

Do generous social-assistance programs lead to dependence? A comparative study of lone-parent families in Germany and the United States

Duncan, Greg; Voges, Wolfgang

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Greg Duncan, Wolfgang Voges

**Do Generous Social-Assistance Programs Lead
to Dependence? A Comparative Study of Lone-
Parent Families in Germany and the United
States**

ZeS-Arbeitspapier Nr. 11/93

Greg J. Duncan
Survey Research Center, University of Michigan
Wolfgang Voges
Centre for Social Policy Research, University of Bremen

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Abstract

Despite receiving much more generous benefits, German lone-parent social-assistance recipients receive benefits for no longer periods of time, on average, than do U.S. lone-parent recipients. We find several reasons for this. First, social assistance is used more often in Germany as very short-term bridge funding prior to the beginning of receipt of social-insurance benefits such as unemployment compensation. Second, repeat spells are considerably more common in the United States. Third, German lone-parent recipients have older children -- a characteristic that leads to shorter spells. Our findings point out a number of problems with analyses of social-assistance dynamics based on individual spells.

Contents

| | |
|---|----|
| Introduction | 5 |
| The Institutional and Demographic Context | 7 |
| Data and methods | 8 |
| Results | 12 |
| Summary | 18 |
| Bibliography | 32 |

Tables and Figures

| | |
|--|----|
| Table 1: Extent and Social-Assistance Receipt of Lone-Parent Families in (West) Germany and the United States (in Percent) | 20 |
| Table 2: Characteristics of First-time, Mother-only Recipients in the Initial Month of Receipt | 21 |
| Table 3: Distribution of Social-Assistance Receipt for First-time, Mother-only Recipients Over the 48-month Period Beginning with the Initial Month of Receipt | 22 |
| Table 4: Regression Coefficients and Standard Errors From OLS and Event-History Models of Duration of Social-Assistance Receipt for First-Time Recipients | 23 |
| Table 5: Simulations of Duration of Social-Assistance Receipt over the 48-Month Window, for First-Time Recipients of Social Assistance | 25 |
| Figure 1 | 26 |
| Figure 2 | 27 |
| Appendix Table 1a: Kaplan-Meier Estimates of First Spells in German LSA | 28 |
| Appendix Table 1b: Kaplan-Meier Estimates of First Spells in U.S. PSID | 29 |
| Appendix Table 2a: Kaplan-Meier Estimates of Time Until 24 Months of Nonreceipt in German LSA | 30 |
| Appendix Table 2b: Kaplan-Meier Estimates of Time Until 24 Months of Nonreceipt in U.S. PSID | 31 |

Introduction

Comparative income-distribution data from the Luxembourg Income Study (LIS) show large differences across countries in the number of low-income families with children. With the poverty line defined as half of the annual income received by the median family, LIS data show in the mid-1980s a poverty rate among families with children in the United States that was three to four times as high as rates in (West) Germany (23% as compared with 6%) and other continental European countries and seven times as high as in Sweden. Poverty rates in Canada and the United Kingdom were closer to but still substantially less than those estimated for the United States.¹

A key factor in producing these differing rates of poverty is the much more generous package of social-assistance programs available to families with children in general and to lone parents in particular in Western Europe (O'Higgins, 1988). Duncan et al. (forthcoming) calculated the ratio of cash and near-cash social assistance available to lone parents with two children as a percentage of median family income in the mid-1980s and obtained the following figures: United States, 27%; (West) Germany, 47% to 67%, depending on the age of the children; Canada, 41%; France, 18% to 54%, depending on the age of the children and recency of divorce; Ireland, 55%; Luxembourg, 51%; the Netherlands, 61%; Sweden, 64%; and the United Kingdom, 60%. Thus, with the exception of France, benefit packages are much more generous outside of the United States.

European social-assistance programs typically build greater disincentives to work into their social-assistance benefit schedules. When Duncan, et al. (forthcoming) extended their calculations to include the case of a lone parent with two children working half-time at the minimum wage, they found the following increments (or decrements) to the resulting total family income, again expressed as a fraction of median family income: United States, +12% (in other words, the income earned from a half-time job at the minimum wage, less the reduction in social assistance associated with the earned income, would increase the total family income of a lone parent with two children by 12 points, i.e., from 27% of median income to 39% of median income)²; (West) Germany, -5% (i.e., total family income would actually fall); Canada, +19%;

¹ Tim Smeeding kindly provided the following calculations. They are based on a definition of poverty that sets the line at 50% of the country's median size-adjusted income and the equivalence scale (single person: 1.0; couple: 1.29; couple plus child: 1.55; couple plus two children: 1.95; couple plus three children: 2.29; couple plus four children: 2.57; couple plus five children: 2.88; couple plus six children: 3.16; couple plus seven or more children: 3.87) implicit in the U.S. poverty thresholds. Estimated poverty rates are: United States (23%), (West) Germany (6%), the Netherlands (6%), France (8%), Sweden (3%), Canada (14%) and the United Kingdom (11%).

² The U.S. figures apply to Colorado, the state paying the median benefit in 1985. In Colorado at that time, income from a half-time, minimum-wage job would not have resulted in a loss of eligibility for AFDC and the Medicaid medical insurance program. In a number of other states, income from such a job would have ended AFDC reciprocity and eligibility for Medicaid.

France, 0 to +28%, depending on the age of the children and recency of divorce; Ireland, +10%; Luxembourg, +9%; the Netherlands, +7%; Sweden, +3%; the United Kingdom, +9%. Thus, work incentives built into benefit schedules tend to be larger in North America and are even negative in Germany.

Economic theory suggests that the more generous redistributive income-transfer programs that reduce poverty in Europe may also reduce incentives to work, save, marry and engage in other behaviors that might shorten spells of social-assistance receipt. There is considerable consensus among U.S. researchers that the U.S. social-assistance system has produced measurable but rather modest reductions of work effort and other mobility-related behavior (Moffitt, 1992). The overall effects of U.S. transfer programs on labor supply have not been very large because the programs themselves have not been very generous. It is quite possible that the more generous European transfer programs have larger effects. Indeed, a detailed study of the Dutch disability system (Wolfe, De Jong and Haveman, 1984) found much larger effects for the more generous Dutch system.

Duncan et al. (forthcoming) investigated whether the duration of social-assistance spells in the U.S., Canada, Germany and the United Kingdom varied with the levels of benefit generosity. Lone-parent recipients in the United Kingdom had the longest spells, with 84% of lone parents who had begun spells of social assistance still receiving it after three years.³ This compares with only 58% for lone parents in (the Quebec province of) Canada, 36% for AFDC lone-parent recipients in the United States and 26% for lone-parent social-assistance recipients in Germany. That U.K. recipients have long spells is hardly surprising: British benefit levels are quite high, employment conditions are poor, norms may well discourage mothers from working and the stigma attached to social assistance appears to be small. A contrasting set of conditions in the United States may account for the comparatively short spells of U.S. recipients. Why recipients in Germany, with its high benefits levels, should have spells as short as recipients in the United States emerges as a key question in understanding how countries might successfully combine generous benefit levels and upward economic mobility.

This paper focuses on the duration of social-assistance receipt in the United States and Germany, the only two countries for which sufficiently comparable data on social-assistance

³ The U.K. data come from a 1989 survey of lone parents which asked for information about current and previous periods of social-assistance receipt. Since the social-assistance experiences of women who remain lone parents are undoubtedly longer than those of the "average" recipient, this will almost certainly impart an upward bias to the estimated duration of social-assistance spells in the U.K., although similar restrictions imposed on a PSID sample suggest that the bias may not be very large (Duncan et al., forthcoming).

spells appear to exist. We concentrate on assistance programs directed at single-parent families with children.

Our aim is to describe and then explain differences in the duration of welfare receipt among first-time lone-parent recipients in the two countries. Our descriptive analysis takes a number of different approaches to deal with the problem that social assistance is often received in a number of distinct episodes; our emphasis throughout is on the total amount of time spent receiving social assistance rather than on the duration of the first spell.

Our models of the duration of social-assistance receipt relate the duration of receipt to comparably-defined demographic characteristics of recipients, e.g., age and work experience of the mother at the time of first receipt, age of children and characteristics of the neighborhoods in which recipient families reside. We first examine the extent to which parameter estimates of the demographic models differ between the two countries' samples and then use differences in the demographic characteristics to account for the observed differences in patterns of receipt.

The Institutional and Demographic Context

Public assistance. The Aid to Families With Dependent Children (AFDC) program is the principal U.S. means-tested cash transfer program for lone-parent families. Benefit levels are determined by individual states, with states in the South paying only one-third to one-fourth as much as the most generous Northern states. When combined with the value of benefits from the Food Stamp program, payments to a lone-parent family with two children in the median-benefit state (Colorado) in 1985 amounted to 27% of size-adjusted U.S. median family income.

During the period covered by our analysis, states also had the option of denying benefits to families in which the father was not present. In the mid-1980s, states representing roughly half of the U.S. population chose this option; however, two-parent families have never constituted more than a small fraction of the caseload even in states that permitted payments to such families.

In Germany there is no special social-assistance program for families with dependent children. The two principal means-tested programs that provide cash assistance to these and other categories of low-income families and individuals are "Hilfe zum Lebensunterhalt" (income maintenance support, commonly called "Sozialhilfe") and "Hilfe in besonderen Lebenslagen" (aid for people with special needs -- e.g., aid for the blind or handicapped or in need of long-term care, medical aid for people without health insurance). Sozialhilfe covers recurring

expenditures like food, accommodation and, after special application, nonrecurring expenditures such as furniture and clothing. These two programs provide the bulk of the assistance to the growing number of claimants of welfare benefits in Germany. Benefit levels vary modestly from state (Bundesland) to state.⁴

Single-parent families. Both the incidence and social-assistance receipt of lone-parent families in Germany are smaller than in the United States (Table 1). In 1970, families with children headed by a lone parent were relatively rare in both countries (7.4% in Germany; 11.5% in the United States). At that time such families were much more likely to be receiving social assistance in the United States than in Germany. As is well known, the number of lone-parent families in the United States has grown dramatically over the past quarter century, now constituting more than one in four of families with children. The incidence of lone-parent families in Germany has grown more slowly and still amounted to less than one-tenth of all families in the mid-1980s. If anything, the extent of social-assistance receipt among lone parents was slightly lower in the United States in the 1990s than it had been in the past. Social assistance receipt among German lone parents has grown markedly, although as of 1988, it still characterized only about one-fifth of lone-parent families with two or more children.

Data and methods

Our U.S. and German samples consist of social-assistance recipients who were observed in the mid-1980s at the beginning of their social assistance "careers". Samples are further restricted to mothers with dependent children (below the age of 18) and not living with their husbands or permanent partners at the time of initial social-assistance receipt.

Data from the United States come from the Panel Study of Income Dynamics (PSID), an ongoing longitudinal survey of U.S. households begun in 1968 by the Survey Research Center of the University of Michigan (Hill, 1992). Low-income families were initially oversampled in the PSID, but weights have been developed and are used throughout our analyses to adjust both for differential initial sampling probabilities and for differential nonresponse that has arisen since the beginning of the study.

By following *all* members of its sample over time, including children as they leave their parents' homes, the PSID maintains a representative sample of the nonimmigrant U.S. population and of major subgroups in the population--in our case, first-time AFDC recipients. The PSID has been

⁴ For a more exhaustive comparison of the institutional differences in these between programs between the two countries see Leibfried (1979).

the source of data for the most influential analyses of AFDC dependence (e.g., Bane and Ellwood, 1983; Ellwood, 1986), however, none of these past studies are based on the monthly event-history data used in our analysis.

PSID information on AFDC receipt was gathered on an annual basis until 1983. Questions on monthly AFDC receipt were added to the questionnaire in 1984, providing monthly data from January, 1983 until the most recent month of data available to us -- December, 1989.

Our PSID sample is of first-time recipients whose receipt began between January, 1983 and December, 1986. Patterns of receipt are measured over the period ending in December, 1989. Women beginning first spells in January, 1983 would be observed for a total of 84 months; women beginning spells in December, 1986 would be observed only for a total of 36 months.

"First-time" recipients in the PSID are defined as either: i) not living in a household in which AFDC was received in the five calendar years prior to the point of receipt during the 1983-86 period; or ii) living in a household in which AFDC was received during that five-year period but not since the birth of their first child.⁵ Also included in the PSID sample are women who were at least in their sixth month of pregnancy with their first child when social assistance was first received.

Data from Germany consist of newly-entering cases of recipients of Sozialhilfe in the Bremen administrative area during calendar years 1983 and 1984. The resulting data, called the Bremen Longitudinal Study of Social Assistance (LSA), are part of a long-term "Special Collaborative Project" (Sonderforschungsbereich), funded by the German National Science Foundation (Voges and Zwick, 1991). This research support has enabled the Bremen group to spend a great deal of time cleaning the data.

The LSA compiles monthly data on the duration of social-assistance receipt, is able to distinguish first-time recipients, and tracks multiple spells of receipt during the entire panel period (Voges, forthcoming). In the LSA, social-assistance cases began between 1 January, 1983 and 31 December, 1984. Patterns of receipt could be observed for the 1983 cohort until March, 1989 and for the 1984 cohort until May, 1992.

All recipients in the LSA are "first-time" recipients in the sense that there was no welfare record for them in the city-state of Bremen in the five-year period prior to the beginning of receipt. For the small number of mothers who did not live in Bremen for the full five-year period prior to

⁵ An example of the members of the latter group is a teenager whose mother received AFDC when the teenager was a dependent and who began receiving AFDC on her own after her first birth. Our analysis considers the birth to mark the beginning of her initial period of receipt.

entry on to social assistance it was assumed that welfare was not received during the portion of the five-year period in which the family lived elsewhere.

Characteristics of recipients, measured at the beginning of the period of first receipt and reasonably comparable across the PSID and LSA data sets, include: age of the mother, age of youngest child, whether other adults were present in the household, whether there is evidence of prior work experience, receipt of public assistance in the neighborhood, and, for PSID only, ethnicity.

As for household structure at the time of the first spell, we were able to distinguish situations with: i) mother and children only; ii) mother and children and at least one parent of the mother; and iii) other family structure. Prior work experience in the PSID was defined by whether the mother's reported annual work hours in the five years before the beginning of the first spell ever exceeded 250. In the LSA, prior work experience is determined from an examination of the case records. Three groups are considered as having prior work experience: i) those eligible to receive unemployment benefits or unemployment assistance (which means that these persons had a job and paid social insurance for at least six months); ii) "working poor" with administrative records noting employment and an income below the social-assistance need standard as reasons for their welfare use; and iii) cases where an occupational career was documented in the administrative records.

Neighborhood conditions in the PSID were constructed by taking addresses at which the mother-only families resided at the point of first receipt and matching them to a 1980 Census geocode. Census tracts were taken to be the relevant neighborhood area whenever possible; in a small number of cases it was necessary to use the Enumeration District or Minor Civil Division as the "neighborhood" area. These geocodes were then used to match to the PSID file 1980 Census information about the fraction of individuals in the neighborhood receiving public assistance.

In the German data, neighborhood conditions were measured by the fraction of the population of the neighborhood district (Ortsteil) who received social assistance. Ortsteile are formed for planning, statistical and election purposes. The data are from the German Bureau of Census's "Microcensus," which is a 1% sample of all households drawn up yearly and questioned about standard demographic measures as well as changing specific topics. Since the end of the 1970s, questions on social-assistance receipt have been included in the Microcensus about every five years. To ensure exogenous measurement of neighborhood conditions, we take neighborhood data from the 1982 Microcensus.

Our decision to restrict our samples to first-time and lone-parent recipients produces a rather small number of cases for analysis -- 108 in the LSA and 133 in the PSID. The benefits of the restriction to first-time recipients are large since, as shown below, first and subsequent spells are quite different between the two countries. Restricting the samples to mother-only households also eliminates two-parent recipient families for whom eligibility requirements and administrative practices differ greatly between the two countries.

We take three approaches to the event-history data on social-assistance receipt. The first is a conventional one, with a focus on the duration of the first spell of receipt.⁶ A drawback of this approach is its failure to account for multiple spells. This is important since they are not uncommon in either country (Ellwood, 1986, Leisering and Voges 1993). As Ellwood (1986) shows in the U.S. context, studies based on single spells of receipt can be very misleading since short initial spells are just as likely as long initial spells to be followed by subsequent spells of receipt. Thus, knowing the correlates of the length of individual spells tells little about the correlates of the total duration of receipt.

Our second approach includes information on multiple spells in a crude way by examining a "fixed-window" of time following first receipt. Specifically, we use data on patterns of social assistance over the 48-month period beginning at the point of initial receipt. We measure the duration of social assistance over this period by counting the number of months in which social assistance was received, without regard to whether that receipt was concentrated in a single period or scattered throughout the 48-month period in a number of distinct episodes. This number-of-months duration measure is then used as a dependent variable in OLS regression models.

Our third approach is based on event-history methods, accounts for multiple spells and takes better advantage of the fact that some of our data extend for as long as 84 months beyond the point of initial receipt. In it, we consider an initial "spell" of dependence to end only if the lone parent receives no social assistance for a substantial period -- 24 consecutive months. This approach reflects our view that a period of dependence on social assistance does not end if an initial period of receipt is soon followed by another. Thus we adopt in our third approach the assumption that there must be a period of at least 24 months of nonreceipt to end a "spell" of dependence. In terms of our event-history models, failure to be observed in the data for at least two years in the state of nonreceipt produces a censored "spell" of dependence.

⁶ In fact, most single-spell analyses use whatever spells are available in their data and often cannot distinguish between first and subsequent spells.

Results

Demographic characteristics of recipients. There are several noteworthy differences between the demographic compositions of the two samples of first-time recipients (Table 2). First, U.S. lone-parent recipients tend to be much younger than their German counterparts. One-fifth of U.S. recipients were under the age of 21 at the beginning of their periods of receipt; none of the German mothers were that young. German recipients were much more likely than their U.S. counterparts to be older than 30 or 40. Since youth has been found to be a correlate of longer spells (Ellwood, 1986), we would expect that these age differences would tend to produce longer-term social-assistance receipt among U.S. recipients.

Second, U.S. recipients tend to have much younger children when they first begin receiving social assistance -- another difference that would be expected to lead to longer U.S. periods of receipt. More than 80% of the U.S. first-time AFDC cases involved a child under the age of four, as compared with less than one-third of the German first-time Sozialhilfe cases. A closer examination of cases involving young children revealed that first births were associated with the beginnings of 11% of the German cases and about 15% of the U.S. AFDC cases (data not shown in Table 2).

Third, German lone-mother recipients were considerably more likely (85% vs. 56%) than their U.S. counterparts to be living alone with their children. A situation that might be expected to facilitate exits, grandparents were more likely to be found in the households of U.S. than German recipients. An examination of the Bremen administrative records suggests that the other household members often were destitute or handicapped individuals who were cared for by the lone mother and whose presence increased the social assistance need standard. We expect these circumstances to decrease the probability of terminating public assistance for German lone-parent recipients.

Fourth, consistent with a greater incidence of market work among U.S. mothers, a look at the roughly comparable measures of work experience in the two samples showed that U.S. recipients were considerably more likely than German recipients to have such experience.

Fifth, the information on social-assistance receipt in the neighborhood showed great differences between U.S. and Germany. While only a little more than the half of the U.S. recipients lived in neighborhoods with relatively low concentrations (less than 10%) of public-assistance recipients, three-quarters of recipients in Germany lived in such neighborhoods. We expect that more recipients in the neighborhood would increase both the acceptability of and information about social assistance programs and thus be associated with longer duration of social assistance.

A final demographic difference is the ethnic composition of the two samples. Some 36.6% of the U.S. cases were black; the vast majority of the German caseload were native Germans. Of the 103 cases in the LSA, there were only three non-Germans, two of whom were asylum seekers (data not shown in Table 2.)

These various demographic differences produce mixed expectations regarding the expected duration of receipt. The greater work experience and availability of grandparents and other adults to look after children would probably facilitate exits for U.S. relative to German recipients. On the other hand, the younger ages of the mothers and children in the U.S. and the worse neighborhood in which recipients live are likely to have the opposite effect.

First spells. Figure 1 shows the Kaplan-Meier-based survival curve for the duration of first spells -- i.e., the fraction of recipients still receiving social assistance at various points following the point of initial receipt.⁷ The survival curves follow rather different patterns in the two countries; a log rank test shows that the hypothesis of equal slopes can be rejected at the 9% significance level.

Most interesting is the fact that the survival curves cross at a duration of about 10 months.⁸ This is the product of two important differences. First, there appear to be more quite short spells in Germany than in the United States. About 17% of first spells in Germany last only a single month as compared with 10% in the United States. This undoubtedly reflects the fact that Sozialhilfe often serves as "bridge" support until other sources of transfers (e.g., unemployment compensation) begin. In their investigation of reasons for social-assistance exits, Duncan et al. (forthcoming) found the beginning of social-insurance receipt was three times more likely (21% vs. 7%) in Germany than in the United States.

The median length of the German spells is shorter as well -- 9.4 months vs. 10.3 months. However, after less than a year, the rate at which U.S. recipients end their initial spells becomes considerably higher than in Germany. At a point two years after initial receipt, the fraction of U.S. first spells still in progress (20%) is only half the size of the comparable fraction for

⁷ Details on the data underlying the figure are given in Appendix Tables 1a and 1b.

⁸ There is some evidence of a "seam effect" with PSID data in Figure 1, with the incidence of 12, 24, and 36-month spells unusually frequent. This reflects the fact that PSID respondents have a tendency to report receipt for all 12 months of calendar years in which AFDC income is received. Although this should not have much of an effect on the average duration of receipt, it does produce more discrete "steps" in the patterns of receipt.

German first spells (38%). Thus, on the basis of first spells, it appears that long-term social-assistance receipt is more common in Germany than in the United States.⁹

48-month window. An analysis based only on first spells may be misleading if the incidence and duration of second and subsequent spells differs between the two countries. Our data sets contain too few observations for a thorough analysis of all spells of receipt. Instead, we take a more aggregative approach to incorporating multiple spells.

Our first analysis is based on patterns of social-assistance receipt over a 48-month window following first receipt.¹⁰ As shown in Table 3, patterns of receipt over the 48-month window differed somewhat between the two countries. On average, first-time recipients in both countries received social assistance during just less than half of the total number of months. Consistent with the first-spell data, short periods of receipt were less common among U.S. lone parents, although it was still the case that nearly one-quarter of them received assistance for less than five total months. Also consistent with first-spell data, relatively long periods of receipt were also more frequent in Germany, with 21% of German lone mothers receiving assistance in all 48 months, as compared with only 7% of U.S. recipients.

Multiple spells of receipt are considerably more common in the United States, occurring to nearly 40% of U.S. recipients within the 48-month window as compared to less than one-quarter of German recipients. Multiple spells in the United States produce larger fractions of first-time recipients -- 41% in the U.S. and 32% in Germany -- receiving social-assistance income at the end of the 48-month observation window.

Duration until two years of nonreceipt. Drawing upon all of the available event-history information in the two data sets, survival curves in Figure 2 incorporate the assumption that a "spell" of receipt or dependence can end only if there are at least 24 consecutive months of nonreceipt. Patterns are strikingly different from those of the single-spell analysis, with long-term recipients now more common in the United States.¹¹ As with Table 3, Figure 2 shows that short periods of receipt are more common in Germany. Some 32% of Germans (vs. 26% of Americans) had ended their "dependence" within six months of initial receipt. But now German

⁹ This conclusion appears to contradict the results from these two data sources appearing in Duncan et al. (forthcoming) and cited earlier. A crucial difference is that Duncan et al. mixed together first and subsequent spells while our spell data are for initial spells.

¹⁰ Although the vast majority of German LSA cases were observed for a period longer than 48 months, a substantial number of U.S. AFDC recipients were not. We judged that a 48-month window would maximize the combination of sample size and length of observation.

¹¹ A log rank test shows that the hypothesis that the survival curves have equal slopes can be rejected at the 13% confidence level.

recipients are less likely (33% vs. 41%) than American recipients to have long (4+ years) periods of dependence.

Duration models. We estimated a number of bivariate and multivariate duration models on the separate samples, searching for important country-based interactions and parsimonious ways of summarizing the structure of the demographic effects. We discovered three statistically significant interactions. First, the effects of the age of the youngest child on duration was much stronger in the U.S. than in Germany. Second, having other adults in the household was more beneficial for U.S. than German recipients. And third, the effect of living in neighborhoods with greater concentrations of social-assistance recipients was more detrimental in Germany. All of our regressions include these three interactions.

Our simplest duration model uses OLS to relate the total number of months of receipt (regardless of spell structure) during the 48-month window following the point of initial receipt to the initial demographic characteristics of the recipient families.¹² The first column of Table 4 show results for OLS models in linear form; a semi-logarithmic form produced virtually identical patterns.

The effects on duration of the age of the mother are surprisingly weak in these data, approaching statistical significance in neither sample and in neither the bivariate nor multivariate duration models we estimated. Further disaggregation of the PSID sample into very young (i.e., under age 21) and somewhat older (i.e., age 21-25) mothers also failed to produce significant differences. We suspect that part of the explanation lies in the assistance provided by other adults who are likely to live in the same households as the young mothers, although the age effects were weak at best even in the absence of controls for family structure.

In contrast, there are much stronger effects for the age of the youngest child, particularly in the PSID sample. When compared with the omitted group of mothers whose youngest children were 3-6 years old at the start of their initial spells of receipt, U.S. mothers with very young

¹² This regression model and the Cox models discussed below were estimated using the sampling weights in the PSID. Unweighted models were also estimated and showed similar although somewhat less significant patterns of effects. Neither of the data sets we used are simple random samples from their respective populations of interest. In the case of the PSID, the stratified and clustered nature of the sample as well as the unequal selection probabilities give rise to "design effects," which generally cause standard errors to be larger than what they would be with a simple random sample. We used the sampling information contained in the PSID data to estimate (using the OSIRIS.IV REPER program) standard errors on the PSID portion of the sample that take sample design into account. Design effects were substantial, increasing the standard errors by a factor of between 1.3 and 2.0. In terms of specific variables, the "youngest child <3" measure retained its significance at the 5% level, while the race variable retained its significance at the 10% level. The t-ratio of the "youngest child >6" fell to 1.4, while the t-ratio on the prior work experience dummy fell to 1.2.

children have 20-month longer durations of receipt. Somewhat surprisingly, receipt durations are also longer if the youngest child was old enough to be in school.

We suspect that these patterns reflect the fact that permanent transitions off AFDC may be easiest when children enter school. Recipients with children in the three to six-year age range will usually have children making the transition to school during the observation window provided by our two data sets.

Haphazard day-care facilities in the United States undoubtedly make transitions prior to this point difficult. AFDC cases that begin with the youngest children already in school may constitute a self-selected set of families in difficult circumstances for whom having children in school is not sufficient to enable the mother to obtain employment.

In the case of the German sample, the statistically significant interaction terms all but eliminate the effect of the age of the children on duration. That mothers with very young children do not have significantly longer durations of receipt may reflect the high priority they receive in the queue for child-care slots in the Bremen administration. All child-care institutions fully or partially financed by the local authorities are required to give single mothers the highest priority for available slots.

As expected, prior work experience was associated with significantly shorter durations. Being black in the PSID was associated with longer durations. Concentrations of public-assistance recipients in the neighborhood had an insignificant effect on the durations of U.S. recipients but a significantly more negative effect for German recipients.

With one interesting exception, OLS regression of the duration of the first spell produced similar results. The exception is that the presence of other adults in the household significantly shortened first spells in the United States but not Germany. That neither the main effect nor interaction was significant in the "total months" regression suggests that grandparents and other adults in the households of U.S. recipients may hasten initial exits (perhaps by receiving income that disqualifies the recipient family), but have little effect on the longer-term patterns of receipt.

We next estimated event-history models that took advantage of the complete histories of receipt and assumed that initial "spells" of dependence were not finished unless 24 consecutive months of nonreceipt were observed.¹³ Both Cox partial-likelihood and log-logistic duration models produced similar results. Results from the Cox model are shown in the third column of Table 4.

¹³ Here we experimented with the definition of duration during the periods of dependence. Should only the actual months of receipt be counted, or should a11 months be counted, regardless of whether

The direction (signs are reversed between the OLS and Cox models since the Cox models are of escapes, while the OLS models are of duration of receipt) and statistical significance of the demographic variables in the Cox models are very similar to those of the OLS duration models. The unexpected positive effect of neighbors on public-assistance recipients on social-assistance "escapes" in the U.S. sample is now statistically significant; the significant interaction term still indicates that such neighbors are more detrimental for German recipients.

As a final comparison, we estimated a Cox model on the duration of the first spell of receipt, where spell is defined in the conventional way of ending at the first instance of nonreceipt. Despite the rather different survival curves associated with first spells and duration defined by time until 24 months of nonreceipt, a comparison of the coefficients in the third and fourth columns of Table 4 show more similarities than differences. The only differences are with the "other adults in household" and neighborhood variables. As with the OLS model of duration of first spell, the presence of other adults in the households of U.S. recipients shortens such durations. Neighborhood conditions become insignificant, indicating that they may be more important for longer-term patterns of receipt than short-term ones.

Simple simulations. We used the coefficients from the linear OLS model using a 48-month window to conduct a number of simulations that standardized the demographic structure of recipients in the two countries. We first simulated the duration of receipt over the 48-month window if the characteristics of the U.S. caseload were applied to the "behavior" implied by the German coefficients. Assuming the coefficient on "Black in the PSID" to be zero, the mean duration of receipt increases by 25% to 25 months. Assuming that the "Black in the PSID" coefficient holds in Germany increases the estimated duration to 28 months. Thus, the less favorable characteristics of the U.S. caseload would appear to lengthen durations if the U.S. caseload exhibited the "behavior" implied by the German coefficients.

Applying the more favorable demographic structure of the German caseload to the "behavior" implied by the U.S. coefficients reduces the mean months of receipt by roughly one-third to about 15 months. Thus both sets of simulations show that apparent equality of average caseload duration in the two countries is the spurious result of the fact that German recipients have characteristics associated with shorter spells.

Summary

Despite a more generous and less stigma-loaden system, German lone-parent recipients of social assistance do not average longer periods of social-assistance receipt than their U.S. counterparts. Our analysis points to several reasons why this is the case.

First, average durations provide a somewhat misleading picture of the nature of dependence in the two countries. The German Sozialhilfe program is much more likely than the U.S. AFDC program to provide short-term bridge funding for families waiting to receive social-insurance transfers such as unemployment compensation. When the very short-term recipients are removed from the two samples, then German recipients indeed have longer durations of assistance than their U.S. counterparts.

Second, demographic characteristics of German recipients differ from their U.S. counterparts in a number of important ways, most of which appear to lead to shorter periods of dependence. Although having somewhat less work experience, German lone-parent recipients and their children are considerable older than their U.S. counterparts, facilitating the chance of work-related exits. Our demographic simulations show that German recipients would have shorter periods of dependence if subjected to the structure of the U.S. model. On the other hand, U.S. recipients would have decidedly longer periods of dependence were they placed in the more generous structure of the German model. We do not want to attach too much importance to the precise estimates coming from our decidedly naive simulations. However, they do demonstrate the importance of accounting for demographic differences in cross-national studies of social-assistance receipt.

Third, although having somewhat longer initial periods of receipt, German recipients tend to be more successful at "permanently" escaping from social assistance. The extent to which this is caused by more intensive job-training or other programs offered to German recipients is an important topic for further research.

Another observation, based on data that are, at best, suggestive, is that cross-country differences in child-care policies may be behind the striking differences in the extent to which young children handicap exits from social assistance. U.S. lone parents who start AFDC spells with children under the age of three have much longer periods of dependence than lone parents with children between the ages of 3 and 6. The fact that Bremen, Germany, has a much more active policy of giving recipients high priority in child care queues may account for at least part of this effect.

Conclusions must be viewed as tentative at this point. Our analysis does not encourage us to expect that a European regime of social-assistance benefits could be imported to the United States without lengthening the duration of receipt among U.S. recipients by at least a modest amount. That cost must be traded off against the gain from having far fewer children spending much of their childhood in poverty.

Table 1: Extent and Social-Assistance Receipt of Lone-Parent Families in (West) Germany and the United States (in Percent)

| | Fraction of Families with Children Headed By A Single Mother | | Fraction of Single-Parent Families With Children Receiving Social Assistance | | |
|------|--|-------------------|--|------------|-------------------|
| | Germany ^a | U.S. ^b | Germany ^c | | U.S. ^d |
| Year | | | One Child | 2+Children | |
| 1969 | | | 1.7 | 10.3 | |
| 1970 | 7.4 | 11.5 | | | 53.3 |
| 1978 | | | 5.7 | 16.2 | |
| 1980 | 7.9 | 19.4 | | | 56.2 |
| 1986 | 9.3 | | | | |
| 1988 | | | 10.2 | 20.0 | |
| 1990 | | 24.2 | | | 44.8 |
| 1992 | | 25.5 | | | 49.2 |

^aSource: Hauser and Semrau (1990), Table 4. Data are ratio of one-parent families with children and all families with children.

^bSource: U.S. Bureau of the Census (1993), Table F.

^cSource: Hauser and Semrau (1990), page 9; Statistisches Bundesamt (1988), Fachserie 13 Sozialleistungen, Reihe 2, Sozialhilfe; Statistisches Bundesamt (1988), Fachserie 1, Bevölkerung und Erwerbstätigkeit, Reihe 3 Haushalt und Familie.

^dRatio of: (Average monthly number of families receiving Aid to Families With Dependent Children less number of families in Unemployed Parent (UP) component of AFDC) and (Number of families with children headed by a lone mother). Source of numerator: Committee on Ways and Means, Table 24, Columns 1 and 4. Source of denominator: U.S. Bureau of the Census (1993), Table F.

Table 2: Characteristics of First-time, Mother-only Recipients in the Initial Month of Receipt

| | U.S.: PSID (weighted) | Germany: LSA |
|---|--------------------------|-----------------|
| Age of Household Head | | |
| <21 | 20.0 | 0.0 |
| 21-24 | 35.7 | 18.5 |
| 25-29 | 24.4 | 31.5 |
| 30-34 | 12.4 | 24.1 |
| 35-40 | 4.9 | 9.2 |
| >40 | 2.6 | 16.7 |
| Age of youngest child | | |
| <2 (including pregnant) | 60.3 | 20.4 |
| 2-3 | 20.8 | 11.1 |
| 3-4 | 3.1 | 12.0 |
| 4-5 | 3.3 | 10.2 |
| 6-10 | 8.6 | 18.5 |
| 11+ | 3.9 | 27.8 |
| Household structure | | |
| Mother only | 56.4% | 85.2% |
| Parent of mother present | 16.5 | 2.8 |
| Other adults present | 27.2 | 12.0 |
| Prior work experience? | | |
| Yes | 66.1 | 39.8 |
| No | 33.9 | 60.2 |
| Ethnicity | | |
| Black | 36.6 | n.a. |
| Other | 63.4 | n.a. |
| Neighborhood conditions | | |
| Percent of households in neighborhood receiving social assistance | | |
| <10% | 53.6 | 77.8 |
| 10-20% | 25.0 | 14.8 |
| 20-30% | 14.9 | 7.4 |
| 30-40% | 3.0 | 0.0 |
| >40% | 3.5 | 0.0 |
| Number of cases | 133 | 108 |

Table 3: Distribution of Social-Assistance Receipt for First-time, Mother-only Recipients Over the 48-month Period Beginning with the Initial Month of Receipt

| | U.S.: PSID (weighted) | Germany: LSA |
|--|--------------------------|-----------------|
| Median months of receipt | 23.6 months | 23.9 months |
| Mean months of receipt | 20.3 months | 21.9 months |
| Percent with total receipt lasting: | | |
| 1 month | 6.4 | 16.7 |
| 2 months | 5.5 | 6.5 |
| 3 months | 4.3 | 5.6 |
| 4 months | 7.3 | 3.7 |
| 5-11 months | 13.4 | 10.2 |
| 12 months | 9.4 | 0.0 |
| 13-23 months | 10.9 | 11.1 |
| 24 months | 8.3 | 2.8 |
| 25-35 months | 5.5 | 14.8 |
| 36 months | 9.3 | 0.0 |
| 37-47 months | 12.5 | 7.4 |
| 48 months | 7.2 | 21.3 |
| Percent receiving social assistance in the 48th month | 41.4 | 31.7 |
| Percent with: | | |
| 1 spell of receipt | 60.9 | 77.8 |
| 2 spells | 29.3 | 13.0 |
| 3+ spells | 9.8 | 9.2 |
| Number of cases | 133 | 108 |

Table 4: Regression Coefficients and Standard Errors From OLS and Event-History Models of Duration of Social-Assistance Receipt for First-Time Recipients

| | OLS Model using 48-months window; dependent variable | | Cox Model, duration | |
|--------------------------------|--|-----------------------------------|--------------------------------------|------------------|
| | total months of receipt receipt | months of first spell spell | until 24 months of non-receipt | of first only |
| German LSA = 1 | 14.78 (7.78) | 10.24 (7.38) | -0.89 (0.60) | -0.92 (0.51) |
| Age < 25 | 0.81 (2.65) | 1.37 (2.51) | -0.18 (0.22) | 0.08 (0.18) |
| Age 25-35 | omitted | omitted | omitted | omitted |
| Age > 35 | -0.68 (3.42) | 1.02 (3.23) | 0.19 (0.26) | 0.30 (0.22) |
| Youngest child <3 | 20.51* (6.28) | 16.99* (5.94) | -1.50* (0.44) | -1.32* (0.39) |
| Youngest child <3 * LSA = 1 | -22.97* (7.58) | -20.32 (7.18) | 1.62* (0.57) | 1.35* (0.49) |
| Youngest child 3-6 | omitted | omitted | omitted | omitted |
| Youngest child >6 | 15.36* (7.05) | 13.75* (6.65) | -1.00* (0.50) | -1.05* (0.46) |
| Youngest child >6 * LSA = 1 | -21.11* (8.09) | -20.61* (7.66) | 1.17* (.59) | 1.37* (0.53) |

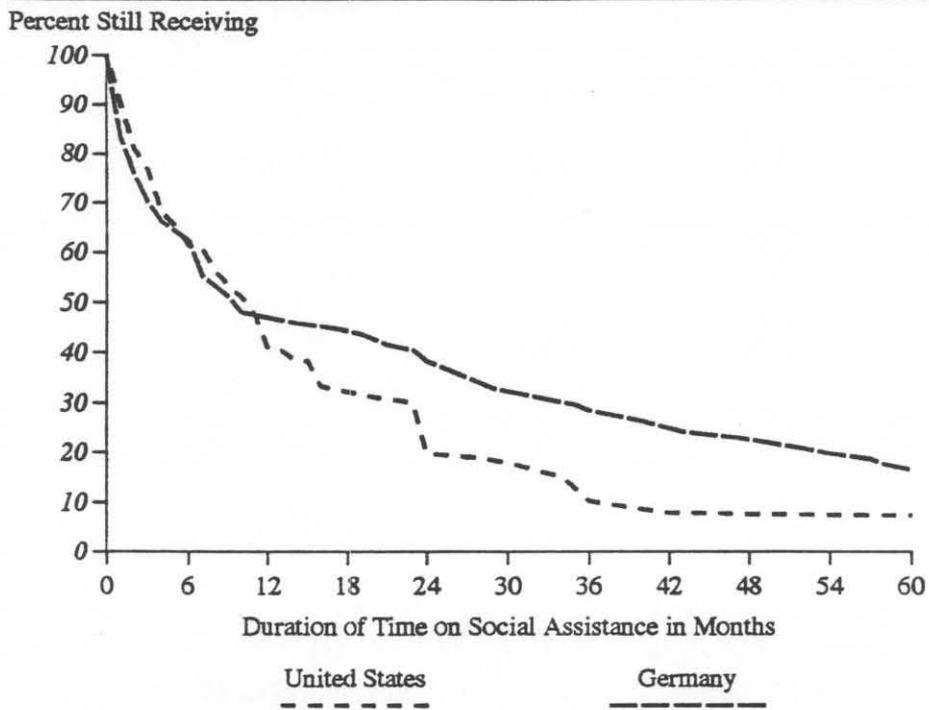
| | OLS Model using 48-months window; dependent variable | | Cox Model, duration | |
|--|--|-----------------------------------|--------------------------------------|------------------|
| | total months of receipt receipt | months of first spell spell | until 24 months of non-receipt | of first only |
| Prior Work Experience = 1 | -5.90* (2.33) | -7.17* (2.21) | 0.66* (0.19) | 0.59* (0.16) |
| Other adults in household = 1 | -3.85 (3.12) | -8.41 (2.95) | 0.15 (0.26) | 0.72* (0.20) |
| Other adults in household * LSA = 1 | 5.21 (5.43) | 12.62* (5.14) | -0.39 (0.45) | -1.39* (0.38) |
| Black in PSID sample = 1 | 9.44* (3.18) | 6.98* (3.01) | -0.64* (0.27) | -0.51* (0.21) |
| % households in neighborhood receiving Public Assistance | -1.96 (1.33) | -0.33 (1.26) | 0.19* (0.09) | 0.01 (0.09) |
| % households in neighborhood receiving Public Assistance *LSA | 9.71* (3.08) | 9.78* (2.92) | -0.51* (0.25) | 0.38 (0.20) |
| Constant | 6.14 (6.80) | 5.57 (6.43) | | |
| R-square (adjusted) | 0.10 | 0.14 | | |
| Log-likelihood | | | -726.50 | -995.36 |
| Number of cases | 241 | 241 | 241 | 241 |

Note: "*" indicated that the coefficient is more than twice its standard error.

Table 5: Simulations of Duration of Social-Assistance Receipt over the 48-Month Window, for First-Time Recipients of Social Assistance

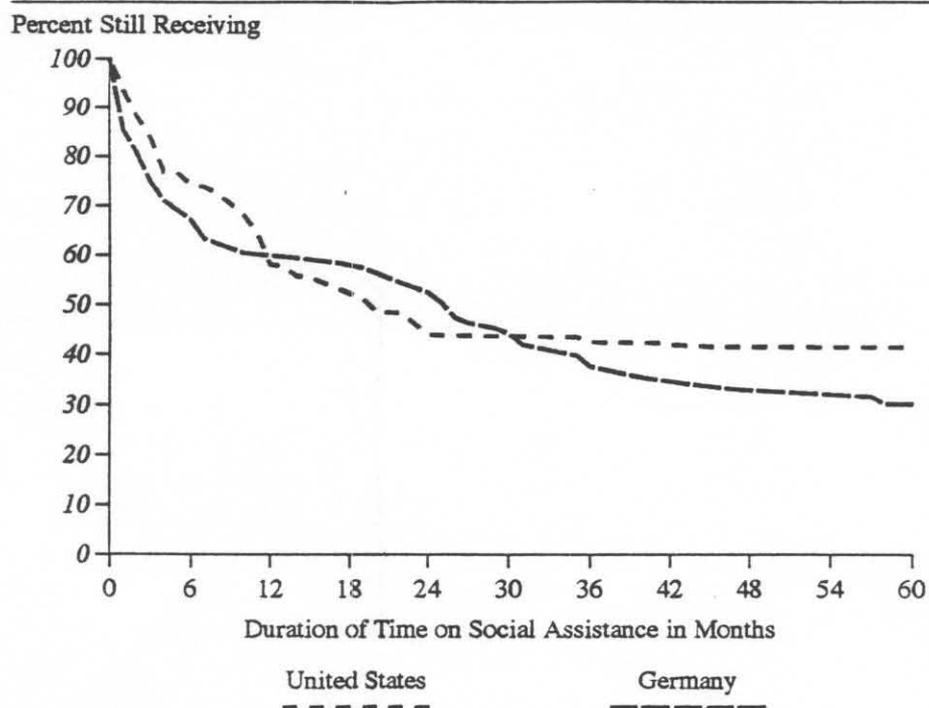
| | U.S.: PSID | Germany: LSA |
|---|-------------|--------------|
| Observed mean | 20.3 months | 21.9 months |
| U.S. means and German coefficients (assuming zero coefficient for "Black in PSID sample") | 25.0 | |
| U.S. means and German coefficients (assuming U.S. coefficient for "Black in PSID sample") | 28.4 | |
| German means (assuming no blacks) and U.S. coefficients | | 15.1 |
| German means (assuming U.S. percentage black -- 36.6%) and U.S. coefficients | | 18.6 |

Figure 1: Duration of First Episode of Social Assistance for Lone Mothers in Germany and the United States



Source: LSA and PSID

Figure 2: Duration of "Dependence" on Social Assistance for Lone Mothers in Germany and United States



Note: Social assistance duration is assumed to have ended only if we observe 24 consecutive months of nonreceipt.

Source: LSA and PSID

Appendix Table 1a: Kaplan-Meier Estimates of First Spells in German LSA:

| ID | Index | Time | Number Events | Number Censored | Exposed to Risk | Survivor Function | Std. Error | Cum. Rate |
|----|-------|-------|---------------|-----------------|-----------------|-------------------|------------|-----------|
| 0 | 0 | 0.00 | 0 | 0 | 108 | 1.00000 | 0.00000 | 0.00000 |
| 0 | 1 | 1.00 | 18 | 0 | 108 | 0.83333 | 0.03586 | 0.18232 |
| 0 | 2 | 2.00 | 8 | 2 | 88 | 0.75758 | 0.04141 | 0.27763 |
| 0 | 3 | 3.00 | 6 | 0 | 80 | 0.70076 | 0.04433 | 0.35559 |
| 0 | 4 | 4.00 | 4 | 2 | 72 | 0.66183 | 0.04594 | 0.41275 |
| 0 | 5 | 5.00 | 2 | 1 | 67 | 0.64207 | 0.04665 | 0.44306 |
| 0 | 6 | 6.00 | 2 | 1 | 64 | 0.62201 | 0.04730 | 0.47481 |
| 0 | 7 | 7.00 | 7 | 0 | 62 | 0.55178 | 0.04884 | 0.59461 |
| 0 | 8 | 8.00 | 2 | 0 | 55 | 0.53171 | 0.04908 | 0.63165 |
| 0 | 9 | 9.00 | 2 | 1 | 52 | 0.51126 | 0.04928 | 0.67087 |
| 0 | 10 | 10.00 | 3 | 1 | 49 | 0.47996 | 0.04946 | 0.73405 |
| 0 | 11 | 12.00 | 1 | 0 | 46 | 0.46953 | 0.04948 | 0.75603 |
| 0 | 12 | 14.00 | 1 | 0 | 45 | 0.45909 | 0.04947 | 0.77850 |
| 0 | 13 | 17.00 | 1 | 2 | 42 | 0.44816 | 0.04948 | 0.80260 |
| 0 | 14 | 19.00 | 1 | 0 | 41 | 0.43723 | 0.04947 | 0.82729 |
| 0 | 15 | 20.00 | 1 | 0 | 40 | 0.42630 | 0.04942 | 0.85261 |
| 0 | 16 | 21.00 | 1 | 0 | 39 | 0.41537 | 0.04935 | 0.87858 |
| 0 | 17 | 23.00 | 1 | 0 | 38 | 0.40444 | 0.04925 | 0.90525 |
| 0 | 18 | 24.00 | 2 | 0 | 37 | 0.38258 | 0.04895 | 0.96082 |
| 0 | 19 | 25.00 | 1 | 0 | 35 | 0.37165 | 0.04876 | 0.98981 |
| 0 | 20 | 26.00 | 1 | 0 | 34 | 0.36072 | 0.04853 | 1.01966 |
| 0 | 21 | 27.00 | 1 | 0 | 33 | 0.34979 | 0.04828 | 1.05043 |
| 0 | 22 | 28.00 | 1 | 0 | 32 | 0.33886 | 0.04799 | 1.08218 |
| 0 | 23 | 29.00 | 1 | 0 | 31 | 0.32792 | 0.04767 | 1.11497 |
| 0 | 24 | 31.00 | 1 | 0 | 30 | 0.31699 | 0.04732 | 1.14887 |
| 0 | 25 | 33.00 | 1 | 0 | 29 | 0.30606 | 0.04693 | 1.18396 |
| 0 | 26 | 35.00 | 1 | 0 | 28 | 0.29513 | 0.04651 | 1.22033 |
| 0 | 27 | 36.00 | 1 | 0 | 27 | 0.28420 | 0.04606 | 1.25807 |
| 0 | 28 | 38.00 | 1 | 0 | 26 | 0.27327 | 0.04556 | 1.29729 |
| 0 | 29 | 40.00 | 1 | 0 | 25 | 0.26234 | 0.04503 | 1.33812 |
| 0 | 30 | 43.00 | 2 | 0 | 24 | 0.24048 | 0.04385 | 1.42513 |
| 0 | 31 | 47.00 | 1 | 0 | 22 | 0.22955 | 0.04320 | 1.47165 |
| 0 | 32 | 52.00 | 2 | 0 | 21 | 0.20769 | 0.04176 | 1.57173 |
| 0 | 33 | 54.00 | 1 | 0 | 19 | 0.19675 | 0.04097 | 1.62580 |
| 0 | 34 | 57.00 | 1 | 0 | 18 | 0.18582 | 0.04012 | 1.68296 |
| 0 | 35 | 58.00 | 1 | 0 | 17 | 0.17489 | 0.03922 | 1.74358 |
| 0 | 36 | 60.00 | 1 | 0 | 16 | 0.16396 | 0.03827 | 1.80812 |
| 0 | 37 | 61.00 | 1 | 0 | 15 | 0.15303 | 0.03724 | 1.87711 |
| 0 | 38 | 62.00 | 1 | 0 | 14 | 0.14210 | 0.03615 | 1.95122 |
| 0 | 39 | 63.00 | 1 | 0 | 13 | 0.13117 | 0.03498 | 2.03126 |
| 0 | 40 | 64.00 | 2 | 0 | 12 | 0.10931 | 0.03239 | 2.21358 |
| 0 | 41 | 65.00 | 2 | 0 | 10 | 0.08745 | 0.02937 | 2.43673 |
| 0 | 42 | 66.00 | 1 | 0 | 8 | 0.07652 | 0.02766 | 2.57026 |
| 0 | 43 | 67.00 | 1 | 0 | 7 | 0.06558 | 0.02578 | 2.72441 |
| 0 | 44 | 68.00 | 1 | 0 | 6 | 0.05465 | 0.02368 | 2.90673 |
| 0 | 45 | 70.00 | 1 | 0 | 5 | 0.04372 | 0.02132 | 3.12987 |
| 0 | 46 | 72.00 | 4 | 0 | 4 | 0.00000 | * | * |

Median Duration: 9.36

Cases: 108 weighted: 108

Appendix Table 1b: Kaplan-Meier Estimates of First Spells in U.S. PSID

| ID | Index | Time | Number Events | Number Censored | Exposed to Risk | Survivor Function | Std. Error | Cum. Rate |
|----|-------|-------|------------------|--------------------|--------------------|----------------------|---------------|--------------|
| 1 | 0 | 0.00 | 0 | 0 | 133 | 1.00000 | 0.00000 | 0.00000 |
| 1 | 1 | 1.00 | 12 | 0 | 133 | 0.90418 | 0.02552 | 0.10073 |
| 1 | 2 | 2.00 | 12 | 0 | 120 | 0.80992 | 0.03402 | 0.21082 |
| 1 | 3 | 3.00 | 5 | 0 | 107 | 0.76679 | 0.03667 | 0.26554 |
| 1 | 4 | 4.00 | 11 | 0 | 101 | 0.68214 | 0.04038 | 0.38251 |
| 1 | 5 | 5.00 | 3 | 0 | 90 | 0.65354 | 0.04126 | 0.42535 |
| 1 | 6 | 6.00 | 5 | 0 | 86 | 0.61261 | 0.04224 | 0.49003 |
| 1 | 7 | 7.00 | 0 | 0 | 81 | 0.60642 | 0.04236 | 0.50019 |
| 1 | 8 | 8.00 | 6 | 0 | 80 | 0.56062 | 0.04304 | 0.57871 |
| 1 | 9 | 9.00 | 3 | 0 | 74 | 0.53306 | 0.04326 | 0.62912 |
| 1 | 10 | 10.00 | 2 | 0 | 70 | 0.51065 | 0.04335 | 0.67206 |
| 1 | 11 | 11.00 | 4 | 0 | 67 | 0.47626 | 0.04331 | 0.74179 |
| 1 | 12 | 12.00 | 9 | 0 | 63 | 0.40800 | 0.04262 | 0.89648 |
| 1 | 13 | 13.00 | 0 | 0 | 54 | 0.40383 | 0.04255 | 0.90675 |
| 1 | 14 | 14.00 | 2 | 0 | 53 | 0.38478 | 0.04219 | 0.95507 |
| 1 | 15 | 15.00 | 0 | 0 | 51 | 0.38253 | 0.04214 | 0.96096 |
| 1 | 16 | 16.00 | 6 | 0 | 50 | 0.33210 | 0.04084 | 1.10232 |
| 1 | 17 | 20.00 | 2 | 0 | 44 | 0.31062 | 0.04013 | 1.16919 |
| 1 | 18 | 21.00 | 0 | 0 | 41 | 0.30767 | 0.04002 | 1.17874 |
| 1 | 19 | 22.00 | 0 | 0 | 40 | 0.30437 | 0.03990 | 1.18953 |
| 1 | 20 | 23.00 | 0 | 0 | 40 | 0.29852 | 0.03968 | 1.20893 |
| 1 | 21 | 24.00 | 13 | 0 | 39 | 0.19673 | 0.03447 | 1.62590 |
| 1 | 22 | 27.00 | 0 | 0 | 26 | 0.18996 | 0.03401 | 1.66094 |
| 1 | 23 | 28.00 | 0 | 0 | 25 | 0.18834 | 0.03390 | 1.66951 |
| 1 | 24 | 30.00 | 1 | 0 | 25 | 0.17786 | 0.03316 | 1.72676 |
| 1 | 25 | 34.00 | 3 | 0 | 23 | 0.14914 | 0.03089 | 1.90285 |
| 1 | 26 | 36.00 | 6 | 0 | 19 | 0.10149 | 0.02619 | 2.28776 |
| 1 | 27 | 41.00 | 2 | 0 | 12 | 0.08140 | 0.02381 | 2.50839 |
| 1 | 28 | 42.00 | 0 | 0 | 10 | 0.07803 | 0.02337 | 2.55066 |
| 1 | 29 | 46.00 | 0 | 0 | 9 | 0.07693 | 0.02323 | 2.56483 |
| 1 | 30 | 47.00 | 0 | 0 | 9 | 0.07565 | 0.02306 | 2.58162 |
| 1 | 31 | 58.00 | 0 | 6 | 2 | 0.07319 | 0.02369 | 2.61468 |
| 1 | 32 | 67.00 | 1 | 0 | 2 | 0.03594 | 0.02746 | 3.32578 |
| 1 | 33 | 84.00 | 0 | 2 | 0 | 0.03594 | 0.02746 | 3.32578 |

Median Duration: 10.31

Duration times limited to: 84

Cases: 133 weighted: 133.001

Appendix Table 2a: Kaplan-Meier Estimates of Time Until 24 Months of Nonreceipt in German LSA:

| ID | Index | Time | Number Events | Number Censored | Exposed to Risk | Survivor Function | Std. Error | Cum. Rate |
|----|-------|-------|---------------|-----------------|-----------------|-------------------|------------|-----------|
| 0 | 0 | 0.00 | 0 | 0 | 108 | 1.00000 | 0.00000 | 0.00000 |
| 0 | 1 | 1.00 | 16 | 0 | 108 | 0.85185 | 0.03418 | 0.16034 |
| 0 | 2 | 2.00 | 5 | 2 | 90 | 0.80453 | 0.03828 | 0.21750 |
| 0 | 3 | 3.00 | 6 | 0 | 85 | 0.74774 | 0.04202 | 0.29070 |
| 0 | 4 | 4.00 | 4 | 1 | 78 | 0.70939 | 0.04402 | 0.34335 |
| 0 | 5 | 5.00 | 2 | 1 | 73 | 0.68996 | 0.04491 | 0.37113 |
| 0 | 6 | 6.00 | 2 | 0 | 71 | 0.67052 | 0.04570 | 0.39970 |
| 0 | 7 | 7.00 | 4 | 0 | 69 | 0.63165 | 0.04700 | 0.45942 |
| 0 | 8 | 9.00 | 2 | 0 | 65 | 0.61221 | 0.04752 | 0.49067 |
| 0 | 9 | 10.00 | 1 | 0 | 63 | 0.60250 | 0.04775 | 0.50667 |
| 0 | 10 | 14.00 | 1 | 0 | 62 | 0.59278 | 0.04796 | 0.52293 |
| 0 | 11 | 17.00 | 1 | 2 | 59 | 0.58273 | 0.04819 | 0.54003 |
| 0 | 12 | 19.00 | 1 | 0 | 58 | 0.57268 | 0.04839 | 0.55742 |
| 0 | 13 | 21.00 | 2 | 0 | 57 | 0.55259 | 0.04873 | 0.59314 |
| 0 | 14 | 23.00 | 2 | 0 | 55 | 0.53250 | 0.04899 | 0.63018 |
| 0 | 15 | 24.00 | 1 | 0 | 53 | 0.52245 | 0.04908 | 0.64923 |
| 0 | 16 | 25.00 | 2 | 0 | 52 | 0.50236 | 0.04921 | 0.68845 |
| 0 | 17 | 26.00 | 3 | 0 | 50 | 0.47221 | 0.04924 | 0.75032 |
| 0 | 18 | 27.00 | 1 | 0 | 47 | 0.46217 | 0.04921 | 0.77183 |
| 0 | 19 | 29.00 | 1 | 2 | 44 | 0.45166 | 0.04920 | 0.79482 |
| 0 | 20 | 30.00 | 1 | 1 | 42 | 0.44091 | 0.04919 | 0.81892 |
| 0 | 21 | 31.00 | 2 | 1 | 40 | 0.41886 | 0.04913 | 0.87021 |
| 0 | 22 | 33.00 | 1 | 0 | 38 | 0.40784 | 0.04906 | 0.89688 |
| 0 | 23 | 35.00 | 1 | 0 | 37 | 0.39682 | 0.04896 | 0.92428 |
| 0 | 24 | 36.00 | 2 | 0 | 36 | 0.37477 | 0.04866 | 0.98144 |
| 0 | 25 | 38.00 | 1 | 0 | 34 | 0.36375 | 0.04846 | 1.01129 |
| 0 | 26 | 40.00 | 1 | 0 | 33 | 0.35273 | 0.04823 | 1.04206 |
| 0 | 27 | 43.00 | 1 | 1 | 31 | 0.34135 | 0.04800 | 1.07485 |
| 0 | 28 | 47.00 | 1 | 1 | 29 | 0.32958 | 0.04776 | 1.10994 |
| 0 | 29 | 57.00 | 1 | 5 | 23 | 0.31525 | 0.04779 | 1.15439 |
| 0 | 30 | 58.00 | 1 | 0 | 22 | 0.30092 | 0.04771 | 1.20091 |
| 0 | 31 | 72.00 | 0 | 21 | 5 | 0.30092 | 0.04771 | 1.20091 |

Median Duration: 25.08

Duration times limited to: 58

Cases: 108 weighted: 108

Appendix Table 2b: Kaplan-Meier Estimates of Time Until 24 Months of Nonreceipt in U.S. PSID

| ID | Index | Time | Number Events | Number Censored | Exposed to Risk | Survivor Function | Std. Error | Cum. Rate |
|----|-------|-------|---------------|-----------------|-----------------|-------------------|------------|-----------|
| 1 | 0 | 0.00 | 0 | 0 | 133 | 1.00000 | 0.00000 | 0.00000 |
| 1 | 1 | 1.00 | 8 | 0 | 133 | 0.93463 | 0.02143 | 0.06760 |
| 1 | 2 | 2.00 | 7 | 0 | 124 | 0.87998 | 0.02818 | 0.12786 |
| 1 | 3 | 3.00 | 5 | 0 | 117 | 0.83685 | 0.03204 | 0.17812 |
| 1 | 4 | 4.00 | 9 | 0 | 111 | 0.76731 | 0.03664 | 0.26486 |
| 1 | 5 | 5.00 | 0 | 0 | 102 | 0.76569 | 0.03673 | 0.26698 |
| 1 | 6 | 6.00 | 3 | 0 | 101 | 0.74160 | 0.03796 | 0.29894 |
| 1 | 7 | 7.00 | 0 | 0 | 98 | 0.73709 | 0.03817 | 0.30505 |
| 1 | 8 | 8.00 | 1 | 0 | 98 | 0.72377 | 0.03877 | 0.32328 |
| 1 | 9 | 9.00 | 2 | 0 | 96 | 0.70293 | 0.03962 | 0.35250 |
| 1 | 10 | 10.00 | 2 | 0 | 93 | 0.68052 | 0.04043 | 0.38489 |
| 1 | 11 | 11.00 | 4 | 0 | 90 | 0.64613 | 0.04146 | 0.43675 |
| 1 | 12 | 12.00 | 8 | 0 | 85 | 0.57909 | 0.04281 | 0.54630 |
| 1 | 13 | 13.00 | 0 | 0 | 77 | 0.57492 | 0.04287 | 0.55353 |
| 1 | 14 | 14.00 | 2 | 0 | 76 | 0.55587 | 0.04308 | 0.58722 |
| 1 | 15 | 15.00 | 0 | 0 | 73 | 0.55361 | 0.04311 | 0.59129 |
| 1 | 16 | 19.00 | 5 | 0 | 73 | 0.51013 | 0.04335 | 0.67309 |
| 1 | 17 | 20.00 | 3 | 0 | 67 | 0.48593 | 0.04334 | 0.72169 |
| 1 | 18 | 22.00 | 0 | 0 | 64 | 0.48263 | 0.04333 | 0.72850 |
| 1 | 19 | 24.00 | 5 | 0 | 64 | 0.43840 | 0.04303 | 0.82463 |
| 1 | 20 | 28.00 | 0 | 0 | 58 | 0.43678 | 0.04301 | 0.82833 |
| 1 | 21 | 35.00 | 0 | 0 | 58 | 0.43434 | 0.04298 | 0.83392 |
| 1 | 22 | 36.00 | 1 | 0 | 57 | 0.42381 | 0.04285 | 0.85848 |
| 1 | 23 | 41.00 | 0 | 2 | 53 | 0.42210 | 0.04283 | 0.86252 |
| 1 | 24 | 42.00 | 0 | 0 | 53 | 0.41866 | 0.04280 | 0.87069 |
| 1 | 25 | 45.00 | 0 | 0 | 52 | 0.41460 | 0.04277 | 0.88043 |
| 1 | 26 | 54.00 | 0 | 19 | 32 | 0.41371 | 0.04281 | 0.88260 |
| 1 | 27 | 84.00 | 0 | 31 | 1 | 0.41371 | 0.04281 | 0.88260 |

Median Duration: 19.42

Duration times limited to: 84

Cases: 133 weighted: 133.001

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