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Are There Communities of Welfare Recipients? Looking for Rural Urban Differences in the Duration on AFDC

Donald P. Hirasuna
and
Thomas F. Stinson

DEPARTMENT OF APPLIED ECONOMICS

COLLEGE OF AGRICULTURAL, FOOD, AND ENVIRONMENTAL SCIENCES

UNIVERSITY OF MINNESOTA

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Are There Communities of Welfare Recipients? Looking for Rural Urban Differences in the Duration on AFDC

by

Donald P. Hirasuna
Legislative Analyst
House Research Department
Minnesota House of Representatives

and

Thomas F. Stinson*
Associate Professor of Applied Economics
University of Minnesota-St. Paul

ABSTRACT. This paper reports the results of regressions on the probability of exiting AFDC based on an administrative data set of Minnesota families. The results find significant differences between recipients in urban, rural farming-dependent and other rural counties. These differences remain even after accounting for the demographic composition of the counties.

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Policy makers continue to demand better information about what affects the time households remain on welfare, and researchers continue to examine demographic and economic variables in attempt to determine how stays on welfare might be shortened. There is, however, little research on rural-urban differences in the duration of welfare episodes. When policy alternatives are formulated, experiences by parents in rural areas are generally assumed to be similar to parents in urban areas.

Rural-urban differences may be important in future policy design. Differences in the probability of exiting AFDC may reflect differences in employment opportunities, cultural behavior and other factors imbedded in the economic, social and demographic structure of affected communities. Those differences could suggest policy adjustments which could make the welfare program more successful. For example, some farming-dependent sub-state regions may contain an unusually high percentage of Hispanic parents who are migrant farm laborers. Those migrant farm laborers might benefit by having additional language interpreters and by adjusting other policies to be more sensitive to their needs.

This study uses a large, state-wide administrative data set to test for rural-urban differences in the time spent on Aid to Families With Dependent Children (AFDC) in Minnesota. Descriptive statistics, Kaplan-Meier estimates, and regression analysis are used to identify differences between rural and urban counties. Besides providing information on rural-urban differences, the descriptive statistics and Kaplan-Meier Statistics serve as a check for consistency with the regressions. The regressions enable further investigation into rural-urban differences by allowing statistical tests of whether the results may be solely explained by differences in demographic composition and local labor market fluctuations.

The Relevance of AFDC in a Post-Reform Era

Although the federal government reformed the welfare system in 1997, the similarities between the old program, Aid to Families with Dependent Children (AFDC), and the current program, Temporary Assistance to Needy Families (TANF), are such that analysis of the AFDC program is still relevant. The programs are not identical: For example, TANF places a 60-month time limit on program enrollment. However, there are many similarities. Both AFDC and TANF are cash assistance programs for low-income families. Both require compliance with child support offices. And both can be combined with other programs such as Section 8 housing and income tax credits. Moreover, the similarities between AFDC and TANF are such that many AFDC recipients were enrolled into TANF. Another reason is that TANF programs in general are too new to draw many conclusions. So far, the best information is still from the AFDC program.

Duration Analyses in the Context of Welfare Dynamics

Prior studies of time spent on AFDC typically examined characteristics correlated with longer or shorter stays on AFDC. Much of the work in this area is part of a larger description of parents' experiences on welfare (Bane and Ellwood 1983)

The dynamics of welfare recipiency describes a parent's stay as a series of entries and exits. For example, suppose the parents of a child separate and the custodial parent cannot find a job. To maintain some income for the family, the custodial parent may apply for welfare, and if income and assets are low enough to qualify, that household becomes eligible. Later, the household may leave welfare because the

parent finds a job, or a new partner. In some instances, the family may re-enter welfare because the parent separated from the new partner or the parent lost the job.

The events defining a person's path onto and off of welfare are likely to be as unique as the individual. However, even though every individual's history is different, there are likely to be common characteristics that correlate with their stay on welfare. Identifying those common characteristics may help eliminate some of the barriers that cause higher entry rates, longer stays on welfare, and shorter stays away from welfare.

Literature Review

Most previous analyses use data from one of three sources–the Population Survey of Income Dynamics (PSID), the Survey of Income and Program Participation (SIPP), or the National Longitudinal Survey of Youth (NLSY).[1] These data sets contain information on individual families. However, their sample sizes are relatively small. Turner (1999), for example, uses the SIPP data set which has 5,006 total families spread across the nation. Smaller sample sizes restrict analysts' ability to analyze smaller cohorts within the sample, including distinguishing between rural and urban places. One exception is Hoynes (2000) who uses an administrative data set, a 1 percent sample of California recipients (17,264 families).

[1]The data sets used in previous studies have some advantages: they contain more demographic information, they contain information on why people exit AFDC and they contain information from states across the nation.

A summary of previous studies is provided in Table 1.[2] The columns list selected coefficients and the final column lists the data set. A positive sign, in the columns of coefficients, indicates an increased probability of exiting AFDC. The higher probability indicates a shorter expected stay. A negative sign indicates a longer expected stay.

Since relatively little is known about administrative data sets and how they might compare with the national public samples, a summary of their results is provided below. These findings, when consistent across studies, provide expectations about the results of the regressions and the Kaplan-Meier analysis conducted in this investigation. Opposing signs may highlight differences between Minnesota's welfare population, or it may merit further consideration with other administrative data sets.

When statistically significant, most prior studies estimated coefficients carried the expected sign. Non-whites, who may face additional barriers to leaving poverty, have a lower probability of exiting AFDC than whites. Older parents, who may have acquired more job related skills, have a higher probability of exiting than younger parents. Families with older children, or fewer children have a higher probability of exiting AFDC. Hoynes (2000) tested for gender differences and found that households headed by males have a higher probability of exiting than females. Most studies, indicate that a high school diploma, which may be an indicator of skills, increases the probability of exiting AFDC. However, Turner (1999) finds an opposite and statistically significant effect.

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[2]Several studies included results from several regressions using different regression models. In cases where a coefficient from one or more regressions was significant, the sign(s) of the significant coefficients were listed in the table. In cases where there were no significant variables were reported, all signs for the same coefficient were listed.

Some took a brief look at sub-state regions by including a variable identifying urban areas (Harris 1993, Klawitter, Plotnick 1996 and Edwards, Sandefur and Cook 1997, and Hoynes 2000) . Those regression results are mixed. Sandefur and Cook (1997) find a higher probability of exiting in urban areas. Hoynes (2000) finds a lower probability for AFDC parents in California. The conflicting results could be caused by differences across states, where urban areas not in California tend to have a higher probability of exiting AFDC. Or, it could be due to a small sample size: There may be too few observations in rural regions to properly estimate time spent on AFDC. This may be especially true when considering differences across rural sub-state regions.

Other analyses examined sub-state regions in the context of local labor markets. Hoynes (2000) included the number of jobs in her regressions and finds an increased probability of exiting AFDC with a higher level of employment. Only in her model without county fixed effects, time effects, and a county time trend did she find a counter-intuitive result.[3] Fitzgerald (1995) finds that the percent of retail sales in a county increases a parent's probability of exiting AFDC. The higher probability of exiting AFDC may be caused by higher demand for lesser skilled labor. However, this approach does not provide for any systematic differences in regions. Instead, it only identifies counties by the number of job opportunities.

The relatively few studies that include information on rural and urban differences underscores the need for more analysis. Most of the previous literature merely delineated between two categories, rural

[3]The county unemployment rate is another common variable often used to capture the local labor market. (Hoynes 2000, Sandefur and Cook 1997, Fitzgerald 1995, Harris 1993). However, Hoynes (2000) notes that a jobs variable is preferable since it does not include changes in the supply of labor.

or urban[4]. However, there are a wide variety of rural places. Each with a different industrial occupational employment structure and possibly, with a different underlying social and demographic structure. This study delineates rural counties based partly upon the underlying industrial employment structure.

Data

This study uses administrative data obtained from the Minnesota Department of Human Services. The data set includes information on every person who applied for and was deemed eligible for AFDC for one or more months in Minnesota between November 1986 and June 1996. The data is unlike that used in most previous analyses in that it is not a sample, but includes all eligible families. Also, the number of AFDC families in the data set is considerably larger than previous studies. The total number of families available for analysis is 83,689.

To simplify the analysis, the data was collapsed into family level observations. After adjusting for left censoring, a total of 57,844 families were available. Each family observation includes monthly information on entry, exit, and the most recent record of the family's demographic characteristics. The availability of monthly eligibility information can increase the accuracy of measuring the spell length. Some national datasets record information in intervals, as long as one year.[5]

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[4] Hoynes (2000) study of California is the only one to further delineate urban and rural places by including a variable that identifies families from urbanized areas, urban areas that are not in an urbanized area, and rural places. These categories conform to the United States Census definitions.

[5]For purposes of this paper, a spell begins when a parent applies and is deemed eligible for AFDC. A spell ends when a person is deemed ineligible for one month or more. Some suggest that a spell ending should be recorded after 3 or more months of recorded ineligibility. By dropping this information, it might bias the results by estimating longer stays for parents who recidivate quickly.

The data covers only parents who remained single throughout all of their spells on AFDC.[6] Married couples with children were excluded because, their household decisions may be more complicated. Such families may face additional choices over health care, child care, work and marriage. Also, these families faced a different set of regulations regarding AFDC eligibility.

In this study, the adult in the household is called the parent, even though in some instances, the adult may be another relative. In some cases, no parent can be identified and all members of the family are minors. A parent, in this case, was designated when there is someone over the age of 14 and the remaining children are at least 14 years younger.

A variable was added to each record to reflect whether the family was located in urban or .rural counties. Urban counties are counties designated as part of a Standard Metropolitan Statistical Area. Rural farming-dependent counties, as defined by the USDA were separated from the other rural counties.[7] The county types were used to test the hypothesis that there is no difference between urban,

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Moreover, when using one month as the measurement, the median length of stay on AFDC is widely consistent with other studies as documented by Hoynes (2000).

[6]This excludes child-only cases, parent-only cases and two parent families. Child only cases are cases where there is no record of the parent. For example, the parent may receive Supplemental Security Income (SSI) instead of AFDC. Parent only cases occur when no children are eligible for AFDC. An example of this might be when the children receive SSI and the parent qualifies for AFDC. For purposes of this paper, two parent families include all families who at one time have joined with another adult partner and both receive AFDC. This includes any parent who stays with a partner during part of the spell and later becomes a single parent on AFDC, or a parent who takes on different partners in other spells.

[7] The Economic Research Service has identified six non-metropolitan county types–farming-dependent, mining-dependent, manufacturing-dependent, government-dependent, services-dependent and non-specialized.

rural farming-dependent and the remaining rural counties. Rejection of that null hypothesis would suggest that the differences in underlying economic, social and demographic structure may lead to differences in time spent on AFDC.

After separating farming-dependent counties from the remaining rural counties, several types of rural counties with different economic bases remained. To denote the diversity of economic activities, these rural counties were termed rural conglomerate counties. Undoubtedly, more elaborate classification schemes than the simple three county types are possible. However, because of time and space consideration, this study limits itself to the three county classifications.[8]

Farming-dependent counties were separated from other rural counties to test whether economies with a higher percentage of farming employment have fundamentally different patterns of welfare behavior. Job opportunities in farm-dependent counties may differ from those in the rural conglomerate counties. For example, parents in farming-dependent counties may be more likely to be farmers or they may be more likely to work in farm-related employment.

These differences in local economic activity may have broader implications for parents on welfare. For example, a welfare recipient living in farming-dependent counties, especially those with smaller populations, might have fundamentally different networks of employers, family contacts and neighbor contacts all of whom may be more likely to hear of job opportunities within the area. Also, lifestyle and cultural opportunities in rural farming-dependent counties may attract a different kind of parent with different preferences and opinions toward work, marriage and welfare. For example, parents

[8]There are 29 farming-dependent counties, 40 rural conglomerate counties and 18 urban counties.

in rural farming dependant counties may place a greater stigma upon welfare than parents in other communities.

The impact of local labor market fluctuations on the time spent on welfare is modeled with variables on the percent change in county employment during each quarter the family is eligible for welfare. There is some evidence that what matters may not be fluctuations in the general economy, but fluctuations as it pertains to lesser-skilled labor. Because of this, four variables are selected–the percent change in all jobs (JOBS), in retail trade (retail), in services and in low-skill services (lowskser). Here, low-skill services is made up of employment in hotels and other lodging places (SIC 70), personal services (SIC 72), auto repair, services and parking (SIC 79), miscellaneous repair services (SIC 76), and amusement and recreation services (SIC 79). The data comes from the ES-202 data set produced by the Minnesota Department of Economic Security and includes all employees covered under the Re-employment Insurance Act.[9]

Descriptive Statistics

The means and standard deviations of the demographic variables used in this study show substantial variation between urban, rural farming-dependent, and rural conglomerate counties (Table 2). For example, African Americans and Asian Americans made up approximately 35 percent of the welfare caseload in urban counties in Minnesota during the study period. In rural farming-dependent and conglomerate counties, the percent of African Americans and Asian Americans was less than 3 percent. On the other hand, American Indians and Hispanics were a larger percentage of AFDC eligible families.

[9] The data also includes federal government employees insured under separate laws.

In rural farming-dependent counties 4.1 percent are American Indian and 26.0 percent are Hispanic. In rural conglomerate counties, 5.5 percent of AFDC eligible families were American Indian and 12.7 percent, Hispanic. The higher percentages of American Indians may be related to the presence of more reservations in non-metropolitan counties. The higher percentage of Hispanics may be due to a large number of migrant farm laborers in Minnesota.

The average age of AFDC parents in rural farming-dependent and conglomerate counties is higher. Children tend to be older and the number of children tends to be larger. A higher percentage of parents in farming-dependent and conglomerate counties are male. Also, the percent of parents without a high school diploma is higher in farming-dependent and conglomerate counties.

The differences in age, number of children and percent of parents without a high school diploma may in part relate to migrant farm labor. When Hispanics were excluded from the data, the state-wide averages for age of the parent falls to 28.55. The average age of children falls to 4.46. The number of children decreases to 1.72 per family. The percent of female parents increases to 90.0 percent and the highschool dropout rate decreases to 23 percent. These differences are consistent with the hypothesis that migrant households are bringing as many working age children as possible to the state, or at least might be bringing children who are old enough to go without day care. Also some families recorded as single parents may be sending the male parent alone so that they can work on the farm while the female parent stays at home, possibly taking care of other children.

Table 3 lists the mean and standard deviations of the employment variables–jobs, retail and services. These variables will be used in two regressions, one with jobs only and one with retail and

services jobs only. The latter more adequately captures the market for lesser-skilled labor. Data privacy restrictions prevented use of county level data on services industries. To compensate, the data was aggregated to three sub-state regions–the Minneapolis-St. Paul metropolitan area, the remaining metropolitan counties and all non-metropolitan counties.[10]

When considering alternative measures of job opportunities for lesser-skilled labor, it was noted that the services industry includes many high-skilled employment opportunities such as computer programmers, accountants, and health care workers. To more adequately capture employment opportunities for lesser-skilled labor, an employment measure using low-skilled services and retail trade was also tested. Data privacy restriction required aggregation into just two regions–the Minneapolis-St. Paul metropolitan area and the rest of the state.

Means and standard deviations for retail and low-skill services within the two regions are shown in Table 4. As in the previous table, the higher standard deviation in non-metropolitan counties reflect more cyclical employment. Within these counties, employment is at a cyclical low from January to March of each year.

Differences in Duration Between Rural and Urban Counties and Other Kaplan-Meier Estimates

Differences in the time spent on welfare between sub-state regions can be estimated with a Kaplan-Meier analysis. The analysis does not control for other correlates and cannot decipher whether the differencees in time across sub-state regions can be explained by the differences in demographic

[10]The data uses the seven county Minneapolis-St. Paul metropolitan area which includes Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington Counties.

variables discussed in the previous section. Instead, the statistics are similar to what policy makers and others implementing the welfare system might observe while working with the recipients.

In addition to comparing differences between rural and urban counties, it was felt worthwhile to generate statistics on duration for the remaining demographic variables. The descriptive statistics will be compared to regression results. They can help address a constant concern that descriptive statistics, as in past studies like Porterfield (1998), do not adequately identify the separate impacts of different socio-economic variables. These statistics will provide a useful consistency check for the regression estimates presented later.

Kaplan-Meier estimates of the time spent on AFDC are provided in Table 5. This descriptive technique estimates the duration of AFDC episode for various percentiles of those eligible for AFDC. For example, the 25^{th} percentile lists the estimated number of months before 25 percent of the families exit AFDC. The 50^{th} and 75^{th} percentiles also correspond to the number of months before the respective percentage of families exit. These estimates are for a family's first AFDC episode and do not include subsequent stays on AFDC.

Since some families may have received AFDC prior to the period covered in this data set, there was no way of knowing which families were truly in their first period of AFDC eligibility. To compensate for this left censoring problem, all families receiving AFDC during the first two years of the data were dropped from the analysis. It was assumed that any family entering after two years was a first time eligible. This adjustment was adopted in both the Kaplan-Meier analysis and the first episode regressions discussed below.

The Kaplan-Meier results suggest significant differences in the estimated length of AFDC episode between urban, rural farming-dependent and rural conglomerate counties. Overall, fifty percent of all parents are estimated to stay on AFDC for about 9 months. The longest estimated stay is in urban counties. There the median is 10 months. For rural farming-dependent counties, the median estimated stay was just half the urban duration, or 5 months. In rural conglomerate counties the median stay was 7 months.

The remaining statistics were largely consistent with regression estimates in other studies. Older parents and families with older children are reported to stay on AFDC for shorter periods. Asian Americans and African Americans tend to stay longer, with a disproportionate percentage of Asian Americans staying beyond 60 months. Consistent with Hoynes (2000) males in Minnesota stay for shorter periods than females.

Unexpected results were obtained for American Indians, Hispanics, parents with more children and for parents who have not graduated highschool. American Indians and Hispanics have shorter estimated stays on AFDC than do whites. For Hispanics, the shorter stays may be because of migrant farm laborers who come to Western and Central Minnesota during Summer months. Also, there was an unexpected result for the number of children. Parent's with two children are expected to stay on welfare one month less than parents with one child. However, as expected, parents with 3 or more children stay longer than parents with fewer children. Finally, parents without a highschool diploma by the end of their episode are estimated to stay for fewer months than parents with a diploma. However, Turner (1999) found a similar result in his regressions.

Regression Model and Estimation

To test if the rural urban differences in time spent on AFDC can be explained solely by differences in demographic variables, a regression analysis was conducted. The regressions help assess whether other variables related to the broader underlying social and economic structure add to the explanatory power of the demographic and local labor market effects. Further analysis is also conducted to examine the extent of rural-urban differences by conducting regressions in each region to see if the signs of the coefficients on demographic and labor market variables remain consistent across regions.

Past analyses of welfare recipiency assume a labor supply model in which parents maximize their utility over a set of choices that include work, marriage and welfare (O'Neill, Bassi and Wolf 1987). Parents choose to stay on AFDC until they find an opportunity that improves their life's situation. Families leave AFDC for many reasons including marriage, higher earnings, additional child support and in some cases, when their youngest child reached the age at which they are no longer eligible for benefits.

The Cox proportional hazards model with time-dependent variables was used to test for rural-urban differences in duration of stay on welfare.[1] For this paper, the hazard rate is the probability of exiting AFDC given that the parent remained on AFDC until the present month.[2] The probability of exit depends upon a set of explanatory variables and the baseline hazard function . In the Cox proportional hazards model the baseline hazard is an unknown function which is equal to the hazard rate when the vector of explanatory variables is set to zero (Cox; Lancaster; and Collett). In mathematical form, the Cox proportional hazards model with time dependent variables can be expressed as:

$$h_i(t) = \exp\left(\sum_{j=1}^{k} b_j x_j(t)\right) h_0(t) \qquad (1)$$

where $h_i(t)$ is the hazard rate for individual i, $x_j(t)$ is an explanatory variable indexed by the subscript j, b_j is the coefficient to be estimated and $h_o(t)$ is the baseline hazard function. Under this version of the Cox proportional hazards model, the explanatory variables are a function of time, which allows the employment variables to change from quarter-to-quarter.

With this hazard function, the log of the partial likelihood function can be written as:

$$(2) \qquad \sum_{i=1}^{n} {}_i\left\{\sum_{j=1}^{p} b_j x_{ji}(t_i) - \log \sum_{i \in R(t_i)} \exp\left(\sum_{j=1}^{p} b_j x_{ji}(t_i)\right)\right\}$$

where $R(t_i)$ is the set of parents on AFDC at month t_i which is the moment when the ith parent leaves AFDC. This set is commonly called the risk set. The set is such that the summation term is across all members in the risk set still on AFDC when a parent leaves (t_i). In some spells, the parent is still on AFDC on the last month in the data set. To account for this type of censoring the variable $_i$ equals one if the parent's spell ends before the last month and equals zero if the parent's spell ends on or after the last month. The above equation can be maximized and solved for each b_j.

Cox Regression Results - First Episode on AFDC

For a parent's first time on AFDC, the Cox regression results show that statistically significant differences in the probability of exit from AFDC remain between urban, rural farming dependent and rural conglomerate counties, even after accounting for differences in the demographic characteristics and labor market fluctuation. The estimated coefficients for three separate Cox regressions are provided in Table 6. The first regression estimates the proportional hazards rate using jobs as the local labor market measure. The second uses the quarterly percent change in retail and services jobs. The third regression uses the percent change in retail and low-skill services jobs. A positive sign on a coefficient implies a

higher probability of exiting and results in an upward scaling of the hazard rate. A negative sign implies a lower probability of exiting.

The table shows that parents from urban countries have the lowest probability of AFDC. The next lowest probability is for parents from the rural conglomerate counties. Parents from rural farming-dependent counties have the highest probability of exiting AFDC.

There are many hypotheses that can explain why parents from urban counties might have a lower probability of exiting AFDC. Barriers to employment may be greater, or poor access to jobs may limit the prospects for employment. Or, the lower probabilities might result from a larger process in which many of the recipients live in segregated housing with poor school districts and a lack of neighborhood role models. All of these factors may interact in a way that limits the economic prosperity of some urban families (e.g., Wilson 1990).

Hypotheses regarding parents from rural farming-dependent counties have a higher probability of exiting AFDC include the possibility of a greater stigma placed on welfare in these counties. Or it may be easier to find jobs for lesser skilled workers in these counties. Or, jobs in these counties may be even more cyclical than what was captured by the employment variables.

A high percentage of AFDC parents in farming-dependent counties are Hispanic, but this does not imply that Hispanics are necessarily responsible for the shorter duration on AFDC since Hispanics are accounted for with a variable in the regression model. The Kaplan-Meier statistics verify this by showing that, even after taking out Hispanic AFDC families, the median length of stay for the first duration in farming-dependent counties is 7 months which is shorter than the overall median of 9 months.

The race variables are all statistically significant. Consistent with the Kaplan-Meier analysis and with the literature review, African Americans have a lower probability of exiting AFDC than whites and that occurs in both rural and urban counties. The relative lack of economic success of African Americans is well documented in the literature as well. Many of the problems mentioned with urban counties may apply to African Americans. To some extent, the problems that plague certain ethnic groups may be inextricably linked with problems that plague inner city neighborhoods.

Asian Americans also have a lower probability of exiting AFDC than whites in rural and urban counties. This is consistent with the Kaplan-Meier analysis and may be related to a large Southeast Asian immigrant population. A study with a similar data set found that between January 1997 and August 2000, more than 46 percent of Asian Americans eligible for welfare were immigrants. Among this group, 93 percent cited their nationality as Cambodian, Hmong, ethnic Laos or Vietnamese.

Recent Asian immigrants may face multiple barriers to employment. In the data used in this study, more than 70 percent of Asian American parents had not completed highschool, nearly triple the percentage of non-Asian AFDC parents. In addition to their lack of education, recent Asian immigrants may also have poor language skills and weak soft-skills. Moreover, some Asian Americans face the same barriers of segregated housing, poor access to jobs and poor school districts as other minorities.

American Indians have a higher probability of exiting than whites. Even though the results are consistent with the previous Kaplan-Meier analysis, this is somewhat surprising. Kaplan-Meier statistics by county show that some non-metropolitan Minnesota counties with Indian reservations have unusually long estimated stays on AFDC. Kanabec, Mille Lacs and Cass counties all have Indian reservations and

all are within the ten longest estimated median stays on AFDC.[11] However, there appears to be wide variation in times spent on welfare for American Indians since the Kaplan-Meier statistics estimate a shorter time on AFDC than whites (7 months versus 9 months).

Hispanic parents are expected to exit earlier than whites. The coefficient is negative and statistically significant indicating a higher probability of exiting in any given period. At least some of this may be due to disproportionate employment in migrant farm labor. In some counties, Hispanic single parents comprise more than 50 percent of the single parent households on AFDC. These counties have highly cyclical caseloads, which peak in Summer months and drop dramatically in Winter months.

As noted earlier, the highschool dropout rate for Hispanic parents on AFDC, 65 percent, was also high. Under conventional thinking, that higher dropout rate might imply a lower probability of leaving AFDC. However, since many of these families come to Minnesota to work in lower skilled economic sectors such as hourly work in sugar beet farms, vegetable processing plants or meat packing plants the lack of a highschool diploma may not be a significant barrier. It is also possible that these parents spend more time on AFDC, but since they are in Minnesota only during Summer months, their recorded stay on AFDC in Minnesota is very short.

Age of the parent has a negative and statistically significant relationship to duration. Human capital theory suggests that older parents have more skills and experiences that may help in finding a job and exiting AFDC. Both the previous literature and the Kaplan-Meier analysis indicate that this is

[11]The longest time is 18 months for Ramsey County which includes the city of St. Paul. Kanabec is estimated at 12 months. Mille Lacs is estimated at 10 months. And Cass county is the tenth highest with 10 months. The time spent on welfare was for the first episode and includes the same method for left censoring as in the regression.

probably the case. However, the Cox regression yields the opposite sign. The unexpected sign might be due to collinearity between age and other variables resulting in age being an inadequate indicator of job skills. The negative sign may also suggest an opposing effect in other exits. For example, older parents may be less likely to exit by marriage thereby confounding the overall exit probabilities.

As expected the sign on the age of the youngest child is positive and statistically significant. Younger children may be more likely to require child care. Younger children may also need more medical attention thereby making AFDC and it's medical benefits a more viable option.

Families with more children are also less likely to exit AFDC. Because benefits increase with the number of children, families with more children must have higher incomes before becoming ineligible for AFDC. Also, unemployed parents with many children may have less time to search for a job. The sign in the Cox regression is consistent with previous literature. However, the Kaplan-Meier statistics produce contradictory results with a shorter estimated stay for parents with two children. The stay is shorter by only one month and the Kaplan-Meier estimates for parents with three or more children have the longest estimated stays. This conflict may be due to other factors correlated with the number of children that were not separated out with the Kaplan-Meier analysis.

Female single parents have a lower probability of exiting AFDC in comparison to the male parents, which is consistent with Hoynes (2000) and with the Kaplan-Meier estimates. The lower probability exits may be caused by many factors including lower wages paid to females.

It was expected that parents without highschool diplomas would have a lower probability of exiting AFDC. The Cox regression did not confirm that hypotheses. Instead, the results yielded an unexpected sign, but one consistent with descriptive statistics. The previously mentioned higher Hispanic

dropout rates may be the reason this education variable had the wrong sign and was not statistically significant in any of the three regressions.

The probability of exiting AFDC increased with the job growth rate. The regression including retail and services employment showed an increase in the probability of exit given an increase in employment in either of these industries. The regression testing the impact of changes in employment in retail and low-skill services also showed an increased probability of exiting AFDC with an increase in either of those variables. The coefficient for the low-skill services variable is relatively small, possibly reflecting the relatively small number of jobs in low-skill services. One percentage point increase in retail results in a larger increase in the number of lesser skilled jobs in comparison to a percentage point increase in low-skill services. While the current regression with retail and low-skill services is not directly comparable with the previous regressions , two regions were used rather than three, all three regressions indicate that an increase in job opportunities is related to an increased probability of exiting AFDC.

Subsequent Episodes

The dynamics of welfare eligibility is such that a parent's first time on welfare is not always the last; some parents have multiple episodes of welfare eligibility. For example, 55 percent of the 9,655 single parents that entered welfare for the first time between the months of December 1988 and November 1989 returned for at least one more episode. In some cases, parents will enter and exit several times; roughly 2.5% of this same group returned 5 or more times.

There are several reasons why parents in their second and subsequent episodes on AFDC may behave differently than those in their first episode. Parents may be more familiar with AFDC and may be better prepared to negotiate their way through the complex set of rules. Parents with multiple episodes

may also have more difficult barriers to overcome. The results of a regression estimating the hazard rate for all repeat spells is shown in Table 7. Since the regression is based on second and subsequent spells, there is no left censoring problem. The only adjustment to the data was made because the percent change in jobs variable starts in the first quarter in 1987. To allow for current information on all jobs variables, episodes beginning before that date were excluded.

The multiple episode results confirm the findings of the first episode regressions, showing significant differences in the duration of welfare episode between urban, rural farming-dependent and rural conglomerate counties. Multiple episode parents in urban counties have a lower probability of exiting AFDC than AFDC parents in rural conglomerate counties, and AFDC parents in rural farming-dependent counties have a still higher probability of exiting AFDC.

Most other coefficients are the same as in the first episode regression, with two notable exceptions. The signs on the coefficient for American Indians and for not graduating from highschool reversed and are now as expected. Perhaps American Indian parents who have multiple episodes have more significant barriers. Also, parents without a highschool diploma that return for subsequent spells may also have significant skills deficits preventing them from leaving AFDC.

Individual Region Regressions

Single parents living in urban counties make up a substantial percentage of families on AFDC. Between 1988 and 1996 in Minnesota just over 70 percent of first episodes were for parents in urban counties. With such a large percentage of urban households, there was some concern that the remaining demographic coefficients largely represented urban counties and that signs on the remaining coefficients might be different if the rural farm dependent and rural conglomerate counties were examined separately.

Table 8 lists the coefficients from Cox regression on single parents living in rural farming-dependent and rural conglomerate counties. The regressions are for first-episodes only.

There were fewer statistically significant coefficients than in the state-wide regression of parents on their first episode. However, all but one of the coefficients carry the same sign. The rural conglomerate county regression now shows that an increase in the number of children is related to a higher probability of exiting AFDC, although that variable was not statistically significant. Otherwise, the results are largely the same: Hispanic parents have a higher probability of exiting AFDC. Asian American parents from rural conglomerate counties have a lower probability of exiting. Older children are related to a higher probability of exiting. Families with male parents have a higher probability of exiting.[3] Finally higher growth rates in jobs, retail jobs, services jobs and low-skill services jobs are all related to a higher probability of exiting AFDC.

These results indicate that the state-wide regression may be appropriate for identifying differences across sub-state regions. Family characteristics and their relationship to quicker exits from AFDC seem, for the most part, similar in sign.

Conclusion

This study finds substantial differences in the duration of episode and the probability of exit from AFDC recipients in rural and urban counties. These differences raise the possibility that welfare may have different impacts on rural and urban counties. Policy makers and analysts should consider rural urban differences as they attempt to design better policies so that cash grant welfare recipients may be more likely to lessen any dependence on welfare, and become more self-sufficient.

Several differences between rural and urban counties were noted. In rural-farming-dependent counties and rural conglomerate counties the percentage of parents who are Hispanic or American Indian is higher. The Hispanic population may represent a unique segment in that many are likely to be migrant farm laborers. Other differences in the welfare population in rural areas include a lower percentage of female parents, a higher average age for the parents and a higher average age for the children.

The length of stay on AFDC in both rural farming-dependent counties and rural conglomerate counties is shorter than in urban counties in Minnesota. And, the length of stay in farming-dependent counties is shorter than rural conglomerate counties. Kaplan-Meier estimates show that these differences occur when comparing all recipients in each of these groups. A Cox regression shows that the differences in length of stay remain even after accounting for differences in demographic variables and local labor market.

Welfare households in Minnesota's urban counties differ from rural counties in several important ways. The most notable is the percentage of African American and Asian American parents is substantially higher. Many of the Asian Americans may represent a unique caseload of first generation East Asian immigrants. Kaplan-Meier estimates and Cox regression estimates all suggest that the length of stay on AFDC is longer in urban counties.

Because of several marked differences in the demographic characteristics between rural and urban counties and because a large percentage of welfare parents lived in urban areas, there was concern that the coefficients in the Cox regression largely represented urban counties. The policy implication could be considerable since it might imply that families with similar characteristics might behave differently

across different regions.[12] Separate regressions were conducted for farming-dependent and rural conglomerate counties. The results were similar to the Cox regression for the entire state.

Recognizing differences between rural and urban counties may help in assessing regional implications of current welfare policy. For example, some urban counties may bear a disproportionate number of families that reach the 60-month time limit. Of particular likelihood might be urban counties with concentrations of Asian American and African Americans parents and with relatively low rates of job growth.

Although much research remains policy makers may consider developing policies that explicitly recognize differences between rural and urban counties. In this respect, there is a large list of potential policy options. For example, extension work might be conducted by helping counties find policy solutions to problems unique to their county or cluster of counties. It might also be possible to create other local efforts such as development of local non-profits. Certain counties may benefit by recognizing members of their community, who may face distinct barriers, such as migrant farm laborers and East Asian Immigrants. These parents may benefit from having more language interpreters and programs that might recognize their unique backgrounds and lifestyles. Policies might even consider broader economic issues such as the mix of industries and occupations prevalent within their local economy. Economic development efforts might be carried out with the hope of helping parents attain higher paying jobs. Or,

[12]Some differences still may exist because of heterogeneity in the population. For example Hispanics may be divided between migrant farm labor in rural areas and permanent Hispanic residents in the Minneapolis-St. Paul metropolitan area.

some counties may address the formidable problems of housing segregation and urban poverty as it relates to single parents on welfare.

References

Bane, M.J. and D.T. Ellwood. The Dynamics of Dependence: The Routes to Self-Sufficiency. Report prepared for the Assistant Secretary for Planning and Evaluation, Office of Evaluation and Technical Analysis, Office of Income Security Policy, U.S. Department of Health and Human Services. Contract No. HHS-100-82-0038. 1983.

Bane, M.J. and D.T. Ellwood. Welfare Realities: From Rhetoric to Reform. Cambridge, MA: Harvard University Press. 1994.

Blank, R.M. "Analyzing the Length of Welfare Spells." J. Public Econ. 39(1989): 245-73.

Collett, D. Modeling Survival Data in Medical Research. London, UK: Chapman and Hall. 1994.

Cox, D.R. "Regression Models and Life Tables." J. Roy. Statistical Society. 34(1972): 187-220.

Fitzgerald, J.M. "Local Labor Markets and Local Area Effects on Welfare Dependency." J. Pol. Anal. Manage. 14(1995): 43-67.

Harris, K.M. "Work and Welfare among Single Mothers in Poverty." Amer. J. Sociology. 92(September 1993): 317-52.

Hoynes, H. W. "Local Labor Markets and Welfare Spells: Do Demand Conditions Matter?" Rev. Econ. Statist. 82(August 2000): 351-68.

Klawitter, M., R. Plotnick, R. and M. Edwards. "Determinants of Welfare Entry and Exit by Young Women." Institute for Research on Poverty, Discussion Paper no. 1099-96. 1996.

Lancaster, T. The Econometric Analysis of Transition Data. Cambridge, UK: Cambridge University Press. 1990.

O'Neill, J.A., L.J. Bassi and D.A. Wolf. "The Duration of Welfare Spells." Rev. Econ. Statist. 69(1987): 241-48.

Porterfield, S.L. "On the Precipice of Reform: Welfare Spell Durations for Rural, Female-Headed Families." Amer. J. Agr. Econ. 5(1998): 994-99.

Petersen, C.D. "Female Headed Families on AFDC: Who Leaves Welfare Quickly and Who Doesn't." J. Econ. Issues. 29(June 1995): 619-28.

Sandefur, G.D. and S.T. Cook. "Duration of Public Assistance receipt: Is Welfare a Trap?" Institute for Research on Poverty, Discussion Paper no. 1129-97. 1997.

Turner, M. "The Effects of Higher Minimum Wages on Welfare Dependency." Joint Center for Poverty Research, Working Paper no. 95. 1999.

Wilson, W.J. Truly Disadvantaged: The Inner City, the Underclass and Public Policy. Chicago, IL: University of Chicago Press. 1990.

Table 1. Review of Previous Analyses on the Probability of Exiting AFDC.

Author(s)	Race					Age of Parent	Age of Children	Number of Children	Female	High school Dropout	Data
	Urban	Hispanic	Asian Amer.	Black	Amer. Indian						
O'Neill, Bassi and Wolf				-**		-		-** [4]		-** [5]	NLS[6]
Blank		-*[7]	-*	-*	-*	+*	-[8]	-*[9]		-*[10]	SIME/DIME[11]
Harris	+/-	-	-[12]	-	-	+/-[13]	+/-[14]	-[15]*		-**[16]	PSID
Bane and Ellwood (1994) First Episode on AFDC		+/-	+/-	-**[17]	+/-	+/-	+/-	+/-		-**	PSID
Bane and Ellwood (1994) Subsequent Episodes on AFDC		+	+	+	+	+*[18]				-	PSID
Petersen		+	+[19]	+	+		+*	-		-*	SIPP
Klawitter, Plotnick and Edwards	-[20]	+	+	-**	+		-				NLSY
Fitzgerald	-*[21]	-				+**[22]	+*[23]	-*[24]		-*[25]	SIPP
Sandefur and Cook	+**	-**		-**		+**	+*[26]	-**[27]		-**	NLSY
Turner		+	+[28]	+	+	+**	+**	-**		+**	SIPP
Hoynes	-**[29]	-	-**[30]	-**[31]	-[32]	+[33]**	+[34]**	-**	-**		LDB

1. No data exists on the type of exit, e.g., via marriage or earnings. So, there is no accounting for the different types of exits with a

different regression (e.g., a multinomial logit).

2. A hazard rate is a statistical term that represents the conditional probability of an individual exiting a state given that the individual has survived in the current state until now. In this case, the current state is remaining eligible for AFDC.

3.1. The higher probability of exiting is consistent with Hoyne's estimates for welfare recipients in California. With the higher percentage of male headed, Hispanic single parents, the shorter stays may be related to migrant farm labor. However, some of this should have been accounted for with the dummy variable that denotes Hispanic parents.

4.Number of children less than 6 was significant at the 0.01 level.

5.Years of school completed.

6.National Longitudinal Survey of Young Women.

7.Significant for non-whites in all exits and in exits by marriage.

8.Used the number of children below five.

9.Significant at the 0.05 level for the Weibull hazard and for spell endings by earnings..

10.Number of years of education; only significant when considering spell endings by earnings

11.Seattle and Denver income maintenance experiments - provides monthly data from 1971 to 1976.

12.White versus non-white.

13.Four age categories, <22, 22 to 25, 26 to 30 and 30 to 35. All variables except for age 30 to 35 had negative coefficients.

14.Youngest child less than 3 years old resulted in a higher probability of exiting.

15.Families with three or more children were less likely to exit.

16.Significant when the parent exits by finding a new job.

17.Significant in all exits and exits by marriage.

18.Parents over 40 are more likely to exit than parents 21 and under.
.
19.Included a variable for all other races besides black and the reference variable - white.

20.Urban residence at age 14.

21.Significant when considering other exits besides marriage and earnings.

22.Significant when considering all exits, or exits other than earnings or marriage..

23.Whether there are children under six years old. Significant for whites in all exits or in exits other than by marriage or earnings.

24.Significant for whites in all exits, and in exits.other than by marriage or earnings.

25.Years of education completed. Significant for blacks exiting by earnings.

26.Youngest child under 2; Significant with a stepwise hazards model without unmeasured heterogeneity.

27.Two or more children

28.Used non-whites and whites.

29.Two urban categories, urban inside urbanized area and urban outside urbanized area. Significant for both.

30.Categories for Filipino, Cambodian, Laotian and Vietnamese. Except for Filipino, all were significant.

31.Significant for all exits and exits by marriage.

32.Includes all other races besides Filipino, Cambodian, Laotian, Vietnamese, Black and Hispanic.

33.Five age categories (<20, 20 to 24, 25 to 34, 35 to 44 and 44 to 54), all were statistically significant except for the ages 45 to 54.

34.Three age categories for the youngest child - <3, 3 to 5 and >5. The youngest child over 6 is more likely to exit.

Table 2. Comparison of Means and Standard Deviations Across Rural and Urban Counties (December 1988 to June 1996)

Variable	State-wide		Urban Counties		Rural Farming-Dependent Counties		Rural Conglomerate Counties	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Urban Counties (URBAN)	0.7052	0.4560						
Rural Farming-Dependent Counties (FARMING)	0.0732	0.2604						
Rural Conlglomerate Counties	0.2217	0.4154						
Asian American (ASIAN)	0.0392	0.1940	0.0503	0.2185	0.0104	0.1015	0.0133	0.1147
African American (BLACK)	0.2150	0.4108	0.2998	0.4582	0.0028	0.0532	0.0154	0.1230
Hispanic (HISPANIC)	0.0929	0.2903	0.0648	0.2461	0.2602	0.4388	0.1273	0.3333
American Indian (AMIND)	0.0409	0.1981	0.0364	0.1874	0.0414	0.1991	0.0551	0.2281
Age of Parent at Beginning of Episode (AGEPAR)	28.6842	8.1701	28.4665	8.1252	29.6677	8.4434	29.0524	8.1846
Age of Youngest Child at Beginning of Episode (AGECH)	4.5229	4.6408	4.4007	4.6082	5.0022	4.6944	4.7539	4.7072
Number of Children at Most Recent Recording (NCHILD)	1.7470	1.0258	1.7427	1.0399	1.8388	1.0367	1.7303	0.9745
Female (Female)	0.8994	0.3008	0.9087	0.2881	0.8802	0.3248	0.8764	0.3292
Does Not Have a Highschool Diploma (DROPOUT)	0.2700	0.4400	0.2700	0.4400	0.3400	0.4700	0.2600	0.4400
Number of Families (Sample Size)	57,844		40,791		4,231		12,822	

Table 3. Means and Standard Deviations of the
Quarterly Percent Change in Jobs, Retail and Services Variables
(Three Regions: First Quarter 1987 to Third Quarter 1996)

Variable	Minneapolis-St. Paul Metropolitan Area		Remaining Metropolitan Areas		Non-Metropolitan Areas	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
All Jobs (JOBS)	0.47	1.94	0.67	2.49	0.76	3.24
Retail Trade (RETAIL)	0.31	2.91	0.68	2.69	0.75	4.43
Services (SERVICES)	1.00	1.61	1.03	1.98	1.45	3.53
Number of Quarters (Sample Size) = 31						

Table 4. Means and Standard Deviations of the
Quarterly Percent Change in Retail and Low-Skill Services Employment
(Two Regions: Fourth Quarter 1988 to Third Quarter 1996)

Variable	Minneapolis-St. Paul Metropolitan Area		Rest of the State	
	Mean	S.D.	Mean	S.D.
Retail Trade (RETAIL)	0.31	2.91	0.71	3.55
Low Skill Services (LOWSKSER)	0.52	2.84	0.89	3.63
Number of Quarters (Sample Size) = 31				

Table 5. Estimated Survival Times at the 25th, 50th, and 75th Percentiles (December 1988 to June 1996).

Category	Variable	Percentile		
		25th	50th	75th
	Overall	4 mo.	9 mo.	23 mo.
Sub-State Region	Urban Counties	4	10	26
	Rural Farming-Dependent Counties	3	5	13
	Rural Conglomerate Counties	3	7	18
Race	Asian American	7	21	62
	African American	5	11	27
	Hispanic	2	4	9
	American Indian	3	7	20
	White	4	9	23
Age of the Parent	Less than 20 yr.	4	10	26
	Between 20 and 30 yr.	4	9	24
	Over 30 yr.	3	8	21
Age of the Child	Less than 3 yr.	4	9	23
	Between 3 and 5 yr.	4	8	23
	Over 5 yr.	3	7	18
Number of Children	One child	4	9	23
	Two children	3	8	22
	Three or more children	4	10	28
Gender	Male	3	5	13
	Female	4	9	24
Highschool Diploma	No	3	5	13
	Yes	4	9	24
	Number of families (Sample Size) = 57,844			

Table 6. Estimated Coefficients for the Cox Regression First Episode on Welfare (December 1988 to June 1996).

Variable	(1a)		(2a)		(3a)	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
URBAN	-0.1759**	0.012	-0.1643**	0.0116	-0.1674**	0.0101
FARMING	0.1238**	0.019	0.1215**	0.0190	0.1145**	0.0168
HISPANIC	0.4566**	0.017	0.4481**	0.0170	0.4524**	0.0156
ASIAN	-0.6909**	0.029	-0.6905**	0.0293	-0.6913**	0.0260
BLACK	-0.0929**	0.013	-0.0932**	0.0126	-0.0677**	0.0112
AMIND	0.0961**	0.023	0.0968**	0.0228	0.0441*	0.0193
AGEPAR	-0.0049**	0.001	-0.0049**	0.0007	-0.0047**	0.0006
AGECH	0.0348**	0.001	0.0348**	0.0011	0.0374**	0.0010
NCHILD	-0.0042	0.005	-0.0043	0.0049	-0.0083	0.0042
FEMALE	-0.3346**	0.015	-0.3335**	0.0153	-0.337**	0.0139
DROPOUT	0.0271*	0.011	0.026*	0.0112	0.0153	0.0099
JOBS	0.0187**	0.002				
RETAIL			0.0109**	0.002	0.0171**	0.002
SERVICES			0.0213**	0.003		
LOWSKSER					0.0067**	0.001
Number of families (Sample Size) = 57,844						

* statistical significance at the 0.05 level.

** statistical significance at the 0.01 level.

Table 7. Estimated Coefficients for the Cox Regression

Subsequent Episodes on Welfare (April 1987 to June 1996).

Variable	(1b)		(2b)		(3b)	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
URBAN	-0.1565**	0.009	-0.1496**	0.009	-0.1521**	0.0090
FARMING	0.07**	0.0156	0.069**	0.0156	0.0694**	0.0156
HISPANIC	0.3227**	0.0166	0.3163**	0.0166	0.3145**	0.0166
ASIAN	-0.4282**	0.0331	-0.4283**	0.0331	-0.426**	0.0331
BLACK	-0.1562**	0.0115	-0.1565**	0.0115	-0.1532**	0.0115
AMIND	-0.1066**	0.0142	-0.1073**	0.0142	-0.1069**	0.0142
AGEPAR	-0.0044**	7.19E-04	-0.0044**	7.19E-04	-0.0044**	0.0007
AGECH	0.0343**	0.0012	0.0343**	0.0012	0.0342**	0.0012
NCHILD	-0.0072	0.0042	-0.007	0.0042	-0.007	0.0042
GENDER	-0.2845**	0.0147	-0.285**	0.0147	-0.2847**	0.0147
DROPOUT	-0.084**	0.009	-0.0846**	0.009	-0.0847**	0.0090
JOBS	0.0262**	0.0015				
RETAIL			0.0179**	0.0016	0.0227**	0.0014
LOWSKSER					0.004**	0.0006
SERVICES			0.015**	0.0022		
Number of Families (Sample Size) = 83.689						

* statistical significance at the 0.05 level.

** statistical significance at the 0.01 level.

Table 8. Estimated Coefficients for Cox Regression on First Episodes in Rural Counties (December 1988 to June 1996)

Variable	Rural Farming-Dependent Counties						Rural Conglomerate Counties					
	(1d)		(2d)		(3d)		(1e)		(2e)		(3e)	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
HISPANIC	0.6915**	0.0461	0.6744**	0.0463	0.6754**	0.0463	0.4878**	0.0316	0.4808**	0.0316	0.4802**	0.0316
ASIAN	-0.2579	0.1716	-0.2562	0.1716	-0.2585	0.1716	-0.2351**	0.0908	-0.2352**	0.0908	-0.2352**	0.0908
BLACK	-0.2696	0.3544	-0.2725	0.3544	-0.2711	0.3544	-0.1425	0.0870	-0.1414	0.0870	-0.1414	0.0870
AMIND	0.1788*	0.0833	0.1796*	0.0834	0.1791*	0.0834	0.074	0.0416	0.0748	0.0416	0.0747	0.0416
AGEPAR	-0.0125**	0.0029	-0.0125**	0.0029	-0.0125**	0.0029	-0.0102**	0.0017	-0.0103**	0.0017	-0.0103**	0.0017
AGECH	0.0361**	0.0051	0.0361**	0.0051	0.0361**	0.0051	0.0392**	0.0029	0.0392**	0.0029	0.0392**	0.0029
NCHILD	0.012	0.0170	0.0127	0.0170	0.0125	0.0170	-0.0034	0.0103	-0.0032	0.0103	-0.0033	0.0103
FEMALE	-0.333**	0.0512	-0.3316**	0.0512	-0.3321**	0.0512	-0.3144**	0.0294	-0.3126**	0.0294	-0.3129**	0.0294
DROPOUT	0.0232	0.0409	0.0208	0.0409	0.0218	0.0409	0.0345	0.0238	0.0336	0.0238	0.0339	0.0238
JOBS	0.0102	0.0052					0.0168**	0.0029				
RETAIL			0.0015	0.0064	0.0152*	0.0062			0.011**	0.0037	0.0193**	0.0035
SERVICES			0.024**	0.0079					0.0142**	0.0046		
LOWSKSER					0.004*	0.0020					0.0038**	0.0011
Number of Families (Sample Size) = 4,231							Number of Families (Sample Size) = 12,822					

* statistical significance at the 0.05 level.

** statistical significance at the 0.01 level.