-Supan 1993; Deurloo, Dieleman, and Clark 1997). Despite these differences, studies of mobility in Germany have shown the applicability of the general model of mobility (Frick 1996; Clark and Drever 2000), which indicates that the role of age and space are as important in mobility behavior in the German housing market as they are in the United States. That research also shows that there is little variation in mobility rates by citizenship even when there are appropriate controls for age and socio-economic status (Clark and Drever 2000). However, it does not rule out the possibility that immigrants are circulating within poor quality housing. Frick (1996) and Dangschat (1994) point out that there is a growing gap between the housing conditions of the top and bottom segments of society in Germany. This is a reflection of industrial restructuring, as well as the German government's recent desire to decrease its involvement in the housing market. In addition, the West German housing market has had to absorb a large immigrant population from the east. These factors seem likely to have a disproportionate impact on economically vulnerable populations such as the foreign born and to limit their ability to move into good quality housing. Frick (1996) has shown that households, in general, are able to increase their living space with a move. Does this hold true for immigrants as well?

### 3. Data and Variables

The German Socio-Economic Panel (GSOEP) is a rich source of information on the housing and household characteristics of a sample of approximately 6,000 randomly chosen households. Of particular importance in this study is the foreign subsample of approximately 1,400 households. This subsample is primarily made up of members of the former guest worker population, but it is not large enough to disaggregate the sample. The data are analyzed at the household level because, for the most part, individuals move in household units. Individual "split-offs" from a household are tracked as new households. The analysis compares 1985 and 1995 cross-sectional files for all households and examines all households that moved in the interval from 1985 to 1996. The study did not distinguish between long and short-distance moves.

The measures of housing quality are: increases in rooms per person, increases in square meters per person, increased satisfaction with housing space, and whether or not the housing unit requires renovation. These measures are computed for all households and for the housing situation of households before and after a move. As there is no variable within the dataset that measures change of residence directly, we constructed a "move" variable. The GSOEP groups households into cat-

egories of old and new. Old households are those in which the household head remained the same from one year to the next. New households are created when an individual moves out of a household tracked by the GSOEP in a previous year. We label as movers the old households that have changed addresses, as well as new households.

The immigrant variable is created by using the immigrant subsample of the GSOEP. It includes households of the Turkish, Greek, Italian, Spanish and Yugoslavian origin. A household was considered to be immigrant if the household head was foreign born,<sup>1</sup> even though other members of the household might possess German citizenship. In addition, the vast majority of the subsample had been residing in Germany since at least 1984. Immigrants arriving after 1984 were included in the immigrant subsample only if they moved in with an immigrant family that was living in Germany when the GSOEP was first conducted in 1984.

## 4. Analysis and Results

The analysis first considers the housing status of all households, and then specifically considers the interaction of mobility and changing housing status.

### 4.1 Variations in housing consumption over time and by immigrant status

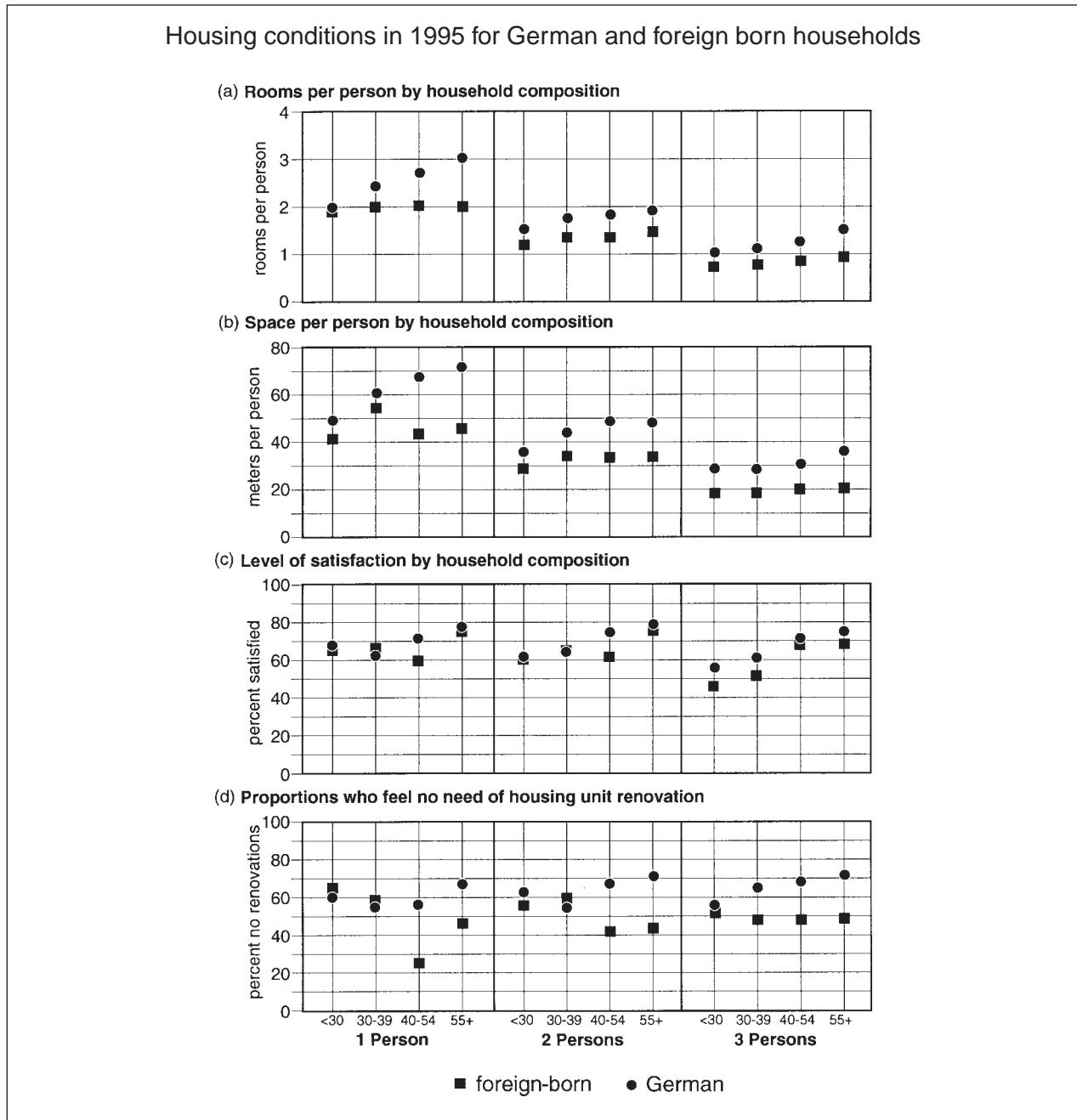
We compare housing status for German and immigrant households over the period from 1985 to 1995 to look at how well housed immigrant households are in comparison with native-born Germans, and what is the nature of their progress over time. The analysis examines four measures of housing status: number of rooms per person, square meters per person, percent of households satisfied with their space, and percent who respond that their unit does not need renovation. To control for position in the life course, the study uses four age categories (<30, 30<39, 40–54, 55+) and three household size groups.

Overall, native-born German households have more rooms and more space — about one-third more, than immigrant households (Figure 1). As expected, the amount of space per person increases with age and decreases with increases in family size. Single-person households have the most space whether they are German or immigrant households. On average, immigrant households have about 1.3 rooms for two-person households and a

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<sup>1</sup> The foreign-born population that arrived in Germany under the guest worker programs of the 1950s and 1960s are variously referred to as *Ausländer*, *Gastarbeiter*, or *Fremdarbeiter* (foreigner, guest worker or foreign worker). Each of these labels distinguishes this population from native-born Germans.

Figure 1



little less than one room per person for larger households. German households have nearly one-half a room more across all household types. Space, measured in square meters per person, declines gradually across household categories (Figure 1). Single-person households have more space per person than two-person households but the unit in total square meters is smaller. German two- and three-person households have about 10 square meters more than similar immigrant households. Both German and immigrant households have moderately high levels of satisfaction with the amount of

space available to them (Figure 1). However, average levels of satisfaction are lower among larger immigrant households, which is consistent with the objective measures of rooms and square meters per person. On average, about one-half of immigrant households report that their housing units are not in need of renovation, although there are some important variations, while about two-thirds of German households report this finding. In general, younger immigrant households report less need for renovation, while older immigrant households report a greater need for renovation.

The amount of space, both in rooms per person and in square meters per person, increased from 1985 to 1995 (Table 1). The amount of space, either in rooms or square meters increased on average from 5 to as much as 40 percent. There are one or two anomalous findings where rooms per person decreased while square meters increased, but in general the measures of changes in space over time are positive and consistent. Of course, an increase in space can result from gains in actual size of the unit or a decline in the number of inhabitants. However, these gains appear to be real, as household size has been almost constant over the same period.

The more interesting temporal change is the finding that the percentage expressing satisfaction with housing space has declined for both German and immigrant households. Satisfaction has declined as space has increased. Clearly, there are greater expectations of the housing market, which are perhaps linked to the widening gap between the well and poorly housed in Germany. At least part of the decline in satisfaction is intertwined with the perception that more units are in need of renovation than a decade ago. Again the results vary by household size and age. Younger immigrant and German households report a decrease in the need for renovation, (positive percentages) while older two-person immigrant households report a substantial increase in the need for renovation.

#### 4.2 Housing quality gains with residential change

The central question of the research is whether households that relocate are able to improve their housing quality and whether there are differences between immigrant

and German households in the gains in housing quality with mobility. To assess the impact of residential change we examine the same four variables, but we also examine the variations in housing consumption by specific tenure changes. The analysis of the impact of mobility examines the amount of space, level of satisfaction, and need for renovation before and after the residential move.<sup>2</sup>

Mobility brings significant increases in space, greater satisfaction with the fit of the household to the amount of housing, and a reduction in the perceived need for renovation (Table 2). However, there are some important differences between German and immigrant households. While older single-person German households do not gain space and are less satisfied, it is very young single-person and older two-person immigrant households that are either stable in rooms per person or have slight declines in the amount of space per person. Even so, their levels of satisfaction with their housing space are high and increase after the move. Clearly, mobility is working to create a better fit between household needs and the space they occupy.

Even though immigrant households make gains in the amount of space and in the proportion of units that do not require renovation, they still do not achieve parity with German households. In the aggregate they have about 30 percent less space than German households. Still, they are more satisfied overall than German households. The perception of the need for renovation is greater for immigrant households, though it is about 10 to 20 percent less

<sup>2</sup> The relatively small number of moves requires aggregation to one-person and two-person and greater households.

Table 1

#### Percent Change in Housing Conditions, 1985–1995

Household Size	Age Household Head	Rooms per Person		Square Meters		Satisfaction		No Renovations Needed	
		Immigrant	German	Immigrant	German	Immigrant	German	Immigrant	German
1-person	< 30	8.5	9.5	7.7	-1.7	-1.3	-0.4	17.8	5.1
	30 to 39	14.3	9.4	39.5	3.0	5.6	-5.5	11.1	-6.7
	40 to 49	27.5	7.9	19.2	5.8	-14.7	10.2	-21.1	-4.9
	55+	9.9	10.3	24.3	7.9	3.4	-2.7	-4.8	5.8
2-person	< 30	-1.6	-6.8	4.4	-2.8	-9.2	-10.6	9.1	2.2
	30 to 39	16.2	-0.6	18.6	10.3	-13.2	-7.9	-7.3	-10.8
	40 to 49	14.3	10.6	14.5	8.4	-33.7	-3.3	3.6	-6.6
	55+	9.8	10.1	-7.3	10.7	-17.9	-4.5	-23.1	2.7
3-person	< 30	-8.4	3.8	-5.9	16.6	-8.8	-7.4	13.6	-5.3
	30 to 39	2.6	0.0	2.6	0.0	-5.5	-10.2	-3.0	-0.2
	40 to 49	4.7	-0.8	14.5	7.7	-1.4	-3.3	-2.4	-0.2
	55+	5.2	4.2	5.6	10.4	-8.5	-4.8	-4.5	6.6

Source: Authors' calculations.

Table 2

## Pre and Post-move Average Housing Conditions

Household Size	Age Household Head	Rooms per Person		Square Meters		Satisfaction		No Renovations Needed	
		Pre-Move	Post-Move	Pre-Move	Post-Move	Pre-Move	Post-Move	Pre-Move	Post-Move
German Population									
1-person	< 30	1.9	<b>2.0<sup>a</sup></b>	49.7	<b>49.7</b>	61.6	<b>67.9</b>	58.0	<b>63.4</b>
	30 to 39	2.3	<b>2.6</b>	58.4	<b>64.9</b>	61.7	<b>66.8</b>	60.8	<b>68.5</b>
	40 to 49	2.4	2.1	62.4	56.3	59.9	55.1	54.2	<b>65.2</b>
	55+	2.6	2.1	64.4	51.6	78.8	76.3	68.4	<b>78.1</b>
2-person	< 30	1.2	<b>1.4</b>	30.3	<b>34.6</b>	57.2	<b>71.2</b>	61.9	<b>63.4</b>
	30 to 39	1.2	<b>1.4</b>	30.5	<b>35.2</b>	57.0	<b>73.4</b>	58.1	<b>65.8</b>
	40 to 49	1.4	<b>1.4</b>	33.4	<b>36.3</b>	63.3	<b>75.5</b>	62.2	<b>71.9</b>
	55+	1.7	1.5	41.1	38.2	71.6	<b>83.1</b>	59.4	<b>82.1</b>
Immigrant Population									
1-person	< 30	1.9	1.7	46.3	43.6	71.0	-65.4	64.5	61.4
	30 to 39	1.9	<b>1.9</b>	43.1	<b>45.2</b>	64.7	<b>81.8</b>	47.1	<b>60.6</b>
	40 to 49	2.0	<b>2.3</b>	44.5	<b>55.6</b>	71.4	<b>75.8</b>	35.7	28.8
	55+	1.5	<b>1.6</b>	37.6	<b>39.0</b>	75.0	<b>77.8</b>	62.5	<b>63.0</b>
2-person	< 30	0.9	<b>1.0</b>	22.9	<b>24.7</b>	56.0	<b>70.2</b>	56.3	<b>64.4</b>
	30 to 39	0.9	<b>1.0</b>	20.7	<b>24.1</b>	54.7	<b>79.4</b>	58.6	<b>65.6</b>
	40 to 49	1.0	<b>1.0</b>	21.6	<b>23.2</b>	57.6	<b>73.7</b>	52.1	<b>61.5</b>
	55+	1.0	<b>1.0</b>	23.5	23.0	65.3	<b>71.7</b>	41.8	<b>66.3</b>

<sup>a</sup> Bold typeface indicates a positive change or no change in conditions from pre to post-move.

Source: Authors' calculations.

after a move and it is still much lower than for the population as a whole. Some specific household groups, such as middle-aged single-person immigrant households, see the greatest need for housing unit renovation. At the same time, the results for immigrant households stress the overall greater satisfaction and decreased perceptions of the need for renovation.

Controlling for the kind of tenure transition provides greater detail on housing quality gains with mobility. The overall gains in housing space, satisfaction, and reduced need for renovation are striking (Figure 2). In the moves within the rental sector, immigrants are close to or above the gains by German households. The gains are considerably larger for both groups in the rent-to-own transitions, sometimes by three or four times the gains for rent-to-rent moves. While younger German households make greater gains than immigrant households, older immigrant households achieve more by moving than do German households (Figure 2). Older immigrant households, with a head over the age of 40, gain more than German households in rooms per person and in square meters per person. Some older German households do not gain as much space from mobility (to be expected as households downsize with fewer household members), though it is notable that their level of satisfaction with their space and the perception of the need for renovation do not decline.

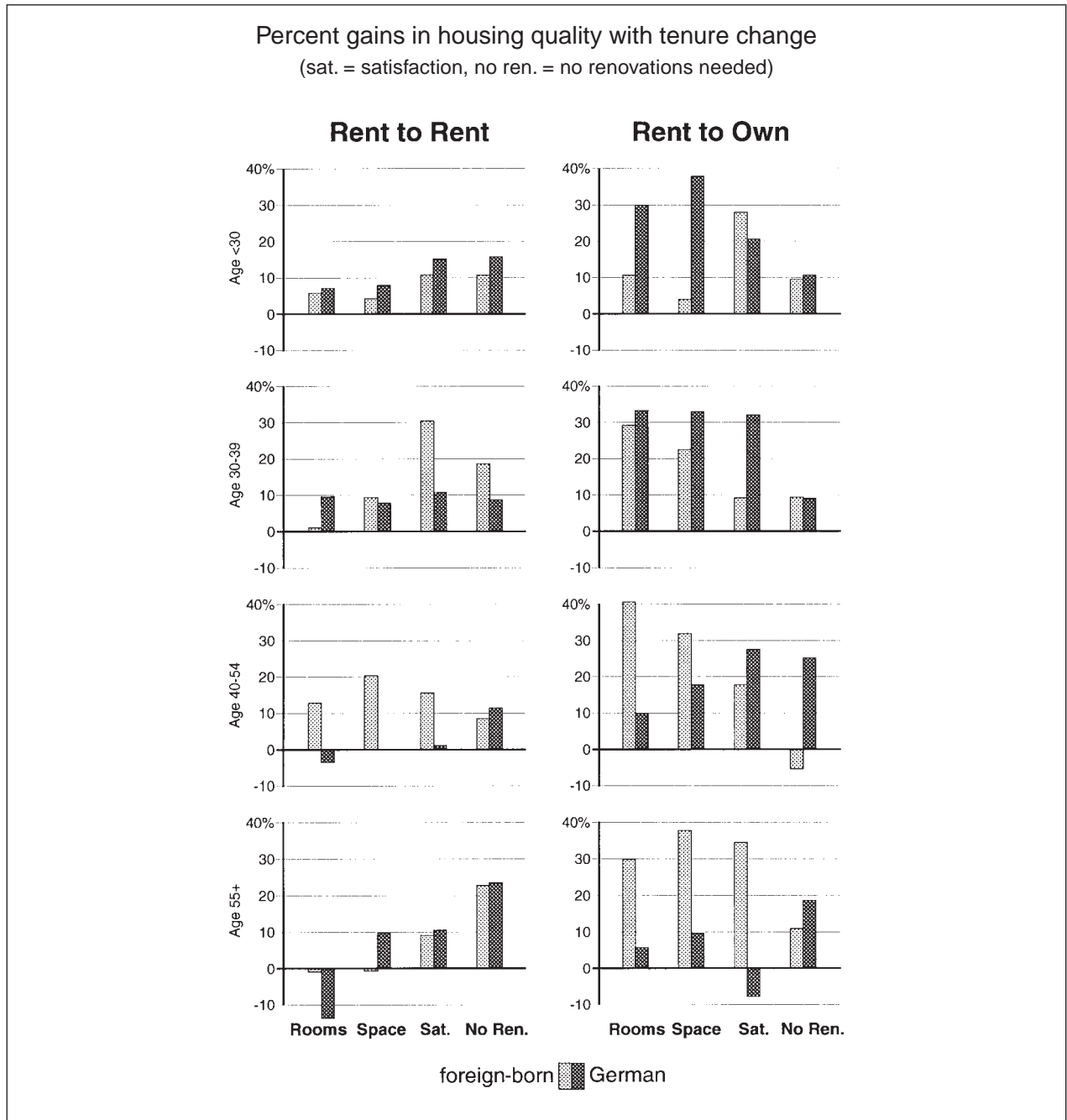
### 4.3 Predicting gains in housing quality

We have established gains in housing quality with mobility, for both German and immigrant households. How are these gains related to the variables that have been fundamental in general models of mobility? We use logit models of increases (yes/no) in each of the four dependent variables as a function of the independent variables — age, age squared, household income, family size, foreign-born, tenure change to ownership, and interaction variables for age/income and family size/income. Age is consistently an important predictor of moving, primarily because it acts as a surrogate for other life course events (Clark and Dieleman 1996) and is probably related to changes in the need for space. Income, household size, and tenure change are expected to increase the likelihood of increases in housing status. Tenure change to ownership is expected to be positively related to increasing quality and satisfaction (Clark and Dieleman 1996).

The models are more exact fits for changes in the number of rooms and increases in space than they are for levels of satisfaction and perceptions of the need for renovation. The objective measures are more closely related to household characteristics than are the subjective measures. The models for increase in number of rooms and



Figure 2



increase in square meters per person have concordant values of over 60 percent and gamma values of 0.23 and 0.22. Clearly, the models do reasonably well but are from a complete explanation of the likelihood of increases in space.

For both increases in rooms and square meters per person, age and age squared are significant and in the expected direction, that is the likelihood of increasing space decreases with age (Table 3). Family size is negatively related to increased space; gains in space are more difficult if family size is larger. Tenure transition to ownership, as

expected, is positively related to increased space. Immigrant status is not significant in the increase in number of rooms but it is significant for increased square meters per person. This could be a result of immigrants moving into larger newly built apartments constructed to meet the needs of low-income migrants after reintegration. Or perhaps the measure of square meters per person is simply a more sensitive measure of the changes in space than the calculation of rooms per person. The interaction of size/income may reflect the ability of the well-to-do to manage effectively in the German housing market even if

they have a large family, and at the same time reflect a disadvantage for poor large households.

The models for changes in satisfaction and renovations classify only slightly more than 50 percent of the cases and the gamma values are 0.13 and 0.16 (Table 3). Family size and a change to homeownership are positively related to increased satisfaction, both plausible results.

### 5. Conclusions and Observations

The research provides two major and one minor finding. It is clear that immigrant households are making significant gains in housing quality and that these gains are widespread across immigrant household compositions. The evidence from this study suggests that there have been

significant changes in access to housing since the study nearly two decades ago by Kreibich and Petri (1982). While there may still be constraints in the German housing market, those constraints are much less severe than in the past, and they do not differentially affect immigrant households. At the same time, immigrant households have not yet reached parity with German households. They have, on average, about one-third less space and are more likely to perceive that their housing is in need of renovation than are German households. In summary, immigrant households have made real gains, but they are not yet equal.

The research also shows the difficulty of modeling the subjective measures of housing quality. Clearly, there is much more variation across household types in their feelings about their housing space than there is in the more objective measures of housing consumption.

Table 3

**Log Estimates for Changing Housing Status, 1985–1995**

Independent Variables	Increase in Number of Rooms	Increase in Space	Increased Satisfaction	Increase in Need for Renovation
	1.0127**	1.0314**	-1.1279	-0.5454
Age	-0.0252**	-0.0128**	-0.00170	-0.0146*
Age squared	-0.00124**	-0.00087**	-0.00016	-0.00059**
Income	0.000021	0.000083	0.000091	0.000038
Family size	-0.1578**	-0.1764**	0.1232*	0.00679
Foreign born	0.0644	0.2023**	-0.0225	-0.0121
Age x Income	-0.000000233	-0.000000267*	-0.000000249	-0.000000319
Size x Income	0.000039**	0.000025	-0.0000004689	-0.00002
Tenure change own	0.8171**	0.8156**	0.2253*	-0.1873
Concordant	61.0	60.3	55.8	56.7
Gamma	0.230	0.22	0.13	0.16

\* Significant at the 0.05 percent level. — \*\* Significant at the 0.01 percent level.  
Source: Authors' calculations.

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