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FAMILY AND HOUSEHOLD WORK STRATEGIES: NUMBER OF EARNERS AND SELF-EMPLOYMENT IN NORTH CENTRAL LABOR MARKET AREAS

By

Jean Kayitsinga

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A DISSERTATION Submitted to Michigan State University in partial fulfillment of the requirements for the degree of DOCTOR OF PHILLOSOPHY Department of Sociology

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INTRODUCTION

In the last three decades, changes in the structure of the economy have had implications for the survival and economic security of rural workers, households, and communities as indicated by escalating levels of poverty, unemployment, and underemployment in rural areas, increasing housing costs, insecurity of marital relationships, and migration within and between communities, particularly that of younger educated adults to urban areas (Fitchen 1991). Non-metropolitan families and households have adopted a wide range of adaptive strategies, such as combining work on farm and off-farm, paid homework, paid child care, self-employment, unpaid family work and housework, increasing the number of workers per household, seeking multiple sources of income, and traveling long distances for better job opportunities in other places. This study examines the different family and household adaptive strategies of non-metropolitan and metropolitan families and households with a focus on the number of carners within households and self-employment.

The main objectives of the study are (1) to examine family and household adaptive strategies focusing on household and family work strategies; (2) to determine how these forms of household work strategies vary within and across different labor market areas, between rural and urban labor market areas, and across different households given different family and household structures, and 3) to determine and

Chapter 1

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A variety of factors are associated with family and household work strategies. At the macro level, the economic opportunities and their spatial distributions, mainly due to the recent widespread transformation in industrial organization and labor as well as social and demographic composition of different labor market areas, constrain and enable the employment and self-employment opportunities of families and households. At the micro level, family and household social structures, their composition, the life course stages, socioeconomic resources, and other family and household characteristics such as the geographic mobility status and educational levels of their members influence the employment and self-employment opportunities of families and households. The link between macro and micro factors describes the interconnection of families and households with labor market areas (places in which they live and work). Two core questions of the study are (1) To what extent family and household social structures affect the employment and self-employment of members? And (2), how does the labor market area social structure enable or constrain the employment and self-employment of family and household members? A general assumption is that the family/household social, economic, as well as cultural capital are crucial factors for comprehending the diverse social contexts that permit family/household members to adopt any work strategy. At the same time, the way the family/household is situated in broader

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environment¹ affects the "strategies" its members can do and adopt. This study builds on previous research that integrates multilevel theories of social phenomena and analytical strategies. Specifically, this study combines two theoretical perspectives relevant to the understanding of family and household work strategies: (1) the restructuring perspective, and (2) the social embeddedness/social capital perspective. Analytically, this study uses a multilevel framework looking at how individual, household and labor market area factors intersect in association with household work strategies.

Data workers is selected from the PUMS-L data. Four types of boundholds are

This study uses two data sets: The 1990 Public Use Micro Data Samples (PUMS-L) Labor Market Areas and the 1990 Summary Tape Files (STF3). The PUMS-L is produced by U.S. Bureau of the Census and funded by the Economic Research Service. U.S. Department of Agriculture and Agricultural Experiment Stations and land-grant institutions affiliated with U.S.D.A. Regional Project S-259. Labor market areas (LMAs) are groups of counties that encompass the county of residence and the county of work. The labor market area PUMS-L data provides an excellent sample for linking individuals, households, and labor markets areas, thus permitting the incorporation of multilevel factors in models of household and family work strategies. The other advantage of using the PUMS data for labor market areas is their coverage of both rural and urban local labor markets. For this study a sub-sample of 112 North Central labor market areas (LMA) is first selected. These LMAs are groups counties mainly in the

¹ The term "environment" is used in many instances to refer to the economic, social, political, and cultural contexts that constrain, guide, or enable individual actions, practices or representations.

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states of Michigan, Ohio, Indiana, Illinois, Wisconsin, Minnesota, Iowa, and Missouri. The boundaries of labor market areas are not limited to geographic lines of these states. Some counties are from the neighboring states including Kentucky, West Virginia, Arkansas, North and South Dakota, and Nebraska. The major limitation of these labor market areas is the Census Bureau confidentiality requirement for any geographic identifier on the PUMS to contain a minimum of 100,000 people (See Tolbert and Killian, 1987, for greater details). A sample of civilian working-age individuals (age between 16 and 64) is selected from the PUMS-L data. Four types of households are selected: Married families, male and female-headed households, and cohabiting households (unmarried persons living with their partners). Excluded in the analysis are farm families, households of living alone individuals, as well as group quarter/vacant households. This corresponds to 64,356 households with about 35 percent (22,790 households) living in non-metropolitan areas.

The summary tape files data from the 1990 census (STF3A) is used to construct characteristics of labor market areas. Data from the summary tape files is at the county level and is aggregated at the corresponding labor market areas. Characteristics of labor market areas include the opportunity structure (i.e., the availability and types of jobs), residential stability, social and demographic characteristics, and social inequality (i.e., poverty, unemployment, income inequality, public assistance).

The Research Problem

In the last three decades, major changes in the economic processes, labor force composition, and state activities, known as "the restructuring of the economy," had states of Michingan. Ohio, Indiana, Lihnots, Wisconsin, Mirnesota, Jowe, and Missouri. The boundaries of labor market areas are not limited to geographic lines of these states. Some counties are from the neighboring states including Kentucky, West Virginia, Arkansas, North and South Dakota, and Nebraska. The ungior limitation of these labor market areas is the Census Bureau confidentiality requirement for any geographic identifier on the PUMS to contain a minimum of 100,000 people (See Tolbert and Killiun, 1987, for greater details). A sample of elvition working-age individuals (age between 16 and 64) is selected from the PUMS-L data. Four types of households are selected: Married families, male and female-headed households, and cohabiting households (unmarried persons living with their partners). Excluded in the analysis are households. This corresponds to 64,356 bouseholds, with about 35 percent (22,790 households. This corresponds to 64,356 bouseholds, with about 35 percent (22,790

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In the last three decades, major changes in the economic processes, labor force composition, and state sorivities, known as "the restructuring of the economy," lad important effects on the socioeconomic well-being of a large number of workers, families, households, and communities, particularly, those in non-metropolitan areas. In the late 1970's and 1980's, employment in agriculture and extractive industries and in manufacturing industries underwent sharp contractions while the service sector has increased. However, the rise in service sector employment in rural areas has been limited to lower-wage jobs while the urban areas have experienced a rise in jobs at both ends of the wage spectrum (Gorham 1992). These changes have not only exacerbated the existing spatial disadvantage of rural areas (Tickamyer and Duncan 1990), particularly the economic survival of many families and households in rural communities, but also they have opened new horizons for making a living, as revealed by a growing diversity of working activities.

The net and profound impact of the recent economic transformation and long term structural changes on families and households have been the persistent and increasing lack of secure full-time jobs and an increase in numbers of workers with average levels of education and high job expectations (Mingione 1991). Recent research indicates that poverty, unemployment and underemployment have increased while the earnings have declined (Lichter et al. 1994; Whitener 1991; Jensen and Eggebeen 1994). Moreover, the impact of the ongoing structural changes on families and households is unevenly experienced across spatial locations (Rural Sociological Task Force on Persistent Poverty 1993; Lichter and Constanzo 1987) and depending upon their structure, class, gender, and race (Tickamver and Bokemeier 1993).

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Despite a large volume of research on changes in macro environments and their impacts on households and families, more research is required to understand how families and households survive and adapt to those changes. One fundamental social change in the last two decades is the increasing number of women in the labor force. Women's participation in the labor force, particularly married women and mothers of young children, has increased dramatically². Despite this trend, family income has continued to decline³. This change in family income is mainly associated with the lack of secure and good-paying jobs. As a result, a higher proportion of families and households have increased the number of earners while some even hold more than one job. In particular, a previously non-working spouse, a partner, adult children, relative and non-relative members may enter the labor force in order to cope and deal with changing environments surrounding them. In addition, there is evidence that self-

² Between 1940 and 1990, the proportion of breadwinner-full time homemaker families fell from almost 70 percent to about 20 percent. In 1990, 65 percent of mothers with young children under 18 years of age and 53 percent of mothers with children under age 3 were working (Skolnick 1995).

³ Skolnick (1995) shows that the median family income has dramatically increased between 1947 and 1973. However, the median incomes for all families and married-couple families experienced three periods of decline and two periods of increase. Despite these fluctuations and the increase of female labor force, by 1990, the median family income was only 11 percent greater than in 1973.

Thus, it remains important to understand how the ongoing, complex nives of economic and social changes contribute to the levels of poverty, unemployment, and underemployment, and to financial instability of many families and households, particularly those in rural areas. It is also crucial to understand how fimilies and households can adapt to variable social contexts surfounding them, maintain and securi their own and their childron's future.

Despite a large volume of research on changes in matro environments and their impacts on households and families, more research is required to understand how families and households survive and adapt to those changes. One fundamental social change in the last two docades is the increasing number of women in the labor force. Women's participation in the labor force, particularly matried women and mothers of young children, has increased dramatically². Despite this trend, finally income has continued to decline⁴. This change in family income is mainly associated with the lack of secure and good-paying jobs. As a result, a higher proportion of families and households have increased the number of earners while some even hold more than one job. In particular, a previously non-working spouse, a partner, adult children, relative and non-relative numbers any eater the labor force in order to cope and deal with changing environments surrounding them. In addition, there is evidence that as changing environments surrounding them. In addition, there is evidence that as self.

⁷³ Barwan 1947 and 1940, the proper does of Decad virtual Full time bont packet (millies foll from at nons 70 percent or about 20 percent. In 1990, do percent of nonitates with young virialitate unider 16 yours of east and 3 percent of molecular with diluktron maker ages 2 years envirting (Educhtick 1965).

⁸ Skolucle (1965) shows that the metan family income has drammically increased between 1947 and 1973. However, the aediam incomes for all families and amarical-couple families orperioals invece periods of decision and two paroles a Garcease. Despite these fluctuations and the increase of famile labor force, by 1990, the median family income was only 11 particul gather that in 1973.

employment⁴ activities, unpaid work, home-based work, (Gringeri 1994), barters, and illegal jobs are increasing. Some families and households, especially those living in rural areas and those in and near poverty, may be engaging in self-employment activities in order to get by and improve their financial situations. Other families and households may engage in self-employment work and/or receive a self-employment income because of the changes in high technologies, especially in microelectronics or because of challenges to businesses from international competition (Steinmetz and Wright 1989). This study examines the different work strategies of non-metropolitan and metropolitan families and households, with a focus on the number of earners within families and households and self-employment as family and household strategies.

Family and Household Work Strategy

The concept of "strategy" has been used in social science to refer to individuals and groups' conscious and rational decisions for immediate needs and long term goals and describes the logic that people use when they allocate scarce resources such as land or time to different activities such as self-provisioning or paid labor (Garrett et al. 1993). In many cases, this concept has focused on families and households to explain the ways in which they confront, cope, deal with, or overcome changing structural contexts of their environment in order to satisfy their needs. In particular, it has been applied to families and households that are poor or experiencing economic difficulties (Crow

⁴The proportion of self-employment workers in non-agricultural industries has increased from 1970 to 1991, decreased slightly in 1992; then increased in 1993, and decreased then in 1994. In contrast, self-employment in agriculture has declined from 1970 to 1990, increased a little bit in 1991, and decreased again 1992 and 1993, then increased again 1994.

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1989). In general, the concept of "strategy" refers to alternative ways that families use to lessen the gap between their needs and available resources. As useful as it may sound, the concept of "strategy" presents not only conceptual difficulties but also methodological challenges, mainly, those associated with the unit and level of analyses (Moen and Wethington 1992). The next section presents the conceptualization and methodological difficulties associated with the concept of family/household "strategy."

Conceptual Approaches

The Concept of "Strategy"

The main difficulty in using the concept of "strategy" is the complexity and diversity of contexts in which it has been applied (see Crow 1989; Clay and Schwarzweller, 1991; Moen and Wethington 1992; Tilly and Scott (1978); Tilly (1979); Hareven (1982, 1991); and Saraceno 1989). Most studies of family and household strategies have focused on "survival" strategies. The term survival is deliberately applied to the segments of population that are in material deprivation and economic uncertainty, and reflects behavioral responses that allow them to deal with material shortfalls and uncertainties of their situation. Survival is a process of constantly struggling to acquire resources and include formal and informal work, welfare, and kin (Dill and Williams 1992). Harvey (1989) distinguishes between those who are poor, a situation which is temporary, and those who live in poverty. Those who are poor lack resources while those who live in poverty learn how to live with variable social and economic environments - the lower class (Harvey 1989). According to Harvey, the lower-class environment is constantly threatening with its permanent crises and future uncertainty.

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Having neither the material resources nor the political power to transform their environment, the poor must devise ways to ride out or otherwise neutralize its unpredictable nature (Harvey 1989). Families in poverty or in which the husband is unemployed or underemployed, for example, in response to the lack of income opportunities, can (1) search for better income opportunities or migrate in other regions; (2) involve other family members in the paid labor force, particularly the spouse and adult children; (3) seek for other sources of income, both formal and informal, including public assistance benefits and welfare receipts, (4) seek for social support from kin relatives and friends; (5) exist in poverty and survive at a bare subsistence level, with inadequate food, clothing or shelter, credit arrangements etc.; (6) use traditional "knowledge" or develop new ones to satisfy their needs. These alternatives are not exclusive. Those who can adapt learn how to live with limited cash flow or be able to produce something that can generate income mostly in the informal economy, selfprovisioning, or homework (Campbell et al. 1993).

Other studies have focused on "adaptive" strategies. Adaptation refers to the coping behavior that individuals and families use to resolve a crisis in order to achieve a new balance in life. The processes under the social construction of adaptation include adjustment, conformity, assimilation, compliance, and sometimes a passive acceptance of change. Clay and Schwarzweller (1991) indicate that when a change enables the household to become more competitive and effective in dealing with the external environment and without upsetting existing norms for internal cooperation, that the change possesses an adaptive quality called a "household strategy" and also that some

relatives and friends; (5) exist in poverty and survive at a bare subsistence level, with

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strategies may generate negative effects, putting the household in a disadvantaged

The concept of "strategy" has also been used in studies focusing on shifts in marital and fertility patterns as a family-level response to broader social and economic exigencies (Easterlin 1980), migration (Kertzer & Hogan 1989; Hareven 1982), intergenerational transfers (Hill 1970), various forms of human, social, and economic capital in the kinship network (Coleman 1988), and the impact of cultural aspects related to care, affection, and role behaviors on the choice of family adaptive strategy (Hareven 1991; Stack 1974). All of the above examples illustrate a variety of contexts in which the concept of "strategy" has been applied. The question remains what should be considered a strategy, what is not a strategy?

Any behavior or actions manifested by household members, or anything less than a dissolution of a household can be taken as a strategy. That leaves no room for "nonstrategic" change or for individual behavior that is not germane to household maintenance and development (Clay and Schwarzweller 1991:7). Individual members may engage in behaviors that are passive, non-strategic, overtly resistant, antagonist, and ambivalent, or behaviors reflected in laziness, greed, selfishness, revenge, or egocentrism, or in "everyday acts of resistance" such as income retention or non compliance (Wolf 1992:17).

In summary, the underlying assumption in the use of the term "strategy," whether for survival or adaptation reasons, is that individuals within families and households make choices and exercise priorities when responding to external or internal needs. The strategies may generate negative effects, putting the household in a disadvantaged position (Clav and Schwarzweiler 1991).

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concept of strategy emphasizes different ways individual and family's resources are organized to accomplish desired end states. This study intends to determine how family and household resources (economic, social, and cultural resources) influence different work strategies. In the next section, the concept of work is discussed.

The Concept of Work

In many studies, the concept of work has been reduced to official employment. Household and family work strategies from the point of view of work require a clarification of what is work, who is involved in work at the household level, and for what needs. The concept of work requires a broader definition beyond the remunerated or wage labor (Mingione 1991; Collins 1990). Work should include all types of formal employment, but also a variety of irregular, temporary or occasional activities undertaken to raise cash and various activities that produce use values, goods and services for direct consumption either by an individual and his/her household or by other individuals and households, which are more or less necessary for the survival of individuals as distributed in different household structures (Mingione 1991: 74). Given the limitations of the data, this study focuses on paid employment of family and household members other than the head of the household, the spouse or partner (adult children, relatives, and non relatives), self-employment, and unpaid work.

The Concepts of Family and Household

The concepts of family and household have different meanings depending on theoretical perspectives and analytical strategies (Bokemeier 1997). Traditionally, family is defined as a domestic group of two or more people related by birth, adoption or concept of strategy emphasizes different ways individual and family's resources are organized to accomplish desired end states. This study intends to determine how family and household resources (economic, social, and cultural resources) influence different work strategies. In the next section, the concert of work is discussed.

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marriage (U.S. Bureau of the Census 1990). Families live together, share economic resources, act as cooperative and caring social units, and provide environments for the emotional, social, and economic well-being of family members. Family members live in a distinctive domicile called home, and the household is defined as a unit of coresidence. While the above definitions of family and household include a variety of family forms and structures, its usefulness in analyzing social situations, especially those associated with the diversified ways individual family members respond to changes in their surrounding environments, depends on theoretical and conceptual orientation (Bokemeier 1997).

The neoclassical approach assumes that the household is an income-pooling unit with shared common interests that make rational choices to maximize the utility of the household as a whole (Becker 1981). The underlying assumption is that of consensus and cooperation within the family or household. Also reflected is the assumption that members of family and households work together toward a collective goal (Tilly 1979, 1987). However, co-residence does not always lead to income-pooling and mutual obligations for the purpose of survival, nor is it strictly necessary to be co-resident in order to be involved in household strategies (Mingione 1991). People may live in different households but share mutual obligations. Separated and divorced parents often continue relationships with their children. Seasonal and temporary migrant workers are not residents all the time, but are fully part of the household reproductive strategy. Additionally, the physical co-residence does not tell anything about the kinds of resources involved and to what extent they are pooled in order to achieve the goal of

marriage (U.S. Bureau of the Consus 1990). Families live together, share economic resources, act as cooperative and caring social units, and provide environments for the emotional, social, and economic well-being of family members. Family members live in a distinctive domicile celled home, and the book shold is defined as a unit of coresidence. While the above definitions of family and household include a variety of family forms and structures, its usefulness in analyzingisocial situations, especially those associated with the diversified ways individual family members respond to changes in their surrounding environments, depends on theoretical and conceptual orientation. (Bokeneier 1997).

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survival. Finally, households may or may not contain families (related members by birth, adoption or marriage) but pool their incomes.

This neoclassical approach is criticized for ignoring the processes that structure family arrangements and the social contexts that embrace it. The household is embedded in various social contexts including community, kinship, friendship, and other networks contributing in different ways to the patterns of social reproduction. Furthermore, this definition is criticized for ignoring the competing interests, internal conflicts, and struggles for power that characterize family dynamics (Wolf 1992, 1991, 1990).

Mingione conceptualizes family and household as overlapping, reciprocal, and interdependent social units. In his framework of household strategy, Mingione (1991) emphasizes the considerable importance to processes of social reproduction. He defines the concept of social reproduction as diverse conditions and organizational relations which allow human beings to survive in various social contexts and groups (Mingione 1991). He considers the household as unit of analysis, but departs from the others by emphasizing *the social relations* between members of the household:

A household cannot be simply viewed as a statistical or physical unit of coresidence, but must be seen as a set of changing social relations which establish a set of mutual obligation (basically reciprocal forms of social organization) aimed at helping its members to survive (p.132). ---The most important social network in which the household is strictly embedded is the family/kinship system (p.133).

Feminist family scholars define the family as a location in which production, accumulation, redistribution, and consumption of needed resources is carried out.

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According to Hartmann (1981, 1987), the family is a location in which production and redistribution of resources are carried out -- a location were people with different activities and interests in these processes often come into conflict with one another. No longer is it possible to conflate family or household and assume monolithic interests or access to resources of household members (Wolf 1991; Tickamyer et al. 1993; Feldman and Welch 1995). Instead, studies focusing on the household need to analyze household dynamics and social relations. Such an approach would include analyses of social relations within the household, especially, the relations of gender, generation, and relationships of power and authority, that are crucial for its survival and the ways in which household members interpret and respond to social and economic changes in their environments. For a more extensive review of conceptual definitions of families and households, see Bokemeier (1997). The next section discusses methodological challenges associated with the study of family and household work strategies.

Methodological Approaches

Conventional research on families and households treat them in isolation from other social institutions, such as politics or the economy. Ferree (1990) criticized the conventional conceptualization of "separate spheres", where the family is considered as "haven in a heartless world" (Lasch 1977), where fundamentally different social relations prevail than in the rest of society, and, where women are given a distinct and secondary status. She indicates that family isolation is illusory given the close connection between families" internal lives and the organization of the economy, the state, and other institutions (Ferree 1990). According to Hartmann (1981, 1987), the family is a location in which production and redistribution of resources are carried out – a location were people with different nativities and interests in these processes often come into conflict with one another. No longer is it possible to conflate family or household and assume monolithic interests or access to resources of household members (Wolf 1991; Tickamyer et al. 1993; Feldman and Welch 1995). Instead, studies focusing on the household and assume monolithic interests or dynamics and social relations. Such an approach would include analyses of social dynamics and social relations. Such an approach would include analyses of social relationships of power and authority, the relations of gender, generation, and which household members interpret and respond to accial and economic changes in their relationships of power and authority. The rest of onceptual definitions of families and which household, see Bokeneirer (1997). The rest social and economic changes in their households, see Bokeneirer (1997). The rest social and social and social states and households, see Bokeneirer (1997). The rest social and how of strategies challenges associated with the study of fimily and household work strategies.

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The separation between the "public" and "private" spheres, between production and social reproduction, between paid work and non-paid work is purely deterministic and an oversimplified view of social reality. Family and household members construct their lives within and through the constraints and abilities of their family social structures as well as that of other social structures in which the family/household is embedded. Families and households are not only connected to, and influenced by, other social contexts, they also include these structures (Baca Zinn and Eitzen 1996). Curtis (1986) indicates that despite the increasing attention to structural components of the economy, little attention has been paid to the relationship between the larger economy and the structure of the household or family unit. An understanding of the complex interrelations between changing patterns of social organization derived from the sphere of reproduction a well as production is very important to the study of household strategies.

This study considers work strategies as embedded in the social relations within families and households which are also embedded and interconnected to external structures, including communities, kinship networks, firms and industries within labor market areas. Moen and Wethington (1992) indicate that the repertoire of strategies of individual families both shapes and is modified by institutional, cultural, environmental, and interpersonal circumstances. Furthermore, communities and social agencies, firms and industries, and states have strategies, as do families and individuals. Changes in the organization of the economy, demographic changes, and state reforms enable and constrain the ways that families survive and adapt to such changes. At the same time, individual members of households and families are actively involved in various The separation between the "public" and "private" spheres, between production and social reproduction, between paid work and non-paid work is purely deterministic and un oversimplified view of social reality. Family and household members construct their lives within and through the constraines and abilities of their family social structures as well as that of other social structures in which the family/household is embedded. Families and households are not only connected to, and influenced by, other social families and households are not only connected to, and influenced by, other social indicates that despite the mereasing attention to structural components of the economy, indicates that despite the mereasing attention to structural components of the economy structure of the household or family unit. An understanding of the complex interrelations between changing patterns of social organization derived from the sphere of reproduction a well as production is very important to the standy of household structures of social or a well as production is very important to the standy of household structures.

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Factors Associated with Family and Household Work Strategies

Across levels of analyses, a variety of factors influence family and household work strategies. The economic opportunities and their spatial distributions, as well as social and demographic composition of different labor market areas, constrain and enable family and household work strategies. At the same time, family and household social structures, resources (economic, social, and cultural) and other family and household characteristics such as geographic mobility and life course stages may influence family and household work strategies. Other family and household characteristics that may determine what work strategy will be adopted include age and educational levels of household members.

Moreover, the prevalence and diversity of household work strategies will differ in metropolitan and non-metropolitan areas. Non-metropolitan families and households are more likely to be in economic distress and poverty than their metropolitan counterparts (Rural Sociological Society Task Force on Persistent Poverty 1993, Brown and Deavers 1987). Non-metropolitan labor market areas have a relatively limited employment and earnings opportunities and less diversified labor markets (Tickamyer and Duncan 1990, Killian and Hady 1988) compared to metropolitan labor market areas. Thus, nonactivities, mainly in paid labor force, in order to achieve their goals (Carkovich and Bokenneier 1988). Thus, a multilevel framework that-encompasses the interplay of macro-and micro-levels of analysis factors is needed to understand and illustrate the complexity of the construct of the household and family work strategies. The next section reviews factors associated with family and bousehold work strategies.

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metropolitan labor market areas offer fewer alternatives for potential family and the household work strategies than metropolitan labor market areas.

Family and household work strategies are likely to vary by gender, race, and social class. Feminists have criticized the limitations of research that aggregates gender interests and unequal power relations within the household (Wolf 1992; Hartmann 1981). At the same time, they emphasized that families and households are fully integrated into wider systems of economic and political power (Ferree 1990). Empirical evidences indicate that, despite the increase in female labor force participation over the last decades, and the associated dual-earner marriages, women's economic opportunities remain conditioned and shaped by their disadvantage in the wage labor market, their oppression and domestic obligations, their high participation in informal and unpaid labor, and by state policies toward women, work and welfare (Tickamyer et al. 1993).

Furthermore, families and households are changing at different intensities, rates, places, and at different time as indicated by the increase in female-headed and nonfamily households (Skolnick 1995; Santi 1988). Research has tended to either focus on married-couple households or female-headed families. For example, recent research on poverty indicates that female-headed households, particularly those in rural communities, have been increasing and are more likely than married-couple households to be in poverty (McLaughlin and Sachs 1988; Tickamyer and Latimer 1993; Bane and Ellwood 1986; Hoppe 1993; Lichter and Eggebeen 1992; Wilson 1987; Duncan and Tickamyer 1988; Fitchen 1981, 1991). metropolitan labor market areas offer fewer aftereatives for potential family and household work strategies than metropolitian labor market areas.

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Furthermore, families and households are changing at different intensities, rates, places, and at different time as indicated by the instease in female-headed and nonfamily households (Skolaick 1995; Santi 1988). Rusearch has tended to either focus on married-couple households or female-headed families. For example, recent research on poverty indicates that female-headed households, particularly those in rural communities, have been increasing and are more likely than married-couple households to be in poverty (McLaughlin and Sacha 1988; Tickamyer and Latimer 1993; Bane and Eilwood 1986; Hoppe 1993; Lichier and Eggebeen 1992; Wilson (987; Duncun and Tickamyer 1988; Fitchen 1981, 1991).

However, little research on work strategies of male-headed families and that of the expanding "non family" households is done. A demographic profile of the diversity of family and household structure indicates that the proportion of male-headed families and that of the non-family household has increased. Increases in single-parent households and non-family households are mainly due to the changing patterns of marriage, divorce, fertility, and increase in cohabitation of unmarried couples (Skolnick 1995, Santi 1988; Goldscheider and Waite 1991; Stacey 1991).

Furthermore, analyses of family and household work strategies must acknowledge that families and households are hierarchically ranked by their social class. The economic situation of households limits choices and favors certain patterns (Crow 1989; Saraceno 1989; Moen and Wethington 1992). Households have different capacities to engage in various household strategies, and these differences reflect both household composition and economic resources. Households with more resources tend to have more choices and more information, and may be able to tolerate higher risks associated with certain strategic decisions (Wolf 1992). Harvey (1989) indicates that those who live in poverty or near poverty may have neither materials nor political power to transform their niche in order to rise out of poverty or otherwise stabilize and neutralize its unpredictable nature. However, they may find ways of getting by in absence of social supports for family living. Thus, it is important to analyze how different household social structures as well as that of other environments surrounding the family/household, in particular recent widespread transformations of industrial organization and labor as However, little research on work strategies of male-headed families and that of the expanding "non family" households is done. A demographic profile of the diversity of family and household structure indicates that the proportion of mate-headed families and that of the non-family household has increased. Increases in single-parent households and non-family households are mainly due to the changing patterns of matringe, divorce, farility, and increase in cohabitation of umamired couples (Skolnick 1995, Santi 1988; Gotdscheider and Waite 1991; Stacey 1991).

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well as social and demographic composition of different labor market areas, have enabled and constrained families and households to adopt different work strategies.

Summary and Implications for the Study

In summary, this study attempts to link multiple perspectives to multilevel models of family and household work strategies. Family and household work strategy is a multidimensional concept that requires multiple approaches and multilevel model conceptualization. A general assumption is that economic, social as well as cultural resources controlled by members of families and households, as well as their social relationships, interactions, and activities are crucial factors for comprehending the diverse household social contexts that permit members of households to adopt any work strategy. At the same time, the way the household is situated in the broader social, cultural and economic environment (the economy, the state, and other institutions) affects the "strategies" its members can do and adopt. Of particular importance is the spatial environment in which families and households can have access to employment and other opportunities. An integrated theoretical framework of family and household work strategies is presented in the next chapter.

Chapter 2 presents a theoretical framework of family and household strategies. Two theoretical perspectives relevant to the study of family and household work strategies are proposed. The first part of chapter 2 describes restructuring perspective. The second part of this chapter describes social embeddedness/capital perspectives. These two theoretical perspectives are integrated in an attempt to account for both macro

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Chapter 3 describes the research design and analytical strategies of the study. This study uses existing data from the U.S. Census. The chapter first describes the data and variables used in data analysis. Finally, the chapter describes the analytical strategy of the study. A multi-level modeling approach is adopted in an attempt to account for different level factors of family and household work strategies.

Chapter 4 displays the results of the study. The first section of chapter 4 displays the descriptive statistics of family and household work strategies, the characteristics of families and households, and the characteristics of labor market areas in which those families and households reside and work. The second part of chapter 4 displays bivariate analysis of family and household characteristics with work strategies as well as that of labor market area characteristics with work strategies. Chapter 4 ends with two multilevel discrete models of self-employment and additional earners on family/household and labor market area characteristics.

Finally, Chapter 5 discusses the results and their implications. This chapter summarizes the results in relation to corresponding hypotheses. Policy recommendations as well as the study limitations and future research are also discussed in this chapter.

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Chapter 2 INTEGRATED THEORETICAL AND CONCEPTUAL FRAMEWORK

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Multiple theoretical perspectives relevant to the study of household work strategies have been developed and applied. These perspectives include micro-oriented theories such as status attainment and human capital theory, and macro-oriented theories such as structural theories that focus on social and economic organization and forces of production. Most research on household strategies has focused on structural factors that constrain and enable potential household strategies (Crow 1989) and fail to include individual factors. Other studies have relied on purely individualistic approaches (Becker 1975, 1981) and fail, not only to take into consideration household and family dynamics, but also the ways in which they are embedded in and connected with other social structures. What has often been missing is the connection between the macro and micro levels of analysis. An integrated theoretical and multilevel conceptual framework that bridges the gap between these theories and analytical strategies provides a better understanding of both macro-, mid-, and micro-level factors of household strategies (Tickamver and Bokemeier 1993).

In this chapter, two theoretical perspectives relevant to the study of family and household strategies are presented. These perspectives include (1) restructuring perspective, and (2) the social embeddedness/social capital perspectives. First, I argue that family and household work strategies are embedded in the social structures of families and households. Family and household structures, available resources, including

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social, cultural, and economic capital, and other household characteristics, condition and constrain potential household work strategies. Second, the family and work strategies are conditioned by larger social and structural contexts in which families and households are located and interconnected. At the same time, a spatial distribution of the social and opportunity structure which is the outcome of both historical, social, economic, and political change, enables and constrains the ability of families and households to adapt to their social environments. Each of these two theoretical perspectives provides a valued partial explanation of household work strategies as well as shared assumptions with other perspectives. Thus, propositions are derived from each of these perspectives and their integration, hypothesizing the unique, shared, and combined factors of household work strategies at both family/household and labor market area levels

Restructuring Perspective

Restructuring perspective provides a lens to analyze how the ongoing transformations of the economy, industries and occupations, the associated spatial distribution of jobs and businesses, and the shifts in the social and demographic composition of places create social contexts that constrain and enable family and household work strategies. Restructuring refers to macro-economic changes in market demands for labor, capital, or technology, shifts in geographical distribution of people and enterprises, and the process of capital accumulation and competitive transformations in the industrial and occupational composition of labor markets such as the growth of the service sector and the decline in manufacturing industries (Redclift and Whatmore 1990; Bokemeier 1997; Tickamyer 1996). Restructuring not only has consequences for the

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spatial division of capital and labor, but is associated with changes in different patterns of work including part-time work, underemployment, contingent work, moonlighting, multiple earners, self-employment, industrial homework, bartering, and illegal jobs etc. To what extent does economic restructuring account for self-employment work and multiple earners within families and households?

In the last three decades, the U.S. economy has experienced three interrelated major trends: (1) the increase in new technologies, especially in microelectronics and in other high-tech industries; (2) globalization³ — given the increasing competition abroad, and associated corporate strategy of reducing labor costs by closing down firms, laying off some workers, relocating, merging businesses, and/or investing overseas (capital flight); and (3) the transition from extractive and manufacturing industries to service and information sectors⁶ of the economy. These interrelated transformations of the economy can be explained in the context of contemporary world economy and its associated competition. I argue that these economic transformations have created social contexts that make self-employment and employment of 'non-core' family/houschold members an adaptive strategy for both capitalists and for families and households.

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Globalization is an historically specific process of global economic and financial management, prosecuted by a powerful global elites of financiers, international and national bureaucrats and corporate leaders (McMcinchael 1996:28).

⁶ Table 653 from the U. S. statistical abstracts produced by the U. S. bureau of labor statistics indicates that the percentage of workers employed in extractive industries have declined from 11.18 percent in 1970 to 3.83 percent in 1990. The percentage of workers employed in manufacturing industries have declined by 8.43 percent from 26.37 percent in 1970 to 17.93 percent in 1990. In contrast, however, the percentage of workers employed in the service industry has increased by 7.18 percent from 25.91 percent in 1970 to 3.09 percent in 1990.

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On one hand, restructuring has created new structures of work and employment. In the context of increased competition, a changing international division of labor, and continued stagnation and economic crisis in the developed world, national and multinational firms have sought to decentralize production in order to lower labor costs, increase flexibility, and minimize investments risk — subcontracting, franchising, and self-employment are part of this broader trend (Mingione 1991, Dangler 1996). On the other hand, restructuring stresses the constrained choices available to workers in the labor market and at home and, ipso facto, the degradation of social and economic wellbeing, such as continuing race and gender inequality, increasing poverty, a more polarized class structure, and shrinking employment opportunities for those outside the technocratic elite (Tickamyer 1996:14). Self-employment and number of earners within families and households can be viewed as alternative work strategies associated with both aspects of restructuring perspective.

Restructuring and Self-employment

One explanation of self-employment includes counter-cyclical response to recession closely related to unemployment (Steinmetz and Wright 1989; Myles and Turegun 1994; Portes and Sassen-Koob 1987; Pahl 1984). The argument is that in periods of economic crisis, with high levels of unemployment and economic hardship, self-employment activities and small business enterprises are likely to increase. Thereafter, a period of economic growth is expected to be accompanied by a slowdown or decline in self-employment. Families and households experiencing unemployment and underemployment may get involved in self-employment in order to get by or

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improve a deteriorating financial situation. Steinmetz and Wright found that while there is evidence to support the counter-cyclical explanation of self-employment as unemployment rises, this effect declines overtime (1989:997). They also indicate that self-employment was not just a consequence of an absolute lack of employment, but was also a structural response to declining opportunities for good jobs (p. 1008). The counter-argument is that self-employment may also responds positively to a decrease in unemployment. Recessions may bring both upturns and dangers for self-employment and businesses. Economic growth may encourage some people to risk starting a small business, while others may take safer option of a better chance for paid-employment (Eardley and Corden 1996:27).

Also under the context of economic crisis, intense competition and uncertainty, the main explanation of self-employment appears to be the decentralization of economic activity, including decentralization of production, marketing, sales, and business services. Self-employment through franchising or subcontracting appears to be a corporate strategy to reduce costs, increase flexibility, and minimize investment risks in the changing economic environment, characterized by increasing competition and continued decline of the economy in advanced capitalist economies.

The other explanation of self-employment associated with restructuring is the shift of manufacturing toward service industries. The number of jobs in manufacturing industries not only has declined in many places, especially in rural areas, but also the new created ones are in the small manufacturing firms which offer no benefits including health insurance, vacations, personal leaves or decent jobs (Lobao and Schulman 1991). improve a deteriorating financial situation. Signimetz and Wright found that while there is evidence to support the counter-cyclical explanation of self-employment as uncomployment rises, this effect doclines overtime (1989-97). They also indicate that self-employment was not just a consequence of an absolute lack of employment, but was also a structural response to doclining opportunities for good jobs (p. 1008). The counter-argument is that self-employment may also responds positively to a decrease in uncomployment. Recessions may bring both upturts and dangers for self-employment and businesses. Economic growth may encourage some people to risk starting a small business, while others may take safer option of a better chance for paid-employment (Gardley and Corden 1996-27).

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At the same time, the number of jobs in the service sector has increased. However, many of the jobs in the service sector were part-time and offered lower wages. Service industries offered the greatest possibilities of people who wanted to work on their own. Mingione (1991) argues that:

The combination of the growing size of productive units leading to an expanding tertialization in employment structure and the productivity gap.....between manufacturing and service jobs caused vertically integrated organizations to become less and less profitable, and at the same time increased the relative advantages of systems which had developed different forms of "organized vertical disintegration" (Sayer 1989), such as Japan or the Third Italy. In this sense, a current important factor in deindustrialization, and also one of the leading aspects contemporary trends towards vertical disintegration, is the contracting out of operations involving the intense use of service labor (201-202).

This trend is not only reflected in decreasing manufacturing and increasing service employment but also and substantially in conditions of work and wage levels. Small subcontracting firms can easily hire casual, untenured and irregular workers characterized by low wages and lack of benefits (Gringeri 1994, Dangler 1996). The resulting effect of this transformation on communities not only has been the loss of "good" full-time jobs in some industries but also the diversification of working activities including self-employment, industrial homework, and casual and irregular forms of labor. At the same time, the number of jobs in the service sector has increased. However, many of the jobs in the service sector were part-title and offered lower wages. Service industries offered the greatest possibilities of people who wanted to work on their own. Mingione (1991) argues that.

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Another structural explanation of self-employment is the increase and diversification of new technologies. New technologies and government incentives through regulations facilitated the decentralization process of economic activities. For example, emergent and successful new technologies encouraged self-employment activities involving computers and light technologies, particularly for those working at home. Christensen (1987) indicates that:

The combination of automated offices, personal computers, and electronic communication services has led to increased decentralization of employment, including home-based work. As offices automate, valued employees increase their opportunities for flexible work alternatives, whereas full-time clericals face a shrinking job market (Leontief and Duchin 1986). Both trends promote home-based employment: valued professional employees may enjoy the luxury of working at home on their computer terminals; clerical employees may find fewer full-time salaried positions, but more opportunities as home-based independent contractors paid by piece rates(479-480).

Also, technological development facilitated the logistics of overseas subcontracting and allowed de-skilling process. The development of compact, versatile components allowed formerly integrated production operations to be split and spread around the globe.

Furthermore, decentralization is facilitated by government regulations and incentives. Government regulations permitted low effective tariffs on further processing abroad of semi-manufactures, and increased the attractiveness of offshore production for Another structural explanation of solf-couployment is the increase and diversification of new technologies. New technologies and government incentives through regulations facilitated the decentralization process of economic activities. For example, emergent and successful new technologies encouraged self-employment activities involving computers and light technologies, particularly for these working at home. Christensen (1987) indicates that:

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Furthermore, decentralization is facilitated by government regulations and incentives. Government regulations permitted low effective tariffs on further processing abroad of semi-manufactures, and increased the atmotiveness of offshore production for many firms. The promotion of the 'enterprise' culture and associated financial incentives may engender self-employment activities. With the Schumacher (1973)'s idea that "Small is beautiful," self-employment activities may be considered as an alternative way of producing and surviving against the suffocating and alienating control exercised by big corporations and the state. Here, the political character of some forms of informalization is underlined, but the possible relations of 'exploitation' and indirect control embodied in the expansion of "informal" sector are underestimated.

According to Mingione (1991), another structural explanation is the neo-dualistic super-exploitative connections between informalization and new developments in the concentration of capitalism on a world scale. The later includes new forms of reproducing cheap labor, of direct exploitation either through self service or through various forms of subcontracting, or of indirect exploitation such as expansion of some privileged markets for do-it-yourself tools, electronic and information-processing equipments, financial control, and/or dismantling of state intervention. Within core countries such as United States, the outcome of this decentralization process is the proliferation of individualized and small-scale economic activities in the form of selfemployment, franchising, and subcontracting (Dangler 1996; Gringeri 1994).

Self-employment may also be considered a new option among the survival strategies available to families and households in industrialized countries. Informalization is held to be one response to inflation, the job crisis, and the rigidity of formal work and consumption. The argument here is that, under certain conditions, doit-yourself or informal activities not only are advantageous from an economic point of

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view but also they are the best way of obtaining certain goods or services quickly or the quality required, sy acrevites (Minnone 1991).

Restructuring and Multiple Earners

For a large number of households, restructuring has contributed to the increasing proportion of multiple-earner households (Gardner and Hertz 1992; Jensen and Tienda 1989). First, the lack of good jobs --- jobs with good wages and benefits, good working conditions, chances for upward mobility, and security --- and the loss of one source of income due to unemployment of a family member may result in an increase in the number of earners within families and households. In married-couple families, for example, if the husband is displaced by current structural transformations, a previously non-working wife, an adult child, a relative, or a non-relative member of the household may be pulled into the labor force. Second, the creation of new jobs may contribute to the increase in the number of earners within families and households. The growth in service employment, for example, has been associated with, on one hand, a number of high-quality jobs offering high wages and benefits, security, and occupational mobility, and on the other hand, a number of low-paying jobs (Kassab 1992; Morris et al. 1994).

Families and households with some members in secure jobs and other members also employed either full-time or part-time are able to achieve and maintain high household incomes and substantial affluence, despite the individually weak labor market position of some of their members. At the other end of the spectrum, other households are increasingly becoming financially insecure, unstable, and working poor because they have little and decreasing access not only to job and self-provisioning opportunities and view but also they are the best way of obtaining certain goods or services quickly or the quality required.

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to new advantages offered by investment in property and household technology, but also by complementary activities (Mingione 1991).

Spatial Aspects of Restructuring

The above interpretation of restructuring phenomena tends to underestimate the other aspects of social change such as (1) the consequences of the uneven spread of advanced technologies among classes and over different geographical areas; (2) the exploitative use of informalization and technological change through corporate restructuring; and (3) the critical feedback from this transformation in terms of under consumption resulting from increased unemployment, underemployment or job transfer and restructuring (Mingione 1991).

The macro changes of the economy affect the livelihood and alternative choices of families, households, and communities in uneven ways. Jones and Kodras (1990) indicate that employment and income are unevenly distributed not just across social classes and strata, but also across geopolitical spaces. On one hand, it has been linked to the degradation of economic well-being, race and gender inequality, increasing poverty, especially working poor, a more polarized class structure, and declining employment opportunities (Brown and Hirschl 1995; Colclough and Tolbert 1993; Tickamyer 1996; Baca Zinn and Eitzen 1996). On the other hand, some families and households are increasingly becoming more fortunate (Pahl 1988; 251).

The restructuring approach also focuses on the spatial location of economic opportunities, and its uneven impacts on individuals, families and households, and communities in different locations (Tickamyer et al. 1993; Lyson and Falk 1993; Lobao

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Spatial Aspects of Restructuring

The above interpretation of restructuring phenomena tends to underestimate the other aspects of social obange such as (1) the consequences of the uneven spread of advanced technologies among classes and over different geographical areas: (2) the exploitative use of informalization and technological change through corporate restructuring; and (3) the critical feedback from this transformation in terms of under consumption restructuring from increased uneutployment, underemployment or job transfer and restructuring (Mingione 1991).

The macro changes of the economy affect the livelihood and alternative choices of families, households, and communities in uneven ways. Jones and Kodras (1990) indicate that employment and income are unevenly distributed not just across social classes and strata, but also across geopolitical spaces. On one hand, it has been linked to the degradation of economic well-boing, race and gender inequality, increasing poverty, especially working poor, a more palarized class structure, and declining employment poportunities (Brown and Hirschi 1995; Colclough and Tolbert 1993; Tickamyer 1996; Bace Zinn and Eitzen 1996). On the other hand, some families and isouscholds are increasingly becoming more fortunate (Pahl 1988; 231).

The restructuring approach also focuses on the spatial location of economic opportunities, and its uneven impacts on individuals, families and households, and communities in different locations (Tickamyer et al. 1993; Lyson and Fallt 1993; Lobao

1990). Tickamyer and Duncan (1990) indicate that location in social space affects economic opportunities and life chances of persons in that locale, providing the parameters of aspirations and opportunities. The spatial distribution of economic opportunities is the outcome of different patterns of economic growth and development. Theories of uneven development focus on the specific social, political, economic, and historic context in which processes and outcome of development occur in a given location. The diversity and structure of employment opportunities in an area, namely, the quantity and quality of jobs, determine options available to workers (Doeringer 1984; McLaughlin and Perman 1991). A major consequence of the uneven development process is a spatial division of labor that produces economic inequalities between places (Colclough and Tolbert 1993).

Many rural communities and regions lack stable employment, opportunities for upward mobility, investment in the community or regions, and diversity in the economy and other social institutions (Tickamyer and Duncan 1990). The poor distribution of jobs and wages result in low opportunity and high poverty rates for people and places (Tickamyer and Bokemeier 1993; Wilson 1987; Tickamyer and Latimer 1993). New industries are attracted by rural areas low labor costs, anti-union policies, and nonunionized workers, but also quickly relocate operations in search of cheaper labor (Bloomquist 1988; McGranahan 1988; Tickamyer and Duncan 1990).

The resulting net effects of restructuring in rural areas has been an increase in poverty (Rural Sociological Society Task Force on Poverty 1993), unemployment and underemployment (Lichter and Constanzo 1987; Bokemeier and Kayitsinga 1997), and 1990). Tiekamper and Duncan (1900) indicate that location in social space affects economic opportunities and life chances of persons in that locate, providing the parameters of aspirations and opportunities. The spatial distribution of economic opportunities is the outcome of different patterns of economic growth and development. Theories of uncert development locus on the specific actual, political, economic, and historie context in which processes and outcome of development occur in a given becaution. The diversity and structure of employment opportunities in an area, namely. Integration The diversity and structure of employment opportunities in an area, namely. MeLaughlin and Perman 1991). A major consequence of the uneven development process is a spatial division of lebor that produces economic inequalities between places process is a spatial division of abort that produces economic inequalities between places place. (Colelongh and Tobert 1993).

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declines of earnings (Shapiro 1989; Lichter et al. 1994; Whitener 1991). Nonmetropolitan families and households are more likely to be in economic distress and poverty than their metropolitan counterparts (Rural Sociological Task Force on Persistent Poverty 1993, Brown and Deavers 1987). Non-metropolitan labor market areas have a relatively limited employment and earnings opportunities and less diversified labor markets (Tickamyer and Duncan 1990, Killian and Hady 1988) compared to metropolitan labor market areas. Economic restructuring has had uneven impacts on different places, and in particular, it has engendered an environment that threatens the economic survival of many families and households in rural areas.

Furthermore, economic restructuring has exacerbated the already existing disadvantages of rural communities (Tickamyer and Duncan 1990; Lyson et al. 1993:124)). Rural communities have lower population density and limited physical infrastructure (e.g., railroads, highways, postal services, water and sewer systems, educational facilities, and hospitals) than their metropolitan counterparts. Rural communities not only differ in size, physical infrastructure, and economic base, but also in their social infrastructure (Flora and Flora 1993). Thus, the effect of restructuring on rural communities is unevenly felt depending upon their community characteristics.

Another important correlate of restructuring in rural communities is migration, especially the out migration of educated young people. Migration is a demographic process frequently associated with the concept of household strategy (Hareven 1991; Tilly and Scott 1987). Economic explanation of migration has been concerned with differences in net economic advantages of places—with more net in migration where declines of earnings (Shapiro 1989; Lichter et al. 1994; Whitener (991). Nonmetropolitan families and households are more likely to be in economic distress and poverty than their metropolutan counterparts (Rural Sociological Task Force on Persistent Powerty 1993, Brown and Deavers 1987). Non-metropolitan labor market areas have a relatively limited employment and earnings opportunities and less diversified labor markets (Tickamyer and Duracan 1990, Killian and Hady 1988) compared to metropolitan labor market areas. Economic restructuring has had uneven impacts on different places, and in particular, it has engendered an environment that threatens the economic survival of many families and households in rural areas.

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employment diversity and opportunities and wages are higher (Lyson et al. 1993). Historically, populations migrate from poor places to prosperous areas, particularly, the movement from rural areas to urban ones. The major assumption is that migration. particularly for the poor, is a response to economic opportunities (Wenk and Hardesty 1993, Nord et al. 1995). Geographic mobility may provide a better income or offer a new job, yet this depends on the opportunity structure of the place of the destination (Nord et al. 1995). Yet, poor families often move from poor rural communities to poor or even poorer rural places where they are attracted to the measer but real opportunities that often exist in high poverty places such as entry-level and lower-skill jobs and inexpensive housing (Fitchen 1991; Fitchen 1995; Nord et al. 1995). At the same time, poor families may move into poor rural communities because they may experience less competition as young people with higher education and good job skills leave those communities to live in more prosperous areas (Cromartie 1993; Garkovich 1989; Lichter et al. 1994; Fitchen 1981, 1991, 1994, 1995). In-migration may also increase poverty of rural places if in migrants are older, poorer, less educated, and less connected to the labor force (Fitchen 1995; Lichter et al. 1994).

Although labor market areas with relative advantages in employment and income opportunities may attract people from other areas, more recent studies on migration indicate that non-economic factors, particularly family ties, play a key role in the decision to move from one community to another (Jobes et al. 1992; Wenk and Hardesty 1993). The decision to move, either for economic or non-economic reasons, is articulated at the household level and differ in the relative impact on labor or economic activity of

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family members by gender (Tickamyer and Bokemeier 1993). Wenk and Hardesty (1993) indicate that although rural-to-urban migration is associated with an exit from poverty for women, a great proportion of women do not make such a move. When a family moves, the close ties they have developed and associated supports are undermined and often lost. Previous studies indicate that motivations for migration are associated with family ties and economic maintenance strategies (Jobes et al. 1992; Sell 1992; Stinner et al. 1992; Voss et al. 1992). Such strategies involve a complex network of residences, employment, and income sources (Fitchen 1991; Stack and Cromartie 1992).

Changes in Families and Households

The restructuring of the economy has also been associated with structural changes of families and households. A demographic profile of changes in family and household structure indicate that the proportion of married-couple families has decreased since the 1960's, while the proportion of single families, especially female-headed households and that of non-family households has increased?. Goldscheider and Waite (1991) group changes in family and household living arrangements into two categories: "No families," referring to unmarried adults living independently, a situation in which men and women avoid marriage and parenthood or living in families; and, "New families," referring to families in which men and women share family economic responsibilities as well as

ended families living with their ex-mouses and their lovers, children, and friend

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⁷ From 1960 to 1994, the proportion of married-couple households has decreased by 33 percent. In contrast, the proportion of female-headed families has increased by 39 percent while that of male-headed families increased by 17 percent. Also, the proportion of non-family households has tremendously increased from 1960 to 1994. Male-headed households increased by 127 percent while female-headed households increased by 54 percent.

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Past research has tended to compare married-couple households to female-headed families. For example, recent research on poverty indicates that female-headed households, particularly those in rural communities, have been increasing and are more likely than married-couple households to be in poverty (McLaughlin and Sachs 1988; Tickamyer and Latimer 1993; Bane and Ellwood 1986; Hoppe 1993; Lichter and Eggebeen 1992; Wilson 1987; Duncan and Tickamyer 1988; Fitchen 1981, 1991; McLanahan and Sanderful 1994; McLanahan and Booth 1996). These families experience poverty and economic insecurity because of the difficulties in obtaining fulltime employment reflecting limited labor market opportunities, especially for women, and because of insufficient child support from fathers, and low welfare payments. There is little research on male-headed families and that of the expanding "non-family" households.

Increasingly, family scholars are emphasizing the pluralism of family and household arrangements (see Cheal 1991, 1993; Stacey 1990; Goldscheider and Waite 1991; Baca Zinn and Eitzen 1995). As non-marital fertility, divorce and remarriage rates increase, there is an increasing diversity of family forms. They include divorcedextended families living with their ex-spouses and their lovers, children, and friends, cohabiting households, single and unwed parents, divorced parents, matrilineal, extended and kin support networks, and dual-earner households. Also, families and households are changing in their structures due to transformations in the social and macro-economic domestic tasks, Both these categories "no families" and "new families" are increasing, compared to the traditional nuclear families.

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forces, and changes are most profound in poor and working-class families (Baca Zinn and Eitzen 1995; Stacey 1990). It is thus, important to analyze how economic restructuring, with its uneven impact across space and strata, as well as that of families and households have enabled or constrained families and households to adapt to various environments in which they are embedded. In the next theoretical perspective, families and households are considered as the locus of social relations that help members to organize and participate in various activities in order not only to survive, but also to adapt to changing environments surrounding them. At the same time, families and households are embedded in larger social contexts, most notably, the labor market opportunities, social networks, and culture in their local communities.

Social Embeddedness/Capital Perspectives

Families and households have different capacities to engage in work strategies. Work strategies cannot be understood unless we consider family and household different capacities, including their composition and structures, their economic resources, as well as their social and cultural capital. This not only would require to analyze family and household social structures and how these constrain or enable work strategies, but also to analyze families and households as social entities well connected and dependent on larger social contexts. In this section, I use two conceptual frameworks: social capital and social embeddedness perspectives to analyze family and household work strategies. I first argue that work strategies are embedded in family and household social structures. Secondly, I argue that families and households are embedded themselves in larger social contexts, most notably, labor market area social structures. forces, and changes are most profound in poor and working-class families (Baca Zinn and Eftzen 1995; Statesy 1990). It is thus, important to analyze how economic restructuring, with its uneven impact across space and stran, as well as that of families and households have canabled or constrained families and households to adapt to various environments in which they are embedded. In the next theoretical perspective, families and households are considered as the locus of social relations that help members to organize and participate in various activities in order not only to survive, but also to adapt to changing environments surrounding them. At the same time, families and households are embedded in larger social contexts, most notably, the labor market opportunities, social networks, and culture in their local communities:

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Social capital was initially identified by Jane Jacobs (1961), Pierre Bourdieu and Jean-Claude Passeron (1990[1970]), and Glenn Loury (1977), and developed more extensively by James Coleman (1988), Ronald Burt (1992), Robert Putnam (1995), Alejandro Portes (1998), and Portes and Sensenbrenner (1993). It has been extensively applied in many areas of social sciences and has attracted many interdisciplinary scholars as well as policy makers seeking non-economic solutions to social problems. However, there are different conceptualizations of social capital. What they have in common is that they all seek to highlight properties of the social structure that facilitate or hinder social action (Wacquant 1998). Despite the different conceptualization of social capital, there is a consensus that social capital stands for the ability of actors to secure benefits by virtue of membership in social networks or other social structures (Portes 1998). What is social capital and what is not social capital? And most importantly, how does social capital affect work strategies?

The concept of social capital is not new for sociologists. In their review, Portes and Sensenbrenner (1993) and most recently Portes (1998) contend that there are four different sources of social capital corresponding to each of the major theoretical traditions in sociology: value introjection, bounded solidarity, reciprocity exchanges, and enforceable trust. They argue that from Marx and Engels, we derive the notion of "bounded solidarity," ---- the altruistic dispositions of actors are bounded together by the limits of their community. Other members in the same community can then appropriate such dispositions and the actors that follow as their source of social capital. From

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Simmel we learn of "reciprocal transactions" - the norms and obligations that emerge through personalized networks of exchange. The undersocialized view of human nature sees social capital as primary the accumulation of obligations from others according to the norm of reciprocity. In this case, donors provide privileged access to resources in the expectation that they will be fully repaid in the future. From Durkheim and Parsons, we learn of "value introjection" - the idea that values, moral imperatives, and commitments precede contractual relations and inform individual goals other than the strictly instrumental. From Weber, we learn of the idea of "enforceable trust" - formal institutions and particularistic group settings use different mechanisms for ensuring compliance with agreed-upon rules of conduct --- the former (e.g. bureaucracies) using legal/rational mechanisms, the latter (e.g. families) substantive/social ones. As in reciprocal exchanges, the motivation of donors of socially mediated gifts is instrumental. However, the expectation of repayment is not based on knowledge of recipient, but on the insertion of both actors in a common social structure. According to Portes (1998), the embedding of a transaction into such structure has two consequences: (1) the donor's return may come not from the recipient but from the collectivity as a whole in the form of status, honor, or approval; and (2) the collectivity itself acts as guarantor that whatever debts are incurred will be repaid. As a source of social capital, enforceable trust is appropriable for both donors and recipients. For recipients, it facilitates access to resources. For donors, it yields approval and expedites transactions because it ensures against malfaisance (Portes 1998).

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membership in a group are the basis of solidarity which makes them possible." He adds that social networks are not a natural given, or even a social given, — they are the products of investment strategies, individual or collective, consciously or unconsciously aimed at establishing or reproducing social relationships that are directly usable in the short or long term (Bourdieu 1986:249).

According to Bourdieu, the different types of capital differ in the degree of convertibility. Economic capital is the most convertible from the transformation into social and cultural capital. Through social capital, for example, actors can get access to economic resources (subsidized loans, investment tips, protected markets). By comparison, social and cultural capital possess their own dynamic and are characterized by less transparency and more uncertainty. While it is difficult to convert social into cultural capital, the transformation of cultural into social is easier. Strategies of reconversion are one of the means through which individuals, families, or groups attempt to maintain or improve their social position. The conversion rate between various species of capital, in turn, is one of the central stakes of struggles between groups, each seeking to impose the hierarchy of capitals most favorable to its own endowment or profile (Bourdieu 1986). Bourdieu argues that people struggle for economic, cultural. and social capital to maintain or improve their social positions within "fields." These fields constitute networks of relationships among positions (Bourdieu and Wacquant 1992). The overall volume and structure of capital detained by an individual, group, or institution define their position in social space; changes in the volume and structure of one endowment chart one trajectory through it (Bourdieu 1986). Anheier et al. 1995 also find that variations in capital are reflected in positional arrangements within fields. The presence or absence of these resources defines the social context in which individuals live. These objective conditions give rise to particular tastes, lifestyles, and ways of looking at the world as well as taking action.

Bourdieu also uses the concept of "habitus" --- a concept that refers to a system of lasting, transposable dispositions which, integrating past experiences, functions at every moment as a matrix of perceptions, and actions and makes possible the achievement of infinitely diversified tasks. Bourdieu argues that agents act within socially constructed ranges of possibilities, durably inscribed within them (even in their bodies) as well as within the social world in which they move. "The habitus is the source of these series of moves which are objectively organized as strategies without being the product of a genuine strategic intention — which would presuppose at least that they are perceived as one strategy among other strategies" (Bourdieu 1977). An individual's "habitus" is a direct product of the person's structural situation. Different life conditions give rise to different forms of habitus and those exposed to the same conditions will develop the same habitus (Bourdieu 1990). The habitus, in turn, has a direct, constraining effect on the social action of individuals, which coming full circle, contributes to the reproduction of the social structure. Thus, it would be expected that work strategies are likely to be affected by the family/household structure.

Coleman (1990) indicates that social capital constitutes a particular kind of resource available to an actor. He argues that social capital is defined by its function. It is not a single entity, but a variety of entities with two elements in common: they all

consist of some aspect of social structures, and they facilitate certain action of actors -whether persons or corporate actors -- within the structure" (Coleman 1988:S98, 1990:302). For Coleman, social capital, like other forms of capital, is productive, making possible the achievement of certain ends that would not be attainable in its absence (Coleman 1990:302). Unlike other forms of capital, social capital inheres in the structure of relations between and among actors (Coleman 1988:S98). He identifies three forms of social capital including obligations and expectations, which depends on trustworthiness of the social environment, information-flow capability of the social structure, and norms accompanied by sanctions. He adds that some aspects of social structure facilitate social capital formation. They include close social networks and appropriable social organizational arrangements. They do that through multiplex rather than simplex relations (Coleman 1988; S108-S109).

Coleman (1988) conceptualizes social capital at both family and community level. Social capital of the family is the relation between children and parents (and, when families include other members, relationships with them as well)(pS110). Social capital within the family depends both on the physical presence of adults — structural deficiency — and on the relationship between children and parents (or other adults in the household). He argues that single-parent families or those where both parents work outside the home lack the social capital that comes with the presence of parents during the day, or with grand parents or aunts and uncles in or near the household (Coleman 1988: S111). McLanahan & Sanderfur (1994) also indicate that social capital tends to be lower for children in single-parent families because they lack the benefit of a second at-

home parent and tend to change residence more often, leading to fewer ties to other adults in the community. However, social capital is more than the presence of adults in the family. Coleman (1998) indicates that even if adults are physically present, there is lack of social capital in the family if there are not strong relations between children and parents.

Coleman (1988) also indicates that social capital exists outside the family — "it can be found outside as well as in the community consisting of social relationships that exists among parents, in the closure exhibited by this structure of relations, and in parents' relations with the institutions of the community (pS113)." He argues that for families that have moved often, the social relations that constitute social capital are broken at each move. Leaving a community tends to destroy established bonds, thus depriving family and children of a major source of social capital (Hagan et al. 1996; McLanahan and Sanderfur 1994). Thus, social capital exists at both the family and community levels.

At the community level, Putnam (1993) defines social capital as features of social organization, that include trust, norms, and networks. All of these aspects facilitate action and cooperation for mutual benefit. Working together is easier in a community blessed with a substantial stock of social capital." (Putnam 1993: 35-36). He found that communities in certain regions of northern Italy were able to maintain and accumulate social capital which has been put to use in fostering economic development. By contrast, social capital in poor regions of southern Italy remains bounded in patron-client relations which hamper economic and political development. He suggests that this difference can

be understood in light of norms. Of special interest is "generalized reciprocity," that is, the assurance community members have that their altruistic actions will be rewarded at some point ensures their willingness to contribute to others' welfare. People are thus less likely to opt out of civic responsibilities and social attachments, thereby creating certainty and stability, as well as becoming models for future cooperation.

Historically, families have relied kin and relative ties to access or maintain their economic resources. The family plays a considerable role not only in the transmission but also in the management of the economic heritage, especially through business alliances which are often family alliances (Bourdieu 1996, 1998). Social capital originates in kinship ties but extends beyond kin and relative ties. Granovetter (1974) used the term "strength of weak ties" to refer to the power of indirect influences outside the immediate circle of family and close friends to serve as an employment referral system. The common sense would be that, dense networks such as available through family circles, would be most effective in finding jobs. Burt (1992) built on Granoveter and developed a concept of "structural holes." According to Burt (1992), social capital is based on the relative paucity of network ties rather than on their density. He defines social capital as friends, colleagues, and more generally contacts through whom you receive opportunities to use [other forms of] capital (Burt 1992:9). According to Burt, it is the relative absence of ties, labeled "structural holes," that facilitates individual mobility. This is so because dense networks tend to convey redundant information, while weaker ties can be sources of new knowledge.

An extensive literature on social capital outside the immediate family comes from ethnic entrepreneurship and enclave studies. Networks and the social capital that flow through immigrant and ethnic groups are identified as a key resource for the creation of small businesses. Light (1984) and Light and Bonacich (1988) emphasized the importance of rotating credit associations for the capitalization of Asians immigrant firms in the United States. Social capital comes from the trust that every member has in the continuing contribution of others even after they have received the pooled funds. Enclave studies consistently highlight the role of ethnic networks as a source of vital resources, including start-up capital, tips about business opportunities, access to markets, cheap and disciplined and mostly co-ethnic labor force. For example, entry level openings are frequently filled by contacting kin and friends in remote foreign locations rather than using available local workers (Sassen 1995). Also, mobility opportunities through niches are entirely networks driven. Examples of such ethnic enclaves include New York Chinatown (Zhou 1992), Miami little Havana (Portes 1987, Portes & Stepick 1993, Perez 1992), and Los Angeles Korean town (Light & Bonacich 1988, Nee et al. 1994).

The literature on studies that emphasize the "social isolation" concept highlight the use of social capital in poor communities. Survival in poor urban communities frequently depends on the close interaction with kin and friends in similar situations (Carol Stack 1974). However, the problem with such ties is that they seldom reach beyond the inner city, thus depriving their inhabitants of sources of information about employment opportunities elsewhere and ways to attain them (Portes 1998). Wilson

(1987, 1996) emphasize how the departure of both industrial employment and middleclass families from Black inner city areas have left the remaining population bereft of social capital, a situation leading to extremely high levels of unemployment and welfare dependency. Fernandez-Kelly (1995) also indicates that the dense but truncated networks of inner-city Black families not only cut off members from information about the outside world, but alternatively support alternative cultural styles that make access to mainstream employment even more difficult.

The concept of social capital is without limitations. Woolcock (1998) argues that social capital is regarded as other capital that can be maximized — "if a little trust, group participation, and cooperation is a good thing, should not more of it be better?" Social capital has both positive and negative effects (Portes and Sensenbrenner 1993; Portes 1998). There may be different types of social capital and that collectively they are resources to be optimized not maximized (Woolcock 1998). There are different types, levels, or dimensions of social capital, different performance outcomes associated with different combinations of these dimensions, and different sets of conditions that support or weaken favorable combinations (Woolcock 1998).

Social Embeddedness Theory

The concept of embeddedness was originally introduced by Karl Polanyi et al. (1957), then used by Granovetter (1985) and Mingione (1991), and more recently by Portes and Sensenbrenner (1993). Granovetter (1985) argues that:

The embeddedness approach to the problem of trust and order in economic life, then, threads its way between the oversocialized approach of generalized morality and the undersocialized one of the impersonal, institutional arrangements by following and analyzing concrete patterns of social relations. Unlike either position, or the Hobbesian position, it makes no sweeping (and thus unlikely) predictions of universal order or disorder but rather assumes that the details of social structure will determine which is found (p493).

Following Mingione (1991) and Granovetter (1985), Bloomquist et al. (1993) argue that work activities are purposive actions of individuals or groups, but these actions are embedded in particular social contexts. The concept of embeddedness emphasizes social relations and network ties within and between social groups, organizations, and institutions. Granovetter (1985) indicates that social structures can advance and constrain individual goal seeking and they can even redefine the content of such goals. He argues that

Actors do not behave or decide as atoms outside a social context, nor do they adhere slavishly to a script written for them by the particular intersection of social categories that they happen to occupy. Their attempts at purposive action are instead embedded in concrete, ongoing systems of social relations (1985: 487). Granovetter (1985) indicates that social networks can be viewed as social capital that actors can use to pursue their own goals or interests. He indicates that action is embedded in social relations. These social relations in turn can limit and influence actor's choice of strategy as well as provide actor with opportunities to further his or her interests and influence others.

Social embeddedness refers to more than the network of social relations — it highlights the processes and social-structural context that maintain the interdependence of those structural ties. Bloomquist et al. (1993) indicate that:

Work activities are embedded in household structures (including the internal distribution of power). These are in turn embedded in other reciprocal networks and in associative structures of redistribution (p96).

From this perspective, family and household work strategies depend on not only the family/household social structure in which these activities are embedded, but also on labor market area social structure in which families and households reside. The analysis of family and household work strategies requires a multi-level approach as Bloomquist et al. (1993) put it:

The conceptualization of the embeddedness of work activities requires one to consider not only how work opportunities are organized in a particular social context, but also how household members organize their work activities in the context of the overall reproductive strategy (p96).

Mingione 's (1991, 1994) focuses on the social embeddedness of economic behavior. He indicates that industrial societies are based on systems of social integration founded on complementarity between forms of institutional regulations and associative organizations and the role of adapted reciprocity networks. In his conceptualization of work activities as a component of household reproductive strategies, he highlights the considerable importance of the regulatory process based on reciprocity in addition to what he calls the "associative regulatory process."

I am convinced that nowhere can industrial development be fully understood without devoting great attention to the adaptation and change of reciprocity networks and to family and kinship strategies, which have maintained a crucial role as the fundamental social and organizational background to the biological reproduction of human kind. As such, complex mixes of reciprocity loyalties greatly condition individual economic behavior (1994:24).

Mingione's approach highlights the fact that work structures are embedded in social contexts as complex mixes of associative and reciprocal kinds of relationships organized to regulate the tensions produced by competitive market behaviors. He indicates that the basic unit of social reproduction is, for the most part, located in the household. The most important social network in which the household is strictly embedded is the family (1991:133). Recent studies also indicate that families and households are critical and strategic social organizations, through which individuals shape and adapt to social transformations (Bokemeier 1997).

The social embeddedness perspective provides a lens to analyzing family and household work strategies in both relations of production and social reproduction. Family and household work strategies are conditioned and constrained by available resources including social relations within households, considered as units of social reproduction, as well as its social relations with surrounding environments, particularly, labor market conditions and processes. Social reproduction involves the process of reconstituting the social relations of society necessary for human social and economic activities. It covers all activities necessary to sustain the household and the economy,
including childbearing, child rearing, housework, household consumption, emotional labor, and other non-labor market activities (Tickamyer 1992; Collins 1990). It encompasses diverse conditions and organizational relations that make possible household members survival in the social and economic environment (Mingione 1991:124) as well as their adaption to changes in such environments.

The internal activities and resources controlled by household members are crucial factors for comprehending the diverse household conditions that permit members of households to adopt an adaptive strategy. At the same time, the location of the household in the broader social, cultural and economic environment affects the "strategies" its members can do and adopt. Mingione (1991) argues that:

The combination of resources utilized in reproduction is connected with, among other factors, labor market conditions and processes . . . within the household as a unit of social reproduction, embedded in different supportive reciprocal networks, decisions are taken according to the varying and changing internal distribution of power on which is the best possible allocation of available resources to meet subsistence needs, given the existing relations between work opportunities and income and the parallel possibilities of saving subsistence expenses through labor for direct self-provisioning, and/or given the existence of other reciprocal or redistributive resources. In this sense, the complex structure of reproduction expresses, among other processes, the formation of the labor supply at given condition of labor demand and of overall work opportunities (Mingione 1991:141).

Given variable social context in which households are embedded, household members organize their work activities in the context of the overall reproductive strategy (Mingione 1991). The restructuring of the economy has eliminated or redefined many jobs in the paid labor force, allowing workers and their families to support themselves in different ways (Garrett et al. 1993). That situation has encouraged some household members to enter the paid labor force, engage in self-employment work, and seek different sources of income, given the conditions, organization, and availability of social, cultural, and economic resources of labor market area structures in which they are embedded.

Social embeddedness perspective is useful for understanding how social structure affects economic activities. However, it does not concretely explain how social ties affect economic outcomes (Uzzi 1996). He argues that

The core statement — that economic action is embedded in social relations which sometimes facilitate and other times derail exchange — is conceptually vague (p674).

In a review of sociology of markets, Lie (1997) indicates other criticisms of the embeddedness approach. It neglects nonsocial or nonstructural factors such as culture, technology, and even macroeconomic forces. It eschews analyzing historical and cultural variations in markets. Power, especially in non-economic realms, remains elided, and the role of the state is not accounted for. The embeddedness approach must itself be embedded in larger, historically transient social structures — not only state institutions

and superstate organizations, but also historically shifting transnational relations and structures (Lie 1997: 351).

Woolcock (1998) argues that all forms of exchange are inherently embedded in social relationships. He cited Braudel in indicating that "it is easy to call one form of exchange economic and the other social. In real life, all types are both economic and social." He cited Zukin and DiMaggio⁸ indicating that embeddedness could take several distinct forms: social ties, cultural practices, and political contexts, all had a powerful effect on shaping the types of opportunities and constraints individuals faced as they sought economic advancement. He also indicates that many benefits gained by embeddedness in a given network were not indeed without corresponding costs.

The high degree of density and closure characterizing the social relations undergirding the relatively simple, small-scale, informal exchange in village markets, for example, could in facts impose considerable constraints on successful members of these communities as they attempted to make the transition to membership in larger, more extensive, and sophisticated exchange network coordinated by formal institutions and the rule of law (p13).

Woolcock proposes a framework that integrates "embeddedness" and "autonomy" as distinct forms of social capital at both micro and macro-level of analysis (p15). Embeddedness at micro refers to intra-community ties, while at the macro level it

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Zukin and DiMaggio (1990) classify embeddedness into four forms: 1) structural --- material quality and structure of ties among actors; 2) cognitive --- structured mental processes that direct economic logic; 3) cultural --- shared beliefs and values that shape economic aims; and 4) political --- institutional limits on economic power and incentives.

refers to state-society relations. Autonomy at the micro level refers to extra-community networks, while at the macro level it refers to institutional capacity and credibility. The micro-level, what he calls "bottom-up dilemmas of development," encompasses individuals, households, small groups, and communities. Bottom-up development typically functions in and through social relations among people with common neighborhood, ethnic, religious, or familial ties (i.e., those with high endowments of social integration). In such cases, integration constitutes an important source of social capital, enabling participants to provide one another with a range of services and resources — the more intensive the social ties and generalized trust within a given community, the higher its "endowment" of this form of social capital (p21).

However, he indicates that more is not generally better — where generalized trust extends only to immediate family members and blood relatives, a stark of nondevelopmental reality is likely to be present. He refers to "amoral familism"— presence of social integration but the absence of linkage (extra-community networks). "Amoral individualism" on the other hand exists where there is neither familial nor generalized trust, where narrow self-interest literally permeates all social and economic activity, and where members are isolated — either by circumstance or discrimination — from all forms of cohesive social networks. It is thus characterized by absence of both integration and linkage. He also describes anomie (as in Durkheim) referring to the situation where individuals have newly found freedom and opportunity to participate in a wider range of activities but lack the stable community base to provide guidance support and identity, i.e., they have linkage but no integration. For example, without a strong community

group to provide initial financial resources, small businesses fail to get started or go bankrupt in the early stages. Strong intra-community ties, can be highly beneficial to the extent they are complemented by some measure of linkage. He argues that, people who are able to forge new social ties into the wider business community, even in less dramatic circumstance, are the ones who enjoy greater economic success.

Summary of Research Propositions and Hypotheses

In summary, this study integrates (1) the restructuring perspective, and (2) the social embeddedness/social capital perspectives to explain family and household work strategies. First, family and household work strategies are conditioned by the social structure of environments in which household and families are embedded and interconnected. At the same time, a spatial distribution of opportunity structure which is the outcome of both historical, social, economic, and political changes enable or constrain family and household work strategies. Secondly, family and household work strategies are conditioned and constrained by available resources including economic, but also, social and cultural capital of families and households.

The restructuring and social embeddedness perspectives, taken together, suggested the following propositions and hypotheses:

P11.: Family and household structure determines work strategies.

Families and households have different capacities to engage in work strategies. The diversity of family and household social arrangements may facilitate or inhibit the adaptation to social environments in which families and households are embedded. Family and household composition, as indicated by the presence of marital partners and

other related adults, such as adult children, parents, and in-laws help its members to survive and adapt to different environment (Coleman 1990; Fernandez-Kelly 1994). At the same time, social relations, in particular, those of gender and power, degree of mutual obligation, respect, trust, collaboration, and solidarity enhance their chances of adapting to changes in the social context in which they are embedded. Social capital resides in those relations between household members and may result in family/household members' contribution in terms of labor and financial inputs (Sanders and Nee 1996:233). According to Fernandez-Kelly (1994), social relations vary across social groups, social and physical locations. Thus, it is expected that the family/household social structure will have a differentiated impact on the likelihood of families and households to have other members (other than the head, the spouse, or partner) employed and/or a self-employed member. The hypotheses to be tested in the analyses are summarized as follows:

H111a. Married families are more likely than "non-married" families and households to have a self-employed member.

H112a. Cohabiting families and households are more likely than single-headed families and households to have a self-employed member.

H113a. Female-headed families and households are less likely than male-headed families and households to have a self-employed member.

H111b. Married families are less likely than "non-married" families and households to have a self-employed member.

H112b. Cohabiting families and households are less likely than single-headed families and households to have a self-employed member.

H113b. Female-headed families and households are less likely than male-headed families and households to have a self-employed member.

In addition to family and household types, other household factors influence family and household work strategies. Family and household types are likely to differ on a variety of factors that can influence the likelihood of self-employment and having additional earners, such as the presence and age of children and the presence of adult relatives. I expect family and household work strategies to vary by, in addition to family/household structure, these other composition and life cycle factors because they differentiate the social environment in which family and household work strategies are embedded. The presence and age of children affect not only family and household economic needs but also the ability and availability of parents to respond to such needs. I expect that families with young children, especially preschool children, because of the amount of work and time involved in their care, are less likely to involve their members, particularly mothers, in the paid labor force. However, because of flexibility of small family businesses, some of them done at home or nearby, I expect families with children, especially preschool children, to have a self-employed member. This suggests the following hypotheses:

H114a. Families and households with children under 18 years of age are more likely than those without children to have a self-employed member.

H115a. Families and households with preschool children are more likely than those with school-age and/or adolescent children to have a self-employed member.

H116a. Families and households with school-age children are less likely than those with adolescent children to have a self-employed member.

In addition, family and household work strategies vary by family and household structure and the presence and age of children because of these factors, but also because the presence of other adults, especially adult relatives help either in family/household responsibilities including the care of young children or participate in family/household work strategies such as involving in family business or accessing the paid labor force. Thus, the presence of adult relatives in the household is used as a control variable.

Families and households have different capacities to engage in work strategies, including not only the family-based social capital, but also the external social capital, including the social networks with relatives and friends in their community.

Therefore, I propose that:

P12: Family and household social ties to the labor market area affect work strategies

Family and households move within and across labor market areas. People move from different reasons, mainly economic but also social reasons. As indicated earlier, economic resources in a community, enable and constrain families and households to adopt any strategy. Even in poor communities, especially rural communities, families and households that move in are willing to take any kind of jobs, including low-wage part-time jobs and self-employment activities because they satisfy greater proportion of their needs (Fitchen 1991;1995). Although, families and households' residential move may be associated with a better job for the head of the household, an affordable house, or a better school for children, it is likely to be associated with a decrease in family members in the labor force, particularly wives and women partners (Tickamyer et al. 1993). At the same time, family and household geographic mobility is also associated with less social capital in the community (loss of old friends and adjustment to new friends and neighbors, and co-workers), therefore greater chances of few members in the paid labor force and in self-employment. In contrast, family/household residential stability is likely to be associated with greater social capital (e.g., participation in exchange networks with kin, friends and neighbors, and sharing information on jobs and businesses' opportunities. Thus,

I hypothesize that:

H121a. Family/household residential mobility decreases the likelihood of selfemployment.

H121b. Family/household residential mobility decreases the likelihood of additional earners.

Family and household work strategies are affected by family and household characteristics but also they are conditioned by larger social and structural contexts including the characteristics of labor market area in which they are located, most notably the labor market area opportunity structure and its associated spatial location. The following propositions include the impact of labor market area characteristics on family and household work strategies.

P21: Non-metropolitan-metropolitan residential location determines work strategies.

The restructuring of the economy has placed much greater burdens on nonmetropolitan families and households. Employment in agriculture and in manufacturing industries that has for a long time sustained the well-being of a large number of nonmetropolitan families and households underwent sharp contractions while the service sector has increased. However, the rise in service sector employment in rural areas has been limited to low-wage jobs while the urban areas have experienced a rise in jobs at both ends of the wage spectrum (Gorham 1992). The resulting effects of the economic restructuring in rural areas have been greater rates of poverty, unemployment and underemployment and lower levels of earnings for non-metropolitan families and households when compared to their metropolitan counterparts (Lichter and Constanzo 1987; Lichter et al. 1994; Fitchen 1991; Whitener 1991; Rural Sociological Society Task Force on Poverty 1993). Thus,

H211a. Non-metropolitan families and households are more likely than those in metropolitan areas to have a self-employed member.

H211b.Non-metropolitan families and households are less likely than those in metropolitan areas to have additional earners.

The between labor market area differences in family and work strategies, especially the metropolitan and non-metropolitan differences could be due to the labor market area differences in opportunity structure. I, thus, propose that:

P22. Industrial structure of a labor market area affects work strategies.

The restructuring of the economy has been associated with a shift in the quantity and quality of jobs. The decline in extractive and manufacturing employment, and the rise in service jobs has negative implications for the economic security of a large number of families and households (Brown and Hirschl 1995). This shift in employment structure has resulted on one hand, in a number of high-quality jobs offering high wages and benefits, security, and occupational mobility, and on the other hand, a number of low-quality jobs (Kassab 1992; Morris et al. 1994). At the same time, the restructuring of the economy has changed the patterns of work. The displacement of a large number of workers in manufacturing industries and the low-paying jobs in the service sector has resulted in an increase in self-employment, unpaid work, industrial home working, and a variety of informal work. On one hand, families and households have increased the number of earners in order to cope with the loss of employment and underemployment of one of their members. On the other hand, families and households started or increased their involvement in self-employment activities. For families and households experiencing economic hardships, self-employment is a source for extra income. For other families and households, self-employment is new window for opportunity because the new technology facilities do not require a lot of capital, time flexibility, and the need for work autonomy. Thus, it is hypothesized that:

H221a. The greater the prevalence of core industries in a labor market area the lower the likelihood of self-employment. However,

H222a. Differences in self-employment between non-metropolitan and metropolitan areas are primarily due to their differences in the proportion of core industries.

H221b. The greater the prevalence of core industries in a labor market area the greater the likelihood of additional earners.

Labor market areas differ not only in industrial structure but also in the levels

social capital. I propose that:

P23. Residential stability of a labor market area affects work strategies.

At the labor market area (or community level), the longer the length of residence

(an indication of social ties to the community) the greater the strength of enforceable

trust and the higher levels of social capital stemming from it (McLanahan and Sanderfur

1994). Residential stability is a reasonably good proxy of social capital because it

measures the long-standing connections between families in the community. Social ties and trust are an important source of social capital within a community. They not only enable families and households to access to a range of resources and services, including financial resources that may help start a small business, but also they protect businesses to go bankrupt in their early stages. They may also attract new investments (businesses) from outside the community. Thus,

H231a. Residential stability of a labor market area is positively related to selfemployment.

The net impacts of restructuring have been an increase in poverty,

unemployment, underemployment, decline of earnings, and public assistance receipts.

Labor market areas that experience economic hardships, either because of the recent

restructuring or historical deterioration the economic structure, not only do not have

enough jobs for its residents, but also the likelihood of small businesses is minimum.

Thus, I propose that:

P24. Economic disadvantage/inequality of a labor market area affects work strategies.

This leads to the following hypotheses:

H241a. Economic disadvantage/inequality of a labor market area is negatively related to self-employment.

H241b. Economic disadvantage/inequality of a labor market area is negatively related to additional earners.

A summary of propositions and hypotheses is presented in the following table.

Propositions	Hypotheses		
	Self-employment	Additional Earners	
Level-1: Family/house	hold		
P11. Family and household structure determines work strategies.	H111a. Married families are more likely than "non- married" families and households to have a self- employed member.	H111b. Married families are less likely than "non- married" families and households to have a self- employed member.	
	H112a. Cohabiting families and households are more likely than single-headed families and households to have a self-employed member.	H112b. Cohabiting families and households are less likely than single-headed families and households to have a self-employed member.	
	H113a. Female-headed families and households are less likely than male- headed families and households to have a self- employed member.	H113b. Female-headed families and households are less likely than male- headed families and households to have a self- employed member.	
	H114a. Families and households with children under 18 years of age are more likely than those without children to have a self-employed member.		
	H115a. Families and households with preschool children are more likely than those with school-age and/or adolescent children to have a self-employed member.		

Table 1. Summary of Propositions and Hypotheses.

Propositions	Нуро	theses
	Self-employment	Additional Earners
	H116a. Families and households with school-age children are less likely than those with adolescent children to have a self- employed member.	
P12. Family and household social ties to the labor market area affect work strategies.	H121a. Family/household residential mobility decreases the likelihood of self-employment.	H121b. Family/household residential mobility decreases the likelihood of additional earners.
Level 2: Labor market a	rea	
P21. Non-metropolitan- metropolitan residential location determines work strategies.	H211a. Non-metropolitan families and households are more likely than those in metropolitan areas to have a self-employed member.	H211b. Non-metropolitan families and households are less likely than those in metropolitan areas to have additional earners.
P22. Industrial structure of a labor market area affects work strategies.	H221a. The greater the prevalence of core industries in a labor market area the lower the likelihood of self- employment.	H221b. The greater the prevalence of core industries in a labor market area the greater the likelihood of additional earners.
	H222a. Differences in self- employment between non- metropolitan and metropolitan areas are primarily due to their differences in the proportion of core industries.	
P23. Residential stability of a labor market area affects work strategies.	H231a. Residential stability of a labor market area is positively related to self- employment.	

Propositions	Hypotheses Self-employment Additional Earners		
P24. Economic disadvantage /inequality of a labor market area affects work strategies.	H241a. Economic disadvantage/inequality of a labor market area is negatively related to self- employment.	H241b. Economic disadvantage/inequality of a labor market area is negatively related to additional earners.	

Note: Propositions and hypotheses are numbered using letters and numbers. The letter P refers to a proposition while the letter H stands for a hypothesis. The first digit following the letter, indicates the level of analysis, 1 for a proposition and hypotheses to be tested at level-1 and 2 if a proposition and hypotheses are to be tested at level-2 of the analysis. The second digit refers to a proposition's number. The third digit indicates a hypothesis' number. The last letter indicates the dependent variable for which the hypotheses are being tested --- a for self-employment and b for additional earners.

Chapter 3

THE RESEARCH DESIGN AND ANALYTICAL STRATEGIES

Data

This study uses two data sets: The 1990 Public Use Micro Data Samples (PUMS-L) Labor Market Areas and the 1990 Summary Tape Files (STF3). The PUMS-L is produced by U.S. Bureau of the Census and funded by the Economic Research Service, U.S. Department of Agriculture and Agricultural Experiment Stations and land-grant institutions affiliated with U. S. D. A. Regional Project S-259. Labor market areas (LMAs) are groups of counties that encompass the county of residence and the county of work. The labor market area PUMS-L data provides an excellent sample for linking individuals, households, and labor markets areas, thus permitting the incorporation of multilevel factors in models of household and family work strategies. The other advantage of using the PUMS data for labor market areas is their coverage of both rural and urban local labor markets. For this study a sub-sample of 112 North Central labor market areas is first selected and groups counties mainly in the states of Michigan, Ohio, Indiana, Illinois, Wisconsin, Minnesota, Iowa, and Missouri. The boundaries of labor market areas are not limited to geographic lines of these states. Some counties are from the neighboring states including Kentucky, West Virginia, Arkansas, North and South Dakota, and Nebraska. See Map of Labor Market Areas.



Figure 1. Map of Labor Market Areas

The major limitation of these labor market areas is the Census Bureau confidentiality requirement for any geographic identifier on the PUMS to contain a minimum of 100,000 people (See Tolbert and Killian, 1987, for greater details). A sample of civilian working-age individuals (age between 16 and 64) is selected from the PUMS-L data. Four types of households are selected. They include married-couple families, male and female-headed households, and cohabiting households (unmarried persons living with their partners). Households of one member are excluded in this study. This corresponds to 75,280 households with about 36 percent of them (27,013 households) living in non-metropolitan areas.

The summary tape files data from the 1990 census (STF3A) is used to construct characteristics of labor market areas. Data from the summary tape files is at the county level and is aggregated at the corresponding labor market areas. Characteristics of labor market areas include the opportunity structure, i.e., the availability and types of jobs, residential stability and labor market area inequality.

Variable Construction

The variable of interest, family and household work strategies, is derived from a combination of the employment and self-employment activities of family/household members. Using the employment status of every member in the household (employed, unemployed, or not working) and the class of worker (employed in private or in government sectors, self-employed including unpaid family members), a typology of family and household work strategies is developed and include six excluded categories including: 1) families and households in which none of the members is working

(employed, self-employed or unpaid family member), 2) Only one spouse/partner is employed, 3) Both spouses/partners are the only ones employed, 4) At least one or more additional earners is employed, 5) At least one spouse/partner is self-employed, and 6) a combination of additional earners and self-employment. For simplicity and clarity, this study focuses on two separate dependent variables: (1) Employment of non-core members within families and households⁹, and (2) self-employment¹⁰.

Employment of other members refers to employment of any person 16 years of age and older within the family/household other than the head of the household and the spouse or partner in case they are present. Previous studies have focused on the conventional one-carner employment strategy — the employment of the head of the household. Starting with the 70s, with the increasing participation of women in the labor force, recent studies have shifted the focus to dual-earner employment strategy, that is, the employment of the head of the household and that of spouses. This study analyzes

⁹ Non-core members include other members of the household other than the householder, the spouse and/or partner (if present). Using the label "non-core" is not intended to diminish the importance or attach a tertiary status on the employment of those members, rather it is intended to highlight and emphasize an emerging employment strategy of families and households other than the "traditional" one-carner household and the increasing dual-carner households.

¹⁰ A distinction is being made between three major categories of self-employment: (1) Self-employment in own unincorporated business (Census definition), (2) self-employment in own incorporated business (considered as paid employees for tax purposes), and (3) unpaid family workers (work on a family farm or family business for at least 15 hours per week). There are difficulties in distinguishing self-employed to employees since some corporations may register employees as self-employed to avoid taxes and social security payments (Linder and Houghton 1990; Myles and Turegun 1994). The self-employed indicator is derived from the class of worker variable. Self-employed is defined as CLASS=6, self-employed in own not incorporated business, professional practice or farm, CLASS=7, self-employed in own incorporated business, professional practice or farm, and CLASS=8, working without pay in family business or farm. Not self-employed includes individuals employed in the private, Federal, or State sectors --CLASS=1,2,3,4, and 5. Individuals less than 16 years old, unemployed who never worked, and those not in labor force (last worked prior to 1985), and the armed forces. Individuals who are classified as not self-employed but have received a self-employment income (INCOME2 non-farm self-employment income or INCOME3 farm selfemployment income) are included in the category of self-employed.

the employment of other members of families and households that are employed as a family and household employment strategy. They include adult children living in the household, brothers and sisters, parents, uncles and aunts, other relatives as well as nonrelative members who live in the household. Conceptualized at the household level, employment data for all employed members of the household is used to create a variable that identifies various household employment strategies. This variable identifies three groups of families and households based on their employment status in 1990: (1) Families and households with none of the members is employed, (2) families and households with core members employed and no other members employed, and families and households in which non-core members are employed. The employment of non-core members within families and households is transformed into a dummy variable indicating (1) families and households with other members employed, and (0) families and households with no other members employed. Later in the analysis, I refer to the employment of non-core members as additional earners.

Two main questions are of interest in regards to self-employment: (1) what is the prevalence of self-employment and (2) what are the factors contributing to household involvement in self-employment? Previous studies have focus on the analysis of self-employment at the individual and national level, especially in metropolitan areas and among immigrants (Portes and Zhou 1996; Sanders and Nee 1996), but few have analyzed self-employment at the family/household level and in rural settings. This study examines self-employment at the family/household level in both metropolitan and non-metropolitan areas. Self-employment measure is conceptualized as a dichotomous

variable, indicating (1) Whether at least one or more members of the household are involved in self-employment activities? (0) Otherwise.

The key independent variables are measured at both family/household and labor market area levels of analysis. I argue that both family and household characteristics and labor market area characteristics affect the likelihood of families and households to have additional members in the labor force or to get involved in self-employment activities. At the family/household level, eight indicators are constructed to reflect differences on family and household structure and composition, life-course stages, mobility status, social class, race and ethnicity, and immigrant status. These variables are assumed to determine the diverse family/household social contexts that shape family/household work strategies. Along this study, the family/household has been used interchangeably because they are overlapping, reciprocal, and interdependent (Bokemeier 1997).

Family/household structure is defined by family household type¹¹, as defined by the U.S. Census¹². Past research has tended to focus on married-couple households or on

¹¹ Family/household type is defined as a transformed and combined variable of RHHFAMTP and RELAT1. RHHFAMTP includes married-couple family household, male and female-headed families, and non-family households -- male householder living alone, male householder not living alone, female householder living alone, and female householder not living alone. RELAT1 indicates the relationship to the householder and includes the householder, spouse, related (son/daughter, brother/sister etc..) and unrelated individuals (roommate, partner etc..). Married-couple family is defined as RHHFAMTP=1. Male-headed households are defined as RHHFAMTP=2 or RHHFAMTP=12 and there is no unmarried partner living in the household, RELAT1=10. Female-headed households are defined as RHHFAMTP=3 or RHHFAMTP=22 and there is no unmarried partner living in the household, RELAT1=10. Cohabiting households are defined as being headed by an unmarried male or female, RHHFAMTP=2,3,12,22who coreside with unmarried partner, RELAT1=10. Excluded in the analysis are households of living alone individuals, RHHFAMTP=11,21, as well as group quarter/vacant households.

The U.S. Bureau of the Census distinguishes between households and families. A household is defined as a statistical or physical unit of coresidentiality, composed with one or more individuals who occupy the same living quarters—a house—an apartment or a room. Members of households may be related in most of the cases, unrelated, or living alone. A family is defined as two or more persons related by blood, marriage, or adoption

female-headed households but few have analyzed household work strategies in maleheaded families and in cohabiting households. Family/household type is coded into four categories: (i) married-couple families, (ii) male-headed families, (iii) female-headed families, and (iv) cohabiting households. Single households are excluded in the analysis.

The presence and age of the youngest child under 18 present in the household are use to construct five life course stages: (i) no children — there are no children under 18 living at home, (ii) preschool — the youngest child is under six years of age, (iii) schoolage — the youngest child is between 6 and 12 years of age, and (iv) adolescent — the youngest child is between 13 and 17.

The family/household type indicates whether or not there is a spouse or a partner in the household. The life course stage adds whether or not there are children under 18 years of age in the household. The next variable measures the number of adult relatives in the household. Adult relatives include not only adult children but also other relatives including brothers, sisters, uncles, and aunts and other relatives.

Residential mobility indicates whether or not at least one or all members of families and households have moved in the last five years (period of 1985 to 1990). Residential mobility is used as a proxy for families and households' integration into

who live together at least part of the time, who share economic resources, and who function as a cooperative social unity in several ways. Non-family households include persons who live alone or with unrelated individuals. Non-family households are a diverse group. They may consist of elderly individuals who live alone, college-age youths who share an apartment, cohabiting couples, individuals who can delay or forego marriage, or those who are between marriages. Over the past three decades, the number of non-family households has increased dramatically because of the aging of the population, high divorce rates, and the tendency of young adults to live apart from their parents before marriage. Family ties extending outside the immediate household are not considered in the above definition of the family. In this definition, cohabiting households are defined as non-family households. In this study, cohabiting households include non-family as well as single families living with their partners.

communities. It is assumed that families and households that have experienced geographic mobility in the last five years are relatively less connected to their community, and thus, less social capital stemming from it, when compared to those that have not moved in the last five years. Residential mobility is measured as (1) if at least one or all members of the family/household have moved in the last five years, and (0) otherwise.

Indicators of the economic capital include household income and poverty status. It is assumed that family and household work strategies vary greatly depending upon the family/household economic capital. Household income refers to all sources of income of all members in the household. Family/household poverty is measured using the 1989 poverty threshold¹³. Poverty is a dummy variable scored 1 for families and household in poverty, that is, whose household income is less than 1.25 the poverty threshold and 0 for those who are not poor. The other household indicator that reflects both the social and economic status is home ownership. Home ownership is a dummy variable scored 1 for respondents who own their own home and 0 for those who do not.

The other explanatory variables measure education, race and ethnicity, age, and immigrant status of core members (householder, spouse/partner (if present)). Education differentiates families and households into four categories according to the level of education of core members: (i) At least one or both (if spouse/partner present) core

¹³ Poverty thresholds are defined and revised each year by the office of Management and Budget based on family size, the number of related children under 18 years and income. The 1989 poverty thresholds are used in the computation of household economic well-being. For a detailed discussion on poverty measure, see U. S. Census, Current Population Reports, Series P-60, No 171, *Poverty in the United States: 1988 and 1989*.

members has less than high school (excluded category), (ii) At least one or both has high school education; (iii) At least one or both have some college, and (iv) Both core members have college (bachelor) or higher. Race includes six categories. (1) Non-Hispanic Whites; (2) Non-Hispanic Blacks, (3) American Indians, (4) Hispanics or Latinos, (5) Asian Americans, and (6) Mixed-race households. Later in regression analysis, race is coded into two groups: (1) Minority, and 0 Non-Hispanic White (excluded category). Immigrant status is measured as (1) if at least one member or all is an immigrant member and (0) Otherwise. Age is measured in years and refers to the mean age of householder and spouse/partner or the age of the householder if no spouse/partner is present.

At the labor market area level, indicators were constructed from STF3A data to indicate the spatial location of families and households as well as labor market area differences in opportunity structure, i.e., the availability and types of jobs, residential stability, and levels of inequality/economic disadvantage.

Labor market areas are groups of counties that encompass both the location of residence and employment. Labor market areas are not only the geographical space where people reside and can find jobs, but also they include social, economic, and cultural opportunity structures that influence potential household work strategies. A labor market area's conceptualization allows the analyses of how the opportunity structures of an area, in combination with other aspects of social life, affect the likelihood of families and households to adopt different adaptive strategies. The underlying assumption in using a labor market area is that location in a social space

affects economic opportunity and life chances of its residents and provides the parameters for family/household strategies. The spatial distribution of economic activities and other opportunities conditions the repertoire of potential household work strategies. Recently, sociologists of labor market analysis have begun to specify how employment relationships within the labor market interface with other aspects of the social organization of society and how these social relationships affect labor market behavior (Snipp & Bloomquist 1989). Past studies have tended to focus on labor markets by analyzing characteristics of workers, occupations, organization of industries, firms, occupations, and class (Kalleberg and Berg 1987).

Past studies on spatial variations in social and opportunity structure have considered space as a contextual given, emphasizing its physical view. Most studies that attempt to analyze the spatial location effect on individuals and families use a metropolitan/non-metropolitan dummy variable. The metropolitan-non-metropolitan dichotomy collapses the rich and dynamic aspects of the non-metropolitan and metropolitan differences in social, historical and economic opportunities. Soja (1989:79-80) indicates that space may be primordial given, but the organization and meaning of space are a product of social translation, transformation, and experience. Industrial and occupational structure, along with social and demographic characteristics such as population size, education, housing facilities, race and gender relations, unions of workers, social services, churches and other social organizations interact differently within each labor market area to create an environment of alternative household work strategies.

Non-metropolitan and Metropolitan residence is defined using non-

metropolitan/metropolitan definitions¹⁴ and the size of the largest city, town, or place. It is coded as (1) Non-metropolitan small — population of largest place is between 5,000 and less than 20,000 in 1990, (2) Non-metropolitan large—population of largest place in 1990 was at least 20,000; (3).metropolitan small — population of the largest MSA was less than 250,000 in 1990, (4)metropolitan medium—population of the largest MSA was at least 250,000 but less than 1,000,000, and (5)metropolitan large—population of the largest MSA in 1990 was 1,000,000 or greater. In a multivariate analysis, nonmetropolitan/metropolitan residence is collapsed into two effect categories: (1) Nonmetropolitan, and (-1) Metropolitan.

Industrial structure is defined by the presence and type of industries present in a labor market area. Industries are grouped into five major categories based on expected earnings and using the three-digit standard industrial classification code: 1) Agriculture, Forestry, and fishing; 2) traditional high-wage industries (mining, government, and high-wage manufacturing); 3) construction and low-wage manufacturing; 4) high-wage services; 5) and consumer services¹⁵. In order to assess the relative impact of the

Non-metropolitan labor market areas (LMAs) are those containing no MSAs --Metropolitan Statistical Areas and metropolitan LMAs are those containing one or more MSAs or PMSAs --Primary Metropolitan Statistical Areas (Office of Management and Budget Bulletin 93-17, ERS Staff paper, Rural Economic Division, 9614.

Low-wage manufacturing includes tobacco, textile mill products, apparel, lumber products and furniture, rubber products, leather products, and miscellaneous manufacturing industries. All the other manufacturing industries not classified as low-wage industries are grouped into high-wage manufacturing industries. Consumer services include retail trade, entertainment and recreation services, automotive services and repair, and personal services. High-wage services include services not included in consumer service sector and those include business, professional services, finance, insurance, and real estate services, and transportation, communication, and utilities (Kassab 1992 and Kassab et al. 1995).

presence of high-quality jobs versus low-quality jobs in an area, one aspect of the restructuring, a ratio of core industries (traditional high-wage industries and high-wage services) to peripheral industries (agriculture, forestry, and fisheries, construction and low-wage manufacturing, and consumer services) is computed. A ratio of 1 indicates an equal balance of core and periphery industries. A ratio greater than 1 indicates a greater prevalence of core industries over periphery industries while a ratio less than 1 would indicate a greater prevalence of periphery industries over core industries in a labor market area. Industry structure reflects one important element of the opportunity structure, that is, the quality of jobs available in a labor market area. It is assumed that the opportunity structure of a labor market area enables and constrains family and household work strategies. In addition, the effect of the opportunity structure on families and household work strategies in non-metropolitan areas is hypothesized to differ from that of metropolitan areas. Therefore, an interaction variable is included to test whether the opportunity structure has different effects in non-metropolitan and metropolitan areas.

The other characteristics at the labor market area level included in the study are the percentage of residents that have not moved in the last five years; the percentage of housing owners; social and economic well-being measures including a gini¹⁶ measure of income inequality, the percentage of households in poverty, the percentage of households on public assistance, the percentage of people unemployed, and the per-capita income;

The Gini coefficient takes values between 0 and 1, with 0 representing complete equality of incomes and 1 indicating complete inequality.

educational attainment (percentage of residents over 25 years of age with a college, some college, high school, and less than high school education); race and ethnicity; immigration concentration; and age structure (percentage of residents less than 18 years and percentage of residents greater than 65 years of age). Table 2 displays the descriptive statistics of variables used in the analysis.

Variable	Codes and range	Mean	Std.
			Dev.
Family an	d Household Characteristics (N=75	280)	
Family/household work stra	ntegies		
Self-employment	1 = Self-employed	.167	.372
Non core members'	0 = Otherwise 1 = Non-core members employed	.144	.352
employment Family/household structure Married-couple Families	0 = Otherwise (contrast coding) .750 = Married-couple families	.810	.393
Cohabiting households	250 = Non-married households .667 = Cohabiting households	.039	.195
	333 = Married households		
Female-headed	.000 = Single households .500 = Female-headed households	.122	.327
households	500 = Male-headed households		
	.000 = Married/Cohabiting		
	households		

Table 2. Descriptive Statistics of Selected Characteristics¹⁷

For descriptive purposes, transformed variables with contrast coding schemes are recorded as dummy variables (1, 0) for computation of means, so that they can reflect proportions.

Variable	Codes and range	Mean	Std.
			Dev.
Life course stages (contrast Presence of children	coding) .250 = Children < 18 years	.550	.498
under 18 years of age Preschool children	750 = No children < 18 years .667 = Preschool children	.245	.430
	333 = School-age and/or		
	adolescent children		
School-age children	.000 = No children < 18 years .500 = School-age children	.190	.392
	500 = Adolescent children		
	.000 = No children under 18		
Number of adult relatives	years of age/Preschool 1 = One or more adult relatives	.187	.390
in the household Household Mobility	0 = No adult relative 1= Moved in the last 5 years	.466	.499
Household Income Home Ownership	0= Not Moved (same house) (0, \$455,359) 1= Own a home	38,192 .788	28,391 .422
	0=No home (rent)		
Family/household Education	on (excluded category is less than high	h school)	
High School	(0,1)	.376	.484
Some College	(0,1)	.291	.454
College education	(0,1)	.194	.395
Race and Ethnicity (exclud	ed category is non-Hispanic White)		105
African Americans	(0,1)	.039	.195
Native Americans	(0,1)	.004	.065
Hispanics	(0,1)	.002	.043
Asian Americans	(0,1)	.013	.113
Mixed Households	(0,1)	.006	.0/5
Immigrant Status	l = At least one or all members	.018	.132
	are immigrants		
	0 = No member is immigrant		
Age	(16, 64)	40.93	11.71
Age square (00's)	(.26, 4.10)	1.812	1.000

Variable	Codes and range	Mean	Std.
			Dev.
Labor	Market Area Characteristic	s (N=112)	
Non-metropolitan/Metropol	litan Residence (excluded cate	egory is metro large)	
Non-metro small urban	(0,1)	.241	.430
Non-metro-large urban	(0,1)	.196	.399
Metro small metro	(0,1)	.295	.476
Metro medium metro	(0,1)	.170	.377
Industrial Structure (exclud	led category is consumer servi	ce industries)	
% Agriculture, Forestry,	(.9, 23.5)	6.296	4.604
and Fishing Industries			
% High-wage industries	(10.8, 32.9)	20.730	4.555
% Construction/	(5.6, 19.3)	10.814	2.638
low-wage industries			
% High-wage services	(28.2, 49.9)	38.059	4.417
Ratio of core to periphery	(.41, 1.11)	.744	.162
Industries			
Socioeconomic Indicators			
Income inequality (Gini)	(.369, .462)	.406	.018
% of households in	(6.15, 25.65)	12.017	3.455
poverty			
% of households on public	(3.73, 17.38)	7.291	2.264
assistance			
% of people unemployed	(2.85, 11.52)	6.425	1.891
Per capita income	(8,476, 17,194)	11,370	1,442
Demographic Characteristi	cs		
% of people with a high	(26.59, 46.19)	37.39	4.115
school (over 25 years)			

Variable	Codes and range	Mean	Std.
			Dev.
% of people with some	(15.58, 32.00)	22.791	3.266
college (over 25 years)			
% of people with college	(7.59, 27.80)	14.813	4.223
(over 25 years)			
% Black	(.04, 21.44)	4.116	4.862
% Hispanics	(.21, 11.15)	1.251	1.417
% Asian Americans	(.16, 3.34)	.705	.545
% Native Americans	(.05, 8.60)	.674	1.161
% immigrant	(.13, 6.73)	.782	.769
% Female-headed	(4.35, 14.65)	8.93	1.993
households			
% of people less than 18	(24.69, 31.38)	27.635	1.433
years of age			

Analytical Strategy

Three types of analyses are planned. A descriptive analysis on the prevalence of families and households with other members other than the householder and spouse/partner (if present) employed and self-employment will be first presented. Second, an exploratory factor analysis of labor market area characteristics will follow. Finally, a multi-level model for discrete data to account for the combined effects of labor market area and family/household factors on these dependent variables is envisaged.

In this study, I first examine the relationship between household social structures and the likelihood of families to have other members employed. I expect to find that the odds of other members to be employed (additional earners) vary depending upon family household social structures. Are the odds of having other members employed different for married couples, male-headed households, female-headed households, male-headed cohabiting, and female-headed cohabiting households? If so, what other family and household characteristics that may directly or indirectly influence the likelihood of having other members employed versus that of not having other members employed? Second, I examine the relationship of family/household social structures and the odds of families and households' involvement in self-employment. Do the odds of selfemployment vary depending upon family/household social structures and other family and household characteristics? I argue that family and household social, economic, and cultural capital influence the odds of having other members employed or that of selfemployment.

Assuming a constant variance at the labor market area in the odds of selfemployment and in the odds of family and households to have other members employed, a logistic regression model would fit well the data. However, the odds of selfemployment or of having additional earners are assumed to vary depending upon the social structures of places in which families and households are located and embedded. Thus, I expect to find that the odds of self-employment and the odds of having additional earners vary from labor market area to labor market area. I also expect that the odds of self-employment for families and households living in non-metropolitan areas and those of having other members employed are different from those of families and households in metropolitan areas because of their historical and continuous differences in opportunity structures. Thus, multilevel models that take into consideration different

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levels of analysis, specifically different sources of variations in the odds of selfemployment or having additional earners are required. The next section describes multilevel models and their advantages over standard regressions and conceptually explains how these models would fit this study.

Multilevel Models

Multilevel models refer to a family of models that help analyze hierarchically structured data. In sociology, multilevel models are used to explore the link between the macro and micro levels of social phenomena (see Diprete and Forristal 1994 for a review). There are a variety of multilevel statistical models that are designed to integrate and test multilevel theories using multilevel data. Previous attempts to model and analyze hierarchically structured data have been constrained by conventional statistical techniques that do not allow for analysis of multilevel models. Recent research on multilevel models by Bryk and Raudenbush (1992), Goldstein (1995), and Longford (1993) contributes to a large number of research in social sciences and most importantly find the missing puzzle of studies that attempt to integrate multilevel theories to multilevel analytical strategies. This study applies multilevel models for discrete response data to analyze the effects of both family and household factors as well as the effects of labor market areas' factors on the odds of families and households to have other members employed or the odds of getting involved in self-employment activities. As a general illustration, the next section describes a basic 2-level linear multilevel model.

Two levels of analyses are considered. The household is the level 1 unit, and the labor market area in which the family/household locates and its members find work is
considered the level-2 unit of analysis. Following Bryk and Raudenbush (1992), let Y_{ij} denotes the response variable for household i nested within a labor market area j.

$$Y_{ij} = \beta_{0j} + \beta_{1j} X_{ij} + e_{ij}$$

Where j refers to labor market area unit and i refers to household level; β_{0j} is the intercept and β_{1j} is the regression coefficient indicating how the outcome Y_{ij} varies in a labor market j as a function of the household characteristic X_{ij} ; and e_{ij} the residual or error term. It is assumed that $e_{ij} \sim N(0,\sigma^2)$. $E(e_{ij})=0$, and $Var(e_{ij})=\sigma^2$

The above equation is the linear regression equation for each labor market area j. For j level-2 units, there would be j number of equations. In case there are few level 2 units and the goal of the study is to focus on specific level 2 units, the equation above can be analyzed. However, in case there are many j level-2 units, analyzing the equation above would require to estimate a large number of parameters and may result in imprecision estimates given the potential variation in level-2 units (Goldstein 1995; Bryk and Raudenbush (1992).

In order to have a multilevel model, β_{0j} , β_{1j} are assumed to vary randomly:

 $\beta_{0j} = \beta_0 + \mu_{0j};$ $\beta_{1i} = \beta_1 + \mu_{1j};$

where μ_{0j} and μ_{1j} are random variables and

$$E(\mu_{0j}) = E(\mu_{1j}) = 0$$

Var $(\mu_{0j}) = \sigma_{u0}^2$, Var $(\mu_{1j}) = \sigma_{u1}^2$, Cov $(\mu_{0j}, \mu_{1j}) = \sigma_{u01}^2$

The combined model, then becomes

$$Y_{ij} = \beta_{0j} + \beta_{1j} X_{ij} + (\mu_{0j} + \mu_{1j} X_{ij} + e_{ij})$$

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The model is composed by two major components, a fixed part, $\beta_{0j} + \beta_{1j} X_{ij}$, and a random part ($\mu_{0j} + \mu_{1j} X_{ij} + e_{ij}$). It is this random part that distinguishes the 2-level model to the standard linear regression. For estimation of fixed and random parameters and the introduction of more fixed and random parameters at level 1 as well as parameters at level 2, see Bryk and Raudenbush (1992), Goldstein (1995), and Longford (1993). For a review of software for multilevel models see a review by Kreft et al. (1994) and Goldstein (1995, chapter 11. Given the dichotomous nature of the outcome variables in this study, a multilevel model for discrete response data is described next. In the following description of multilevel model, two levels of analysis are considered. Level-1 units are families and households nested within level 2 units, labor market areas.

Multilevel Model for Discrete Response Data

In this study, having additional earners and self-employment are defined at the family/household level as binary response variables. Having additional variable takes a value of 1 if at least one or more non-core members are employed, and 0 otherwise. Self-employment variable also takes a value of 1 if at least one or more members within a family/household are self-employed, and 0 if there is no self-employed member in the family/household. Next, I will describe a multilevel for discrete response data using self-employment dependent variable. The model for additional earners is similar to that of self-employment because they both have two levels of analysis with family/household and labor market area characteristics as predictors.

For each family/household i and labor market j, and a set of explanatory variables X_{ij} , the logit link function for the probability that family/household i within labor market j have a self-employment member is:

$$\pi_{ij} = f\{X_{ij} \beta + \mu_j\} = \{1 + \exp(-[X_{ij} \beta + \mu_j])\}^{-1}$$

where π_{ij} is the probability of being involved in self-employment for family/household i within labor market j, and f, a non-linear function of the linear predictor $X_{ij} \beta$ which has fixed coefficients, and μ_j is the random component for labor market j. It is assumed that $\mu_j \sim N(0, \sigma_u^2)$. The response variable Y_{ij} is assumed to have a binomial distribution:

$$\mathbf{Y}_{ij} \sim \operatorname{Bin}\left(\pi_{ij}, n_{ij}\right)$$

Where n_{ij} is the number of "trials" and π_{ij} is the probability of "success" in probability terms. In the case of this study, $n_{ij} = 1$ which refers to the Bernouilli distribution.

$$Var(Y_{ij} | \pi_{ij}) = \pi_{ij} (1 - \pi_{ij})$$

The model thus becomes,

$$Y_{ij} = \pi_{ij} + e_{ij} Z_{ij}$$

Where $Z_{ij} = \sqrt{\pi_{ij}} (1 - \pi_{ij})$; $E(e_{ij} = 0; \text{ and } Var(e_{ij}) = 1$.

For full description of multilevel with binary responses see Goldstein (1991,1995) and Rodriguez and Goldman (1995).

Figure 2 shows a multilevel model of self-employment while figure 3 shows a multilevel discrete model of additional earners. Each model combines the level-1 and level-2 predictors. In both models, level-1 predictors are centered to their grand mean, except household income which is centered on the median income. This allows to model the intercept, β_{1i} , the labor market area's mean log-odds of self-employment (or

additional earners), adjusting for the covariates at level-1 (family/household). Then, the adjusted mean for each labor market area j is modeled as a function of level-2 variables plus a random error.

Figure 2: Multilevel Discrete Model for Self-employment

selfemp_{ij} ~ Binomial(denom_{ij},
$$\pi_{ij}$$
)
selfemp_{ij} = $\pi_{ij} + e_{0ij}$ bcons^{*}
logit(π_{ij}) = β_{ij} cons + β_{2} married_{ij} + β_{3} cohab_{ij} + β_{4} femhh_{ij} + β_{5} child_{ij} + β_{6} presch_{ij} + β_{7} schage_{ij} +
 β_{3} adrelat_{ij} + β_{9} mobility_{ij} + β_{10} owner_{ij} + β_{11} hhinc_{ij} + β_{12} highsch_{ij} + β_{13} somecoll_{ij} +
 β_{14} college_{ij} + β_{15} minority_{ij} + β_{16} age_{ij} + β_{17} agesq_{ij} + β_{18} metro_j + β_{19} ressta_j + β_{20} indstr_j +
 β_{21} ecodisa_j + β_{22} metind_j
 $\beta_{1ij} = \beta_{1} + u_{1j}$
 $\begin{bmatrix} u_{1ij} \end{bmatrix} \sim N(0, \Omega_{u}) : \Omega_{u} = \begin{bmatrix} \sigma_{u1}^{2} \end{bmatrix}$
bcons^{*} = bcons[$\pi_{ij}(1 - \pi_{ij})/denom_{ij}^{0.5}$
 $\begin{bmatrix} e_{0ij} \end{bmatrix} \sim (0, \Omega_{e}) : \Omega_{e} = \begin{bmatrix} 1 \end{bmatrix}$

Figure 3: Multilevel Discrete Model for Additional Earners

naddearn_{ij} ~ Binomial(denom_{ij},
$$\pi_{ij}$$
)
naddearn_{ij} = $\pi_{ij} + e_{0ij}$ bcons[•]
logit(π_{ij}) = β_{1j} cons + β_{2} married_{ij} + β_{3} cohab_{ij} + β_{4} femhh_{ij} + β_{5} child_{ij} + β_{6} presch_{ij} + β_{7} schage_{ij} +
 β_{8} mobility_{ij} + β_{9} hhinc_{ij} + β_{10} highsch_{ij} + β_{11} somecoll_{ij} + β_{12} college_{ij} + β_{13} minority_{ij} +
 β_{14} age_{ij} + β_{15} agesq_{ij} + β_{16} industr_j + β_{17} ecodisa_j + β_{18} metro_j
 $\beta_{1j} = \beta_{1} + u_{1j}$
[u_{1j}] ~ N(0, Ω_{u}) : $\Omega_{u} = [\sigma_{u_{1}}^{2}]$
bcons^{*} = bcons[$\pi_{ij}(1 - \pi_{ij})$ /denom_{ij}]^{0.5}
[e_{0ij}] ~ (0, Ω_{e}) : $\Omega_{e} = [1]$

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Chapter 4

RESULTS

Descriptive Statistics

Family and Household Characteristics

Figure 4 shows how many individuals within families and households are working. About 31 percent of families and households have one earner and 47 percent of all families and households are dual-earners. About 9 percent of families and households have three earners. About 3 percent of families and households have four or more earners. The remaining 10 percent consists of families and households in which no member is employed.

In addition to the number of earners within the household, this study is interested in knowing which family/household member is working and in which activity. Family/household members include the householder, the spouse or partner (if present), adult relatives (child, brother and sisters, parents, uncles and aunts etc.), and non relatives. The study distinguishes whether a family/household member is employed, selfemployed, or not working. The combination of family/household composition and work status yields what is referred as family and household work strategies.

The distribution of family and household work strategies is presented in Figure 5. About 61 percent of families and households have only a spouse or partner (core members) employed. In this category, about half of these families and households have one spouse or partner employed. The other half includes families and households in which both spouses/partners are employed. In about 15 percent of families and households, there is at least one additional earner other than the householder, spouse, or partner. This is the case when adult children, relatives, and non-relatives living in the household are employed. About 12 percent of families and households are classified as self-employed, i.e., at least one member is self-employed. This category of households includes cases in which one spouse/partner is employed and the other is self-employed, both spouses are self-employed, one spouse/partner is self-employed and the other is not employed, or additional members are self-employed. In about 2 percent of cases,



families and households combine employment of non-core members and selfemployment activities. About 11 percent of families and households have neither member employed nor self-employed. Figure 5 shows that about 17 percent of families and households have additional earners and about 14 percent of families and households are self-employed.

Table 3 displays the characteristics of families and households by nonmetropolitan and metropolitan residence. Families and households in non-metropolitan areas are more likely than their metropolitan counterparts to have a self-employed member. About 20 percent of families and households in non-metropolitan areas are involved in self-employment work while about 15 percent of those living in metropolitan areas are. Families and households living in metropolitan areas are more likely than those in non-metropolitan areas to have additional earners. About 16 percent of



metropolitan families and households have additional earners while only 12 percent of non-metropolitan families and households do.

In the sample, about 36 percent of households live in non-metropolitan labor market areas and about 64 percent live in metropolitan areas. About 81 percent of all households are married couples and about 12 percent are female-headed households. Approximately 3 percent and 4 percent of the sample are respectively male-headed and cohabiting households. Married households are more likely to be found in nonmetropolitan than in metro labor market areas. The rest of the households, especially female-headed households, are more likely to live in metropolitan areas. About 55 percent of the households have children under 18 years of age living at home.

Family and Household	Total	Metro	Non metro
	Percentages		
Self-employment***			
Not Working	11.4	10.4	13.3
Not Self-employed	72.0	75.1	66.3
Self-employed	16.6	14.5	20.4
Additional Earners***			
Not Working	11.4	10.4	13.3
No Additional Earners	74.1	73.7	75.0
Additional Earners	14.4	16.0	11.7

 Table 3. Family and Household Characteristics by Non-metropolitan and Metropolitan Residence

Family and Household Characteristics	Total	Metro	Non metro
Family and household structure***			
Married couples	80.9	79.8	82.9
Male-headed households	2.9	3.1	2.6
Female-headed households	12.2	13.0	10.7
Cohabiting households	3.9	4.0	3.8
Life course stages*			
No children under 18 years	45.0	45.2	44.7
Preschool children	24.5	24.5	24.5
School-age children	19.0	18.7	19.5
Adolescent Children	11.5	11.7	11.3
Presence of Adult Relatives***			
No adult relative	81.3	80.0	83.6
One or more adult relatives	18.7	20.0	16.4
Residential mobility***			
Movers	46.6	47.4	45.1
Non-movers	53.4	52.6	54.9
Immigrant status***			
At least one member or all is immigrant	1.8	2.2	.9
No member is immigrant	98.2	97.8	99.1
Own a home***			
Yes	76.8	76.3	77.8
No	23.2	23.7	22.2
Household Income***			
Less than \$10,000	8.9	7.7	11.0

Family and Household Characteristics	Total	Metro	Non metro
\$10,000-24,999	24.3	21.1	30.1
\$25,000-34,999	19.7	18.8	21.5
\$35,000-49,999	23.3	24.2	21.6
\$50,000-74,999	16.4	19.1	11.6
\$75,000-99,999	4.3	5.3	2.6
\$100,000 or greater	3.0	3.8	1.7
Household Poverty***			
Poor	13.6	11.7	16.9
Not Poor	86.4	88.3	83.1
Core education***			
Less than high school	13.9	13.2	15.1
High school	37.6	35.7	41.0
Some college	29.1	29.4	28.6
College or more	19.4	21.7	15.3
Core race***			
Non-Hispanic White	93.6	91.7	96.9
Blacks	4.0	5.5	1.2
Asian Americans	1.3	1.7	.6
Native Americans	.4	.3	.6
Hispanics/Latinos	.2	.2	.1
Other Races, including Mixed	.1	.6	.6
Core average age***			
Less than 30	19.2	19.2 19	
30 - 39	31.0	31.4 30	
40 - 49	23.9	24.5	22.8

Family and Household Characteristics	Total	Metro	Non metro
50 - 59	17.7	17.2	18.5
60 or more	8.2	7.7	9.1
Number of cases	75280	48267	27013
	100	64.1	35.9

***p<.001; **p<.01; *p<.05; ns=not significant

About a quarter of households report living with preschool children and about 19 percent of all households have an adult relative living in the household.

Overall, about 47 percent of all households have moved in the last five years. Movers include household members whose residence in 1985 was in a different house in 1990. This includes households that have moved within a labor market area and those whose residence in 1985 was in a different labor market area (either within the same or outside the state or abroad). Households in metropolitan labor market areas have experienced more mobility than their non-metropolitan counterparts. Respondents in more than three fourths of households report to own a home. Home ownership is slightly more prevalent in non-metropolitan than in metropolitan areas. Respondents in about 78 percent of households in non-metropolitan areas compared to 76 percent in metropolitan areas own a home.

The distribution of households in the sample according to the levels of income shows that about 9 percent of households have income less than \$10,000, about 44 percent of households have income between \$10,000 and \$35,000, about 23 percent have

IK k ġ2 Dć 10 Ę Ē. 1 ŋ 5 Ū, ì Ŕ ĥ income between \$35,000 and \$50,000, about 16 percent of households have income between \$50,000 and \$75,000, and about 7 percent of households have income greater than \$75,000. Note that household incomes are lower in non-metropolitan than metropolitan areas. Households with incomes less than \$35,000 are more likely to be in non-metropolitan than in metropolitan areas. In contrast, households with incomes greater than \$35,000 are likely to live in metropolitan than in non-metropolitan areas. 1.10

Overall, about 14 percent of households in the sample are poor. As expected, a greater proportion of poor households live in non-metropolitan than in metropolitan areas. About 17 percent of all non-metropolitan households compared to only 12 percent of metropolitan households are poor.

The distribution of households according to the level of education shows that households with a high school or less level of education are more represented in nonmetropolitan than in metropolitan areas. In contrast, households with college levels of education live in metropolitan than in non-metropolitan areas.

About 6 percent of households are non-White with about 4 percent Blacks. Non-White households, except Native Americans, live in metropolitan than in nonmetropolitan areas. Considering the age structure, a greater proportion of households whose core members on average are over 50 years of age live in non-metropolitan than in metropolitan areas. In contrast, those in the age groups between 30 and 50 years are more likely to live in metropolitan than in non-metropolitan areas.

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Labor Market Area Characteristics

Table 4 displays differences between non-metropolitan and metropolitan labor market area characteristics. The selected households are located in 112 labor market areas, 49 of which are classified as non-metropolitan labor market areas. Table 4 classifies the 112 labor market areas according to industrial structure. The spatial location of industries is as expected, with a greater proportion of agriculture, forestry, and fishing as well as those in construction and low-wage industries in non-metropolitan labor market areas while producer service and mining, government, and high-wage manufacturing are more concentrated in metropolitan than in non-metropolitan areas. Compared to metropolitan labor market areas, non-metropolitan residents are more likely to be non movers. Also, compared to metropolitan, non-metropolitan labor market areas have on average greater percentage of owned occupied housing. Table 4 also classifies labor market areas according to different levels of socioeconomic well-being indicators. Compared to metropolitan labor market areas, the average percentage of households living in poverty, the average percentage of households receiving public assistance, and the average percentage of unemployed residents are higher in non-metropolitan labor market areas. Moreover, the average per capita income is lower in non-metropolitan labor market areas than in metropolitan ones. The average per capita income in nonmetropolitan labor market areas is estimated at \$10,501 while in metropolitan labor market areas, it is estimated at \$12,046.

	Non-metro		Metro		
Labor Market Area Characteristics	Mean (N=49)	S.D.	Mean (N=63)	S.D.	
Industrial Structure					
Agriculture, Forestry, and Fishing***	7.92	5.74	5.03	3.24	
Mining/Government/ High-Wage Manufacturing ^{**}	19.25	4.29	21.88	4.45	
Construction/Low-Wage Manufacturing ^{***}	11.71	3.15	10.11	1.91	
Producer Services**	36.83	3.91	39.01	4.58	
Consumer Services ^{as}	24.28	2.95	23.96	1.90	
Residential Stability					
Percent Nonmovers	55.20	4.21	52.98	4.80	
Percent Owners***	73.28	4.13	69.83	4.07	
Socioeconomic Well-being					
Income Inequality (Gini)	.410	.020	.403	.016	
% of Households in Poverty***	13.40	4.09	10.94	2.40	
% of Households on Public Assistance [•]	7.89	2.76	6.82	.235	
Per Capita Income***	\$10,501	\$944	\$12,046	\$1,404	
% of People Unemployed**	6.99	2.25	5.99	1.42	
Educational Attainment					
Less Than High School***	27.26	5.80	23.25	3.74	
High School [™]	38.04	3.54	36.89	4.47	
Some College [•]	22.09	3.36	23.38	3.09	
College	12.67	2.86	16.48	4.37	

Table 4. Labor Market Area Characteristics by Non-metropolitan and
Metropolitan Residence (N=112).

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	Non-r	netro	Me	tro
Labor Market Area Characteristics	Mean (N=49)	S.D.	Mean (N=63)	S.D.
Race/Ethnicity Concentration				
Non-Hispanic Whites***	95.51	3.92	91.43	6.34
Blacks***	2.30	3.64	5.52	5.24
Native Americans [™]	.89	1.52	.50	.75
Asian Americans***	.45	.29	.90	.61
Hispanic (or Latinos) **	.81	.61	1.59	1.74
Other Races***	.03	.02	.05	.03
Immigration				
Immigrant***	.46	.31	1.03	.92
Family Structure				
Female-headed Households***	8.16	1.84	9.53	1.91

*** p<.001 ** p<.01 *p<.05 ns=not significant

Note that there is greater variation in the per capita incomes across metropolitan labor market areas than in non-metropolitan ones. Thus, consistent with previous studies, nonmetropolitan labor market areas are more economically deprived than metropolitan labor market areas.

Table 4 also shows significant differences between non-metropolitan and metropolitan labor market areas in levels of education, race and ethnicity concentration, and family structure. Residents in non-metropolitan labor market areas have on average lower levels of education than their metropolitan counterparts. Non-metropolitan labor market areas have on average a greater percentage of residents with high school or less education than metropolitan areas. In contrast, metropolitan labor market areas have on average greater percentage of residents with a college level of education. Blacks, Asian Americans and Hispanics are concentrated in metropolitan labor market areas than in non-metropolitan areas. On average, a greater percentage of female-headed households live in metropolitan than in non-metropolitan labor market areas. Next, a bivariate analysis indicating the relationship between family and household characteristics and their work strategies, is presented.

Factor Analysis of Labor Market Area Characteristics

To assess whether a smaller number of linear combinations of characteristics describe the social context of labor market areas, an exploratory factor analysis was used. Three factors are obtained. The first factor describes the labor market area inequality or economic disadvantage. Variables that load high on the economic disadvantage factor include the percent of households in poverty, the percent of households receiving public assistance income, and the percent of people unemployed. These three variables have loadings over .84. Based on these loadings, the labor market area inequality consists of areas with high concentration of poverty, high percent of households dependent on public income, and high unemployment.

The second factor is termed residential stability. Variables that load high on the residential stability factor include the percent of housing owners (loading=.85) and the percent of non movers (residents that had stayed in their homes in the last five years) (loadings =.69). The two variables are positively associated with the factor. Based on the sign of these loadings, labor market area residential stability consists of areas with

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high proportion of housing owners and high proportion of residents that have not moved in the last five years.

The third factor is immigration concentration. Variables that load high on the immigration factor include the percentage of Hispanic residents (loading=.92) and the percentage of immigrants within a labor market area (loading=.67). Factor loadings are presented in table 5. These three factors, economic disadvantage, residential stability, and immigration concentration are consistent with those in Sampson, Raudenbush, and Earls' study (1997).

Table 5. Oblimin with Kaiser Normalization Rotated Factor Pattern (factor loadings >.60) in 112 Labor Market Areas.

Variable	Factor Loading
Residential Stability	
Percent Owner Occupied Housing	.853
Percent Nonmovers	.688
Economic Disadvantage	
Percent of Households on Public Assistance	.948
Percent Unemployed	.884
Percent of households in Poverty	.843
Immigrant Concentration	
Percent of Hispanics	.918
Percent of Immigrants	.674

Extraction: Alpha-Factoring Method

Bivariate Analysis

Family/Household Characteristics and Self-employment

Table 6 displays the distribution of families and households with selfemployment by family and household characteristics. The data in table 6 show that married families are more likely than non-married families and households to have selfemployment. Female-headed households are the least self-employed than other forms of families and households. Families with preschool children are less likely than other families and households to have a self-employed member. Families living with adult relatives are more likely than families without adult relatives to have a self-employed member. Families and households that have moved in the last five years are less likely than those that have stayed to have a self-employed member. Also, immigrant families are less likely to have a self-employed member. Families and households living in an owned home are more likely to have a self-employed member. Table 6 also shows significant differences in self-employment across levels of household income. Families and households with incomes less than \$10,000 are less likely to have a self-employed member than other families and households. In contrast, families and households at the top of the class ladder (starting at \$50,000 up to \$100,000 and higher) are more likely to have a self-employed member. Families and households with incomes between \$10,000 and \$25,000 are more likely than those with incomes less than \$10,000 to have a selfemployed member. However, families and households with incomes between \$25,000 and \$34,000 are less likely than those with incomes between \$10,000 and \$25,000 to have a self-employed member.

Family and Household Characteristics	Not Working	Not Self- employed	Self-employed
	Percentages		
Family and household structure***			
Married couples	9.1	72.0	18.9
Male-headed households	13.7	73.9	12.4
Female-headed households	26.5	69.1	4.5
Cohabiting households	10.5	79.5	10.0
Life course stages***			
No children under 18 years	14.4	68.7	16.8
Preschool children	10.6	73.6	15.8
School-age children	7.5	75.5	17.0
Adolescent Children	7.8	75.2	17.0
Presence of Adult Relatives***			
No adult relative	12.4	71.3	16.2
One or more adult relatives	7.0	74.8	18.2
Residential mobility***			
Movers	11.9	75.6	12.5
Non-movers	11.0	68.8	20.2
Immigrant status***			
At least one member or all is immigrant	12.1	76.1	11.8
No member is immigrant	11.4	71.9	16.7
Own a home***			
Yes	9.2	72.0	18.8

Table 6. Percentage of Families and Households with Self-Employment by Family and Household Characteristics (N=75280).

Family and Household Characteristics	Not Working	Not Self- employed	Self-employed
No	18.8	72.0	9.3
Household Income ***			
Less than \$10,000	49.3	37.6	13.1
\$10,000-24,999	17.8	65.5	16.8
\$25,000-34,999	6.8	77.2	16.0
\$35,000-49,999	3.5	81.9	14.6
\$50,000-74,999	2.4	82.0	15.6
\$75,000-99,999	1.7	74.2	24.1
\$100,000 or greater	2.2	57.4	40.4
Household Poverty***			
Poor	39.2	45.7	15.1
Not Poor	7.1	76.1	16.9
Core education***			
Less than high school	30.0	57.8	12.2
High school	11.8	71.8	16.5
Some college	7.3	75.7	17.0
College or more	3.7	76.9	19.4
Core race***			
Non-Hispanic White	10.6	72.0	17.3
Blacks	26.5	69.5	4.0
Asian Americans	14.8	74.8	10.3
Native Americans	29.0	65.4	5.6
Hispanics/Latinos	20.9	68.3	10.8
Other Races, including Mixed	10.9	76.5	12.6
<i>a</i> +++			

Core average age**

Family and Household Characteristics	Not Working	Not Self- employed	Self-employed
Less than 30	11.8	78.2	9.9
30 - 39	6.3	76.9	16.8
40 - 49	5.5	75.4	19.2
50 - 59	14.4	65.1	20.4
60 or more	40.5	43.5	16.0
Number of cases	8592	54176	75280
% Self-employed	11.4	72.0	16.6

*** p<.001; **p<.01; *p<.05; ns=not significant

Note also that the rate of self-employment decreases further for families with incomes between \$35,000 and \$50,000 compared to those with incomes between \$25,000 and \$35,000, and those whose incomes are between \$10,000 and \$25,000 income brackets. Note also that the relationship between household income and self-employment varies by non-metropolitan and metropolitan residence — families and households with incomes greater than \$50,000 in non-metropolitan areas are greatly more likely than their metropolitan counterparts to have a self-employed member. The relationship between household income and self-employment is presented in figure 6.

Table 6 also shows that poor families and households are less likely than nonpoor families and households to have a self-employed member. Also, families and households with lower levels of education are less likely than those with higher



Figure 6: Percentage of Families and Households with a Selfemployed Member by Income Categories (000's)

education to have a self-employed member. Minority families, especially Blacks and Native Americans, are less likely to have a self-employed member. The rate of selfemployment increases as age increases and then decreases for age 60 or greater.

Family and Household Characteristics and Additional earners.

Table 7 shows the frequency distribution of families and households with additional earners across the categories of a series of family and household characteristics. The results indicate that single-headed families and households, especially male-headed households, are more likely than married couples and cohabiting households to have additional earners. Cohabiting households are the least likely of all household types to have non-core members employed.

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Family and Household Characteristics	Not Working	No additional Earners	Additional Earners
	Percentages		
Family and household structure***			
Married couples	9.1	79.1	11.8
Male-headed households	13.7	40.1	46.2
Female-headed households	26.5	46.4	27.1
Cohabiting households	10.5	83.9	5.6
Life course stages***			
No children under 18 years	14.4	64.3	21.3
Preschool children	10.6	86.3	3.1
School-age children	7.5	84.0	8.5
Adolescent Children	7.8	70.6	21.6
Presence of Adult Relatives***			
No adult relative	12.4	83.7	3.9
One or more adult relatives	7.0	32.8	60.2
Residential mobility***			
Movers	11.9	75.2	12.8
Non-movers	11.0	73.2	15.8
Immigrant status***			
At least one member or all is immigrant	12.1	69.1	18.9
No member is immigrant	11.4	74.2	14.4
Own a home***			
Yes	9.2	75.9	14.9

 Table 7. Percentage of Family and Households with Additional Earners by Family and Household Characteristics (N=75280).

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Family and Household Characteristics	Not Working	No additional Earners	Additional Earners
	Percentages		
No	18.8	68.3	13.0
Household Income ***			
Less than \$10,000	49.3	44.8	5.9
\$10,000-24,999	17.8	72.5	9.8
\$25,000-34,999	6.8	81.0	12.1
\$35,000-49,999	3.5	80.6	15.9
\$50,000-74,999	2.4	75.0	22.5
\$75,000-99,999	1.7	71.1	27.2
\$100,000 or greater	2.2	78.8	19.0
Household Poverty***			
Poor	39.2	53.7	7.1
Not Poor	7.1	77.3	15.6
Core education***			
Less than high school	30.0	52.6	17.4
High school	11.8	72.6	15.7
Some college	7.3	79.0	13.7
College or more	3.7	85.3	11.0
Core race***			
Non-Hispanic White	10.6	75.0	14.3
Blacks	26.5	56.3	17.2
Asian Americans	14.8	69.3	15.8
Native Americans	29.0	56.8	14.2
Hispanics/Latinos	20.9	61.2	18.0
Other Races, including Mixed	10.9	80.3	8.8

Family and Household Characteristics	Not Working	No additional Earners	Additional Earners
	Percentages		
Core average age***			
Less than 30	11.8	79.9	8.2
30 - 39	6.3	87.4	6.3
40 - 49	5.5	69.7	24.8
50 - 59	14.4	64.4	21.2
60 or more	40.5	44.4	15.1
Number of cases	8592	55814	10874
% Self-employed	11.4	74.1	14.4

***p<.001; **p<.01; *p<.05; ns=not significant

About 46 percent of male-headed households and about 27 percent of female-headed households have additional earners. In contrast, about 12 percent of married couples and 6 percent of cohabiting households have additional earners.

Families with no children living a home and those with adolescent children are more likely than those with preschool or school-age children to have additional earners. This is expected because families with young children have greater household responsibilities than those with no children or those with adolescent children. Non-core members of the household including adult children and other relatives may help in child responsibilities instead of seeking employment.

Families and households that have moved in the last five years are less likely than those that have not moved to have additional earners. Home owners are also more likely than those without a home to have additional earners. Families and households with higher income have as expected higher likelihood for additional earners. Poor families and households are less likely than non-poor households to have additional earners. In terms of education though, families and households with low education (high school or less) are more likely than those high education (some college or higher) to involve additional members in the paid employment. Hispanic, Black, and Asian American families and households are more likely than non-Hispanic white and Native Americans to have additional earners. Families and households in which core members are between 40 and 49 years of age, followed by those between 50 and 59 years of age, are more likely to have additional earners than the others, especially the younger generations (less than 40 years of age).

Correlations of Labor Market Area Characteristics

Table 8 displays the correlation matrix of labor market area characteristics including means, standard deviations, and bivariate correlations. At the labor market area level, the average percentage of families and households involved in selfemployment is about 17 percent with a standard deviation of approximately 7 percent. This indicates greater variations in self-employment across labor market areas. There is a strong and positive correlation between the percentage of families and households involved in self-employment and the percentage of agriculture, forestry, and fisheries within a labor market area. Which indicates that self-employment is concentrated in labor market areas that are agriculturally dependent. There is also a significant positive correlation between the percentage of self-employment and the percentage of residents that have not moved in the last five years. This suggests that self-employment is positively associated with residential stability within a labor market area. However, high concentration of traditional high-wage industries (mining, government, and high-wage manufacturing) and consumer service industries are negatively associated with selfemployment. Economic disadvantaged areas, that is, with high unemployment rates and high dependency on public assistance, are strongly and negatively associated with lower rates of self-employment.

	(1)	(2)	6	(4)	(2)	(9)	Ð	(8)	(6)	(10)	(11)
MEAN	13.935	16.876	6.296	20.730	10.814	38.059	24.101	53.952	71.341	12.017	6.425
STDDEV	2.772	6.553	4.604	4.555	2.638	4.417	2.408	4.661	4.428	3.455	1.891
% Additional Farners (1)	1.000										
% Self-employed (2)	-0.407	1.000									
% Aericulture, Forestry, Fishing (3)	-0.430	0.936	1.000								
% High-Wage Industries (4)	0.378	-0.516	-0.472	1.000							
% Low-Wage Industries (5)	-0.259	-0.131	-0.184	0.047	1.000						
% Producer Services (6)	0.269	-0.111	-0.169	-0.521	-0.500	1.000					
% Consumer Services (7)	-0.103	-0.465	-0.508	-0.085	0.086	0.022	1.000				
% Non-movers (8)	-0.255	0.247	0.322	0.118	0.007	-0.345	-0.213	1.000			
% Owner Occupied Housing (9)	-0.376	0.177	0.132	0.169	0.389	-0.579	0.063	0.616	1.000		
% Households in Poverty (10)	-0.511	-0.130	-0.024	-0.299	0.265	-0.034	0.383	-0.032	-0.004	1.000	
% Unemployed (11)	-0.238	-0.512	-0.423	0.136	0.348	-0.215	0.565	0.110	0.239	0.711	1.000
% Public Assistance (12)	-0.245	-0.313	-0.197	0.005	0.273	-0.159	0.358	0.108	0.029	0.793	0.841
% creater than High School (13)	0.470	0.029	-0.050	-0.274	-0.505	0.670	-0.062	-0.521	-0.556	-0.424	-0.432
% Black (14)	0.530	-0.494	-0.443	0.167	-0.212	0.357	0.109	-0.292	-0.565	0.016	0.169
% Hispanics (15)	0.449	-0.246	-0.237	0.176	-0.217	0.196	-0.003	-0.219	-0.345	-0.205	-0.008
% Asian Americans (16)	0.487	-0.117	-0.145	-0.110	-0.265	0.492	-0.127	-0.517	-0.596	-0.247	-0.291
% Native Americans (17)	-0.382	0.277	0.294	-0.300	0.105	-0.121	0.112	0.008	0.093	0.145	0.039
% Immigrants (18)	0.511	-0.194	-0.228	-0.034	-0.224	0.441	-0.063	-0.433	-0.555	-0.176	-0.142
% Female-Headed Households (19)	0.484	-0.747	-0.680	0.338	-0.096	0.251	0.305	-0.224	-0.428	0.178	0.454
% Under 18 Years of Age (20)	0.101	0.253	0.321	0.143	0.131	-0.370	-0.350	0.136	0.142	-0.248	-0.130

Table 8. Correlation Matrix of Labor Market Area Characteristics.

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		(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
MEAN		7.291	37.605	4.116	1.251	0.705	0.674	0.782	8.930	27.635
STDDEV		2.264	6.763	4.862	1.417	0.545	1.160	0.769	1.993	1.433
% Public Assistance	(12)	1.000						1		
% Greater than High School		0.411	1.000							
% Black		0.251	0.260	1.000						
% Hispanics	<u> </u>	0.043	0.367	0.500	1.000					
% Asian Americans	19	0.242	0.660	0.293	0.471	1.000				
% Native Americans	<u>[</u>]	0.084	0.053	-0.252	-0.113	-0.142	1.000			
% Immiorants	- 18	0.118	0.565	0.436	0.719	0.886	-0.123	1.000		
% Female-Headed Households	(61)	0.488	0.091	0.855	0.408	0.130	-0.210	0.285	1.000	
% Under 18 Years of Age	20)	0.020	-0.106	0.067	0.167	-0.164	0.097	-0.137	-0.002	1.000

Table 8. Correlation Matrix of Labor Market Area Characteristics, continued.
Greater concentration of minorities (Blacks and Hispanics), immigrants, and femaleheaded households are associated with lower rates of self-employment. However, labor market areas with greater concentration of Native Americans are associated with higher rates of self-employment.

The average percentage of families and households with additional earners is estimated at about 14 percent with a standard deviation of 3 percent. This indicates relatively not much variation across labor market areas compared to self-employment. Labor market areas with a greater concentration of agricultural industries, construction and low-wage industries, residential stability, (non-mover residents, housing owners), economically disadvantaged areas, and those with a high concentration of Native Americans have lower rates of families and households with additional earners. In contrast, labor market areas with high-wage and producer service industries, as well as labor market areas with a high concentration of Blacks, Hispanics, and Asian Americans and a high concentration of residents with greater than high school level of education, high concentration of immigrants and female-headed households are associated with greater rates of families with additional earners.

The preceding analysis reports the bivariate relationship of household and labor market area characteristics with family and household work strategies. However, it does not tell us about inter-correlations among these factors, nor it does not indicate the relative importance of independent variables in influencing the likelihood of families and households to have additional earners or having self-employed members. In the following analysis, multilevel discrete models are used to determine and assess the

relative importance of multilevel factors influencing the odds of additional earners and self-employment.

Multilevel Discrete Model of Self-employment on Family/Household and Labor Market Area Characteristics.

Table 9 displays the results from a multilevel discrete model of self-employment. Model 1 reports estimates of the unconditional model of self-employment. The fixed part of the model describes the average log-odds of self-employment. The average logodds of self-employment are estimated at -1.753 (se=.027). This corresponds to an estimated average odds of self-employment of approximately .173¹⁸. In terms of probabilities, it is equivalent to an average probability of self-employment of .148.

Parameter	Model 1				
	Estimate S. E.				
Fixed Effects:					
Intercept	-1.753	.027			
Random Effects:					
Level 2: Variance, $\sigma^2_{\mu l}$.068	.011			
Level 1: Variance, e ² _{0ij}	1	0			

Table 9. Multilevel Model Estimates of Self-employment -- The Unconditional Model

The model estimates β are expressed in terms of logits or log odds, i.e., $\log(\pi_{ij}/1-\pi_{ij})$. This can be written in terms of odds by computing the exponential of β . Hence, $\exp(-1.753)=.173$ is the estimate of the average odds of self-employment. The log odds can also be expressed in terms of probabilities by the following formula: $\pi_{ij} = \exp(\beta)/(1+\exp(\beta))$. Hence, the average probability of self-employment is estimated at .173/(1+.173)=.148.

The random part of the model indicates a between labor market area variance of 0.068. This gives a 95% confidence interval of the average odds of self-employment that ranges from .104 to .289¹⁹. Thus, there is evidence of significant differences amongst labor market areas in the likelihood of families and households to have a self-employed member. Next, family and household characteristics as well as labor market area characteristics are included in the model as predictors of self-employment.

Family and Household Characteristics and Self-employment

Family and Household Structure and Self-employment

Do families and households with different structures differ in their likelihood of self-employment? The results in model 2 indicate a significant and positive difference between the log-odds of self-employment for married families and the log-odds of self-employment for non-married families and households (i.e., male-headed, female-headed, and cohabiting families and households combined), β =.758 [se(β)=.040]. Taking antilog, this indicates that the odds of self-employment for married families are estimated to be 2.134 [i.e., exp (.758)] times as much as non-married family/households, other things being equal. Thus, when the presence of children and adult relatives in the household are controlled, married families are about 113% more likely than non-married families and households to have a self-employed member.

A confidence interval of the log-odds of self-employment is computed using the formula $\beta \pm 1.96\sqrt{se(\beta)}$ and then converted into odds.

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Parameter	Model Estimates (S.E.)					
	Model 2	SE	Model 3	SE	Model 4	SE
Fixed effect:						
Intercept	-1.806	0.027	-1.830	0.028	-1.857	0.030
Married Families	0.758	0.040	0.516	0.041	0.442	0.042
Cohabiting households	0.290	0.081	0.332	0.081	0.297	0.082
Female-headed households	-0.681	0.093	-0.731	0.093	-0.671	0.093
Presence of Children	-0.069	0.023	-0.045	0.024	-0.045	0.024
Preschool Children	-0.109	0.032	0.006	0.032	0.027	0.033
School-age Children	0.006	0.042	0.029	0.042	0.036	0.042
Presence of Adult Relatives	0.084	0.030	0.029	0.030	0.005	0.031
Residential Mobility			-0.207	0.025	-0.225	0.025
Own a Home			0.587	0.036	0.502	0.037
Household Income ('000)					0.005	0.0004
High School					0.027	0.042
Some College					0.144	0.043
College					0.198	0.046
Random Effects:						
Level 2: Variance, σ^2_{μ}	0.066	0.011	0.067	0.011	0.079	0.013
Level 1: Variance, e ² _{0ii}	1	0	1	0	1	0

Table 9. Multilevel Model Estimates Predicting Self-employment —Explanatory Models.

Non-married families and households also differ in their likelihood of selfemployment. The difference in the log-odds of self-employment between cohabiting families and single-headed families, is positive and statistically significant, $\beta = .290$ [se(β)=.081)]. Translated into odds, this indicates that the odds of self-employment for cohabiting households are about 1.336 [i.e., exp(.290)] times the odds of single-headed families and households (male and female-headed combined). This indicates that when other variables in the model are held constant, the odds of self-employment are about 34 percent greater for cohabiting families and households than single-headed families.

As expected, the relationship of female-headed families and self-employment, in contrast with male-headed families, is negative and statistically significant, β = -.681 [se(β)=.093]. In other words, the odds of self-employment for female-headed families and households are estimated to be .506 times lower than male-headed families, i.e., about 49% lower. Thus, female-headed families and households are less likely than male-headed families and households to have a self-employed member. Thus, the results in model 2 show that families and households with different household structures have different likelihood of self-employment. Next, model 2 controls for household composition variables including the presence or not of children under the age of 18 at home, the age of children, and the number of adult relatives in the household.

Presence of Children and Self-employment

Do the presence and age of children explain the differences amongst families in the likelihood of self-employment? It is expected that families with children under 18 years of age, especially younger children, are more likely than those who do not have children in their homes to have a self-employed member. The presence of children under 18 years of age in the household yields a significant negative relationship with selfemployment, β = -.069 [se(β)=.023]. This indicates the difference between the average log-odds of self-employment for families with children and those without children. Expressed in terms of odds, this means that, the odds of self-employment for families with children under 18 years of age at home are estimated to be 0.933 times the odds of sel-employment for families without children at home, i.e., about 7 percent lower. Thus, families with children under 18 years of age are less likely than those with no children under 18 years of age at home to have a self-employed member.

Furthermore, comparing families with children under 18 years of age, I find that families with preschool children are less likely than those with school-age and/or adolescent children to have a self-employed member. The odds of self-employment for families with preschool children are estimated to be 0.897 [i.e., exp(-0.109)] times the odds of self-employment for families with children between six and seventeen years of age, i.e., about 10% lower. Thus, families with preschool children are less likely than those with school-age and adolescent children to have a self-employed member. However, the difference between the log-odds of self-employment for families with school-age children and those with adolescent children is not statistical significant.

The results in model 2 indicate that, regardless of the family/household structure and the presence of adult relatives, families with children under 18 years of age at home are less likely than families without children at home to have a self-employed member. Also, families with younger children at home are less likely than those with older children to have a self-employed member. Families with preschool children are less likely than those with school-age and/or adolescent children to have a self-employed member. Next, the presence of adult relatives living in the household is included in the model as a control.

Model 2 controls for the presence of adult relatives in the household. The associated assumption is that the difference in the likelihood of self-employment between families and households with different structures may be due to the number of adult relatives in the family (adult children, brothers, and sisters, uncles and aunts, parents, and other adult relatives). Holding other variables in the model constant, that is, the family/household structure, the presence and age of children under 18 in the household, the results in model 2 indicate that the relationship between self-employment and the presence of adult relatives (other than the householder, the spouse or partner) living at home, is significant positive, β = .084 [se(β)=.030]. This indicates that each additional adult relative in the family increases the odds of self-employment by about 9 percent, i.e., 100*[exp(.084)-1].

In summary, controlling for the presence of adult relatives and young children in the family does not change the relationship between family structure and selfemployment. Married-couple families remain more likely than non-married families and households to have a self-employed member, cohabiting families and households are more likely than single-headed family/households to have a self-employed member, and female-headed families and households are less likely than male-headed family/households to have a self-employed member work.

Family Residential Mobility and Self-employment

Model 3 adds family residential mobility as a proxy for family social capital. Does residential mobility of a family/household explain the differences in the odds of self-employment? Results in model 3 indicate a significant and negative relationship between family residential mobility and self-employment, $\beta = -.207$ [se(β)=.025]. In terms of odds, this indicates that the odds of self-employment for families and households that have moved in the last five years are about 19 percent [i.e., 100*(exp(-.207)-1)] lower than the odds of self-employment for those that have not moved in the last five years. Thus, family residential mobility reduces the likelihood of selfemployment.

Model 3 also controls for home ownership. Home ownership affects residential mobility. People who own homes are less likely than those who do not to move. Home ownership may also affect self-employment in two ways. It can be used as an asset to borrow a start-up capital or as a convenient place to do self-employment work, including homework activities. It is expected that families and households with home ownership to have greater chances of being involved in self-employment than families and households who do not own a home. The results in model 3 indicate a significant and positive relationship between ownership of a home and the log-odds of self-employment, β =0.587 (se= .036). In terms of odds, this indicates that, after controlling for the other variables in the model, families and households with a home are about 80 percent [i.e., 100*(exp(.587)-1)] more likely than those who do not own a home to have a self-employed member. Thus, home ownership increases the likelihood of self-employment.

Household Income and Self-employment

Model 4 controls for household income as a proxy of household economic capital. As expected, the relationship between household income and self-employment is significant positive, β =.005 (se=.0004). This indicates that, for each additional \$10,000,

the odds of self-employment increase by 5 percent. This implies that the greater the income the greater the chances for self-employment²⁰. This is probably so because those with greater income have investments to start a small business and/or can have access to loans from banks, because they are economically reliable.

Family Education and Self-employment

Model 4 also controls for family education. The effect of college education on the odds of self-employment is significant and positive, net of all other effects. Families with a college or more education are more likely than those with some college or less education to have a self-employed member, $\beta = 0.198$ (se=0.046). In terms odds, this indicates that the odds of self-employment for families and households in which at least one or both core members have a bachelor or greater level of education are about 22% greater than the odds of self-employment for families with less than college education. Also, families with some college education are more likely than those with high school or less education to have a self-employed member, $\beta = 0.144$ (se=0.043). In terms of odds, this indicates that families and households with some college education have about 15 percent greater chances for self-employment than those with high school or less education. Families and households with a high school level of education are not significantly different from those with less than high school education in their likelihood of having a self-employed member, $\beta = .027$, [se(β).=.042].

Because household income was measured in 1989 and employment, including self-employment's date of reference is the Census reference week in 1990, household income is assumed to cause the involvement in self-employment in 1990 (one direction causality). However, if it was the same reference time, it would have been possible for self-employment to increase household income, which would suggest double-causality, i.e., household income causes self-employment and self-employment causes household income.

Race/ethnicity and Self-employment

Model 5 includes race/ethnicity as a control variable. The relationship of race/ethnicity and self-employment is significant negative, $\beta = -0.472$, [se(β)=.064]. This indicates that minority families have significantly lower (about 38 percent) likelihood of self-employment than non-Hispanic White families. Model 5 also controls or age of core members in the household. It is expected that the odds of self-employment would increase with age. Age square is added in the equation to control for curvilinear relationship between age and self-employment. The estimated coefficient of age is significant and positive, β =.031, [se(β)=.002]. This indicates that each additional year of age increases the odds of self-employment by about 3 percent, i.e., 100*[exp(.031)-1]. As expected also, the estimated coefficient for age square is significant and negative, β =.074 [se (β)=.011]. This means that the odds of self-employment increase at a diminishing rate with age.

The introduction of these control variables in model 5 significantly improves the explanatory power of the model. In comparison to model 4, the estimated coefficients in model 5 for many variables have changed considerably. Married families remain more likely than non-married families and households to have a self-employed member. However, the average difference between the odds of self-employment for married and non-married families decreased. Cohabiting households also remain more likely than single-family households to have a self-employed member, but the difference between the two in their effect on self-employment increases. Cohabiting households tend to be younger.

Parameter	Model Estimates (SE)				
	Model 5	SE	Model 6	SE	
Fixed effect:					
Intercept	-1.791	0.031	-1.748	0.029	
Married Families	0.316	0.042	0.315	0.042	
Cohabiting	0.387	0.082	0.385	0.082	
Female-headed	-0.850	0.094	-0.849	0.095	
Presence of Children	0.147	0.029	0.147	0.029	
Preschool Children	0.257	0.036	0.258	0.036	
School-age Children	0.154	0.043	0.154	0.043	
Presence of Adult	-0.069	0.031	-0.069	0.031	
Residential Mobility	-0.080	0.026	-0.080	0.026	
Own a Home	0.344	0.038	0.343	0.038	
Household Income	0.004	0.0004	0.004	0.0004	
High School	0.102	0.043	0.102	0.043	
Some College	0.259	0.044	0.261	0.044	
College	0.268	0.047	0.272	0.047	
Minority	-0.472	0.064	-0.467	0.064	
Age	0.031	0.002	0.031	0.002	
Age square ('00)	-0.074	0.011	-0.074	0.011	
Non-Metro			0.160	0.025	
Random Effects:					
Level 2: Variance, $\sigma^2_{\mu\nu}$	0.074	0.012	0.050	0.009	
Level 1: Variance, e ² _{0ij}	1	0	1	0	

Table 9. Multilevel Model Estimates Predicting Self-employment, Continued....

Once age is controlled, they are way more likely than single-family households to have a self-employed member, suggesting that the presence of a partner makes a difference. Also, female-headed households remain less likely than male-headed households to have a self-employed member. However, the difference between female- and male-headed households in the odds of self-employment widens up. The most significant changes occur in the effect of having children under the age 18 and the age of children on the odds of self-employment. Once the age of the householder and/or the spouse/partner is controlled, having children under the age of 18 in the household significantly increases the likelihood of self-employment. Families with preschool children also become significantly more likely than families with school-age and/or adolescent children to have a self-employed member. Families with school-age children are also more likely than those with adolescent children to have a self-employed member. This suggests that once age is controlled, having children at home, especially younger children, is associated with greater likelihood of self-employment.

The effect of residential mobility also changed after age was introduced in the model. This is expected because younger families are more likely to move than older families. Despite the change in the absolute value of the effect of residential mobility, residential mobility remains significantly and negatively associated with the odds of self-employment.

The effect of family education also is triggered by the introduction of age in the model. Families with a high school education are more likely than those with less than high school education to have a self-employed member. Before age was introduced (model 4), there was no significant difference between families with a high school education compared with those with less than high school education. Also, families with some college education are more likely than those with high school or less education to have a self-employed member and those with a college education are more likely than

other families (i.e., with less than a college level of education) to have a self-employed member.

The random part of the model indicates a slightly increase in the between labor market area variance from 0.068 in the unconditional model to 0.074 in model 5 — approximately 9 percent increase. Even after controlling for family and household characteristics, there is evidence of significant differences between labor market areas in the likelihood of self-employment. Next, the labor market area (level-2) variables²¹ are included in the model to determine if they account for the between labor market area differences in the likelihood of self-employment.

Non-metropolitan / Metropolitan Residence and Self-employment

Does metropolitan and non-metropolitan residence explain any differences between labor market areas in the likelihood of self-employment? The theory described led me to expect that families and households living in non-metropolitan labor market areas would be more likely to have a self-employed member than those living in metropolitan labor market areas. The results are displayed in Table 9 (model 6). I find that families living in non-metropolitan areas are more likely than those in metropolitan areas to have a self-employed member, β =.160 [se(β)=.025], controlling for family and household characteristics. This indicates that the odds of self-employment for families living in non-metropolitan labor market areas are about 17 percent greater than those of families and households living in metropolitan areas. Notice also that by introducing

The labor market variables in the model have a j subscript while family and household variables have ij subscripts.

non-metropolitan variable in the model, the random part of the model decreases from 0.074 (model 5) to 0.050 (model 6). Residential stability and industrial structure measures are next entered in the model.

Industrial Structure and Self-employment

Does the industrial structure of a labor market area affect any differences amongst labor market areas or the differences between metropolitan and nonmetropolitan in the likelihood of self-employment? A measure of the labor market area industrial structure --- the ratio of core industries (high-wage manufacturing industries and producer services) to peripheral industries (agriculture, fishery, and forestry, lowwage manufacturing, and consumer services) is included in model 7. I find that labor market area with greater proportion of core industries to be associated with lower likelihood of self-employment, all other effects held constant, $\beta = -.795$ [se(β)=.093]. This indicates that families living in labor market areas with greater proportion of core industries are less likely than those in areas with peripheral industries to have a selfemployed member. Thus, families living in labor market areas with greater availability of better jobs are about 55 percent less likely than those living in labor market areas with poor jobs to have a self-employed member. In other words, the greater proportion of good jobs (proportion of core industries) the lower the likelihood of self-employment.

Labor Market Area Residential Stability and Self-employment

In addition to industrial structure and non-metropolitan residence, model 7 includes the labor market area residential stability indicator.

Parameter	Model Estimates (SE)				
-	Model 7	SE	Model 8	SE	
Fixed effect:					
Intercept	0.388	0.408	0.812	0.387	
Married Families	0.313	0.042	0.314	0.042	
Cohabiting households	0.380	0.082	0.381	0.082	
Female-headed households	-0.850	0.095	-0.847	0.094	
Presence of Children	0.146	0.029	0.145	0.029	
Preschool Children	0.260	0.036	0.258	0.036	
School-age Children	0.155	0.043	0.154	0.043	
Presence of Adult Relatives	-0.068	0.031	-0.067	0.031	
Residential Mobility	-0.079	0.026	-0.080	0.026	
Own a Home	0.343	0.038	0.343	0.038	
Household Income ('000)	0.005	0.0004	0.005	0.0004	
High School	0.103	0.043	0.100	0.043	
Some College	0.264	0.044	0.261	0.044	
College	0.275	0.047	0.271	0.047	
Minority	-0.462	0.064	-0.459	0.064	
Age	0.031	0.002	0.031	0.002	
Age square ('00)	-0.074	0.011	-0.074	0.011	
Non-Metro	0.062	0.025	0.066	0.028	
Residential Stability	-0.016	0.005	-0.016	0.005	
Industrial Structure	-0.795	0.093	-0.863	0.092	
Economic Disadvantage			-0.037	0.008	
Non-Metro*Industrial Structure			-0.166	0.090	
Random Effects:					
Level 2: Variance, $\sigma^2_{\mu l}$	0.025	0.005	0.018	0.004	
Level 1: Variance, e ² _{0ii}	1	0	1	0	

Table 9. Multilevel Model Estimates Predicting Self-employment, Continued....

To what extent families and households living in labor market areas with greater residential stability involve in self-employment work? It is expected that the labor market area residential stability would be positively related to self-employment, net of family and household characteristics, non-metropolitan residential status, and the labor market industrial structure. I find that labor market area residential stability is significantly and negatively related to the adjusted log-odds of self-employment, β = -.016 [se(β)=.005]. However, in another analysis (data not shown), when non-metropolitan residence and industrial structure variables are not included in the model, the effect of residential mobility on the log-odds of self-employment is significant positive. Therefore, the negative relationship between residential stability and self-employment at level 2 is probably due to the suppressing effect of industrial structure and nonmetropolitan residence indicators.

Labor Market Area Economic Disadvantage/Inequality and Self-employment

The final model (model 8) includes the labor market area economic disadvantage/inequality indicator and the interaction of non-metropolitan residence and industrial structure. I expected to find that the greater the labor market area disadvantage/inequality the lower the likelihood of self-employment. The labor market area inequality yields a significant negative relationship with the log-odds of selfemployment, β = -.037 [se(β)=.008]. In terms of odds, this indicates that the labor market economic disadvantage decreases the odds of self-employment by about 4%, i.e., 100*[exp(-.037)-1]. Thus, families living in labor market areas with high economic disadvantage/inequality, i.e., with high poverty and unemployment rates as well high dependency on public monies, are less likely than those living in other labor market areas to have a self-employed member, all other variables in the model held constant.

Interaction between Non-metropolitan Residence and Industrial Structure and Self-employment

It is expected that the effect of the labor market area industrial structure on selfemployment varies depending on the metropolitan and non-metropolitan residence, given the metropolitan / non-metropolitan differences in industrial structure. An interaction of the metropolitan / non-metropolitan residence and industrial structure is included in model 8. The interaction effect between the two labor market area variables yields a significant and negative effect on the mean adjusted log-odds of self-employment, $\beta = -$.166 [se(β)=.089]. This suggests that families and households living in non-metropolitan areas with greater and better job opportunities are less likely than those in metropolitan areas with good job opportunities to have a self-employed member. The overall effect of industrial structure on the mean adjusted log-odds of self-employment is estimated at -1.029 [i.e., -.863+(1)(-.166)] for families living in non-metropolitan areas and -.697 [i.e., -.863+(-1)(-.166)] for families living in metropolitan areas. Thus, families living in nonmetropolitan areas are far less likely than their metropolitan counterparts to have a selfemployed member if they have access to good jobs. The growth of new employment opportunities in non-metropolitan areas has been limited to low-paying jobs while the jobs in metropolitan areas are at both ends of the wage spectrum (Gorham 1992). Thus, families living in non-metropolitan areas with greater job opportunities may get involved in self-employment in order to complement their incomes, especially if quality of such jobs does not allow them to satisfy their needs. However, if the available jobs offer good wages, then families, especially those in non-metropolitan areas, are less likely to have a self-employed member.

Summary

The likelihood of families and households to have a self-employed member depends upon family and household social structure as well as the labor market area social context in which families and households are located. The results in model 8 show that married families are more likely than non-married families and households to have a self-employed member. Among the 'non-married' families and households, cohabiting households are more likely than single-headed family/households to have a self-employed member. Also, female-headed households are less likely than maleheaded households to do self-employment work.

Furthermore, the results indicate that families living with young children under 18 years of age are more likely than those with no children at home to have a self-employed member. Among families with children under 18 years of age living in their homes, those with preschool children are more likely than those with school-age and/or adolescent children to do self-employment work while families with school-age children are more likely than families with adolescent children to have a self-employed member.

The results in model 9 also reveal that family residential mobility is significantly and negatively associated with self-employment. Although residential mobility is not a very good proxy for social capital, the results imply that family stability increases the likelihood of self-employment. As also expected, home ownership increases the chances for self-employment. The results show that the greater the household income the greater the changes of self-employment. Family education is positively associated with self-employment. Families with higher educational levels are more likely to have a self-employed member. Minority families are less likely than non-Hispanic White families to have a self-employed member. Age is found to be positively associated with the chances for self-employment — with the older generation more likely than the younger generation to have a self-employed member. At the same time, the relationship between age and self-employment is found curvilinear — self-employment increases at a diminishing rate with age.

The likelihood for self-employment is not only influenced by family and household characteristics, but also on characteristics of places in which they live in, most notably whether they reside in metropolitan or non-metropolitan, the industrial structure, the residential stability, and the labor market area economic disadvantage/inequality. At the labor market area level, when all family and household characteristics are controlled, living in non-metropolitan labor market areas is significantly and positively associated with self-employment. The results also show that families living in labor market areas with greater proportion of core industries, i.e., with good jobs, are associated with lower chances for self-employment. The interaction between non-metropolitan residence and industrial structure is significant negative. This suggests that families living in nonmetropolitan areas with greater proportion of good jobs are less likely to have a selfemployed member. The labor market areas with greater residential stability are associated with lower chances for self-employment. Finally, the greater the economic disadvantage of the area, the lower the chances for self-employment.

Multilevel Discrete Model of Additional Earners on Family/Household and Labor Market Area Characteristics

For this analysis, a sample of families and households with at least one adult member other than core members is drawn. The results of multilevel models for the number of additional earners other than core members are presented in Table 10. The fixed part of the unconditional model (model 1) indicates a non significant average logodds of additional earners, β = 0.004 [se=.022]. A non significant coefficient means that it is possible that β is zero in the population or it could be simply due to sampling error. The average odds of additional earners are estimated at 1.003. Converted into probabilities, this corresponds to a probability to have additional earners of about .501.

Table 10. Multilevel Model Estimates of Additional Earners - Unconditional Model

Parameter	Model 1			
	Estimate	S. E.		
Fixed Effects:				
Intercept	0.004	.022		
Random Effects:				
Level 2: Variance, $\sigma^2_{\mu l}$.029	.007		
Level 1: Variance, e ² _{0ii}	1	0		

The random part of the unconditional model indicates a between labor market area variance of 0.029. This gives a 95% confidence interval of the average odds of having additional earners of [.670, 1.338]. This implies that the likelihood of having additional earners within families and households varies between labor market areas.

Family Structure and the Presence of Additional Earners

It is expected that the presence of additional earners within families and households varies by family and household structure. The results in Model 2 show that married families are less likely than "non-married" families and households to have additional earners, $\beta = -.401$ [se(β)=.044]. In terms of odds, this indicates that married families are about 33% times as less likely as "non-married" families and households to have additional earners other than core members. The results in Model 2 also indicate that cohabiting families and households are less likely than single-headed families and households to have additional earners, $\beta = -.987$ [se(β)=.108]. Converted into odds, this indicates that the odds of additional earners within cohabiting families and households are about 63%, i.e., [100*exp(-.987)-1] lower than the odds of additional earners within single-headed families and households. Female-headed families and households are less likely than male-headed families and households to have additional earners, $\beta = -.373$ $[se(\beta)=.066]$. In terms of odds, this indicates that the odds of additional earners for female-headed families and households are estimated to be 31% as lower as those of male-headed families and households. To sum up, "non-married" families and households are more likely than married families to have additional earners. Also, single-headed families and households are more likely than cohabiting households to have additional earners. Finally, female-headed families and households are less likely than male-headed households to have additional earners.

Parameter	Model Estimates (S.E.)					
	Model 2	SE	Model 3	SE	Model 4	SE
Fixed effect:						
Intercept	0.017	0.021	0.030	0.022	-0.278	0.043
Married Families	-0.401	0.044	-0.173	0.047	-0.143	0.048
Cohabiting households	-0.987	0.108	-0.540	0.115	-0.551	0.115
Female-headed households	-0.373	0.066	-0.115	0.069	-0.094	0.069
Presence of Children			-1.374	0.033	-1.385	0.033
Preschool Children			-0.347	0.061	0.326	0.061
School-age Children			-0.005	0.046	-0.0002	0.046
Residential Mobility					0.094	0.033
Random Effects:						
Level 2: Variance, $\sigma^2_{\mu\nu}$	0.026	0.007	0.025	0.007	0.036	0.007
Level 1: Variance, e ² _{0ij}	1	0	1	0	1	0

Table 10. Multilevel Model Estimates of Additional Earners

Life Course Stages and Additional Earners

Model 3 includes the life course stage variables. I find that when controlling for family/household structure, families with children under 18 years of age at home are less likely than those without children to have additional earners, β = -1.374 [se(β)=.033]. This means that the odds of having additional earners for families with children under 18 years of age are about 75% lower than the odds of additional earners for families without children under 18 years of age in their homes, other things hold constant. When comparing families with young children living in their homes, those with preschool children are more likely than those with school-age and/or adolescent children to have

additional earners, $\beta = 0.347$ [se(β)=.061]. This implies that the odds of additional earners for families with preschool children increase by about 42% when compared to families with school-age and/or adolescent children in their homes. However, families with school-age children are not significantly different from those with adolescent children in their likelihood of having additional earners, $\beta = 0.005$ se(β)=.046]. In brief, the results in model 3 show that, regardless of family/household structure, having children under 18 years of age in the household decreases the odds of additional earners. However, having preschool children increases the odds of additional earners. Note that the estimated log-odds of additional earners for married, cohabiting, and female-headed families decrease substantially when life course variables are included in model. This indicates that when the presence and age of children are controlled, the gap between married and non-married families, between cohabiting families and single-headed families, and between female-headed and male-headed households in terms of having additional earners narrows.

Residential Mobility and Additional Earners

To what extent residential mobility influences the likelihood of additional earners? The next model includes residential mobility as a predictor of having additional earners. Results in model 4 indicate that residential mobility is positively associated with the log odds of additional earners, $\beta = 0.094$ [se(β)=.033]. This indicates that the odds of having additional earners for families that have moved in the last five years are about 10 percent as higher as those of families that have stayed in their homes during the last five years. In brief, the results in model 4 show that families and households that have moved in the last five years, i.e., with less residential stability, are more likely to have additional earners. It was expected that residential mobility would be negatively associated with additional earners. However, it is possible that people who have moved in the last five years are in migrants, i.e., people who are coming back to their communities. Therefore, they could be attached and well connected to their communities, and therefore, may have greater likelihood for additional earners.

Socioeconomic Indicators and Additional Earners.

Model 5 adds household income and education as controls of household economic and human capitals. The relationship between household income and having additional earners is significant positive, $\beta = .009$ [se(β)=.0006]. In terms odds, this implies that the odds of additional earners increase by 9 percent for each additional \$10,000, controlling for other variables in the model. Model 5 displays also the results of the relationship between family education and additional earners. I find that families with a college or higher level of education are less likely than families with less than college education to have additional earners. The odds of having additional earners for families with a college or greater education are estimated to be 41 percent lower than those of families with less than college education. Also, families with some college education are less likely than those with less than some college education to have additional earners. The odds of additional earners for families with some college education are about 16 percent lower than those of families with lower education. Families with a high school education are not significantly different from those with less than high school education to have additional earners.

Parameter	Model Estimates (S.E.)				
-	Model 5	SE	Model 6	SE	
Fixed effect:					
Intercept	-0.441	0.058	-0.580	0.062	
Married Families	-0.263	0.048	-0.269	0.052	
Cohabiting households	-0.682	0.115	-0.641	0.115	
Female-headed households	-0.064	0.070	-0.054	0.073	
Presence of Children	-1.339	0.033	-1.146	0.038	
Preschool Children	0.336	0.062	0.299	0.064	
School-age Children	0.020	0.047	0.066	0.047	
Residential Mobility	0.120	0.033	0.126	0.034	
Household Income (000's)	0.009	0.001	0.009	0.001	
High School	-0.066	0.046	-0.003	0.047	
Some College	-0.177	0.049	-0.094	0.051	
College	-0.529	0.057	-0.458	0.058	
Minority Status			-0.270	0.059	
Age			0.015	0.002	
Age Square			0.160	0.015	
Random Effects:					
Level 2: Variance, $\sigma^2_{\mu 1}$	0.016	0.006	0.017	0.006	
Level 1: Variance, e ² _{0ij}	1	0	1	0	

Table 10. Multilevel Model Estimates of Additional Earners, continued...

Minority and Additional Earners

Model 6 controls for race and ethnicity. Results in model 6 indicate that minority status is significantly and negatively associated with the log odds of additional earners, $\beta = -0.270$ [se(β)=.059]. This indicates that minority families and households are less likely than non-Hispanic Whites to have additional earners. The odds of additional earners for minority families and households are about 24 percent lower than the odds of

additional earners for non-Hispanic White families and households. In this model, immigrant status was also included as a control. Because immigrant status was found not statistically significant with the odds of additional earners, it was removed in the analysis.

Age and Additional earners

Model 6 also includes age and age square variables. Results in model 6 show that age is significant positive, $\beta = 0.015$ [se(β)=.002]. Age square is significant and positively associated with having additional earners, $\beta = 0.160$ [se(β)=.015]. This indicates a curvilinear relationship between age and the odds of additional earners, signaling an increase in the odds of additional earners as age increases.

The introduction of control variables in model 5 and model 6 significantly enhances the explanatory power of the model. Note that the effects of mobility and family structure variables, but female headship, compared to their effects in model 4, have increased when income, education, race, and age variables are controlled. The difference between female-headed families and households and male-headed families and households in terms of having additional earners is no longer significant once these controls are introduced in the models. Also, the intercept, i.e., the adjusted mean logodds of additional earners has decreased considerably from model 4 to model 6.

Labor Market Area Industrial Structure and Additional Earners

The next model includes a measure of industrial structure — the ratio of core industries to peripheral industries in the labor market area. The results in model 7 indicate a significant and positive effect of industrial structure on the log-odds of additional earners, β =0.233 (se=0.074). As expected, this indicates that the greater the prevalence of core industries in a labor market area the greater the likelihood of additional earners.

Labor Market Area Economic Disadvantage/Inequality and Additional Earners

Model 8 accounts for the economic disadvantage/inequality of a labor market area. It is expected that economic disadvantage/inequality of a labor market area would be negatively associated with the likelihood to have additional earners. I find that families and households living in economic disadvantaged labor market areas are less likely than those in prosperous areas to have additional earners, β = -0.038 (se=0.008). In terms of odds, this means that the odds of additional earners for families living in disadvantaged labor market areas are about 3 % lower than the odds of additional earners for families living in more prosperous labor market areas. Note also that the effect of industrial structure on the log odds of additional earners decreases, but remains positive. Thus, the labor market area economic conditions influence the likelihood of additional earners.

Non-metropolitan / Metropolitan Residence and Additional Earners

The final model includes non-metropolitan/metropolitan variable. Does nonmetropolitan residence explain any difference between labor market areas in the likelihood of families and households to have additional earners? As expected, the results in model 9 indicate that families and households in non-metropolitan areas are less likely than their metropolitan counterparts to have additional earners, β = -.049 [se(β)=.024]. The odds of additional earners for non-metropolitan families and

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households are about 5% as lower as metropolitan families and households. Note that the effect of industrial structure on the log odds of additional earners becomes not significant once non-metropolitan/metropolitan variable is included in the model.

Parameter	Model Estimates (S.E.)					
	Model 7	SE	Model 8	SE	Model 9	SE
Fixed effect:						
Intercept	-0.901	0.122	-0.495	0.144	-0.414	0.147
Married Families	-0.264	0.052	-0.268	0.052	-0.267	0.052
Cohabiting households	-0.637	0.115	-0.632	0.115	-0.632	0.115
Female-headed households	-0.058	0.073	-0.055	0.073	-0.056	0.073
Presence of Children	-1.142	0.038	-1.145	0.038	-1.144	0.038
Preschool Children	0.297	0.064	0.298	0.064	0.297	0.064
School-age Children	0.069	0.047	0.067	0.047	0.068	0.047
Residential Mobility	0.125	0.034	0.124	0.034	0.125	0.034
Household Income (000's)	0.008	0.001	0.008	0.001	0.008	0.001
High School	-0.002	0.047	-0.007	0.047	-0.007	0.047
Some College	-0.095	0.051	-0.097	0.051	-0.096	0.051
College	-0.459	0.058	-0.467	0.058	-0.467	0.058
Minority Status	-0.287	0.059	-0.275	0.059	-0.276	0.059
Age	0.015	0.002	0.015	0.002	0.015	0.002
Age Square	0.160	0.015	0.159	0.015	0.159	0.015
Industrial Structure	0.223	0.074	0.166	0.068	0.074	0.081
Economic disadvantage			-0.038	0.008	-0.033	0.008
Non-Metro					-0.049	0.024
Random Effects:						
Level 2: Variance, σ^2_{μ}	0.013	0.005	0.007	0.004	0.006	0.004
Level 1: Variance, e ² _{0ij}	1	0	1	0	1	0

Table 10. Multilevel Model Estimates of Additional Earners, continued...

Summary

The likelihood of families and households to have additional earners depends on family and household characteristics on one hand, and on the other hand, it depends on non-metropolitan /metropolitan residence, industrial structure, and economic conditions of the labor market areas in which families and households reside. Using the results in model 9, which includes all variables. I find that married families are less likely than "non-married" families and households to have additional earners. Cohabiting families and households are also less likely than single-headed families and households to have additional earners. Among single-headed families and households, female-headed households were found not significantly different from male-headed households to have additional earners. Having children under 18 years of age at home is negatively associated with the likelihood of having additional earners. Among families with children at home. I find that the younger the children are the greater the likelihood for additional earners. Families with preschool children are more likely than those with school-age and adolescent children to have additional earners. The higher the household income the greater the likelihood of additional earners. However, the higher the level of education, the lower the probability of additional earners. Minority families and households are less likely than non-minority families and households to have additional earners. Also, the chances of additional earners increase at a diminishing rate of age. Living in non-metropolitan labor market areas is negatively associated with the likelihood of additional earners. I also find that the greater the quality of jobs in a labor market area, as indicated by the greater prevalence of core industries, the greater the

chances for families and households to have additional earners. Finally, I find that families and households living in economically disadvantaged labor market areas have lower likelihood of additional earners.

Chapter 5

SUMMARY AND CONCLUSIONS

This study has examined family and household work strategies focusing on selfemployment and employment of additional earners in non-metropolitan and metropolitan labor market areas. The important contribution of this study is that it accounts for family and household factors as well as labor market area factors of family and household work strategies. The main finding of this study is that family and household work strategies vary within and across different labor market areas, between non-metropolitan and metropolitan labor market areas, and across different households given different family and household as well as labor market area social structures. The propositions and hypotheses tested were derived from the restructuring and the social capital / embeddedness perspectives. The results indicate that family and household work strategies, in this case self-employment and having additional earners, are influenced by both family/household characteristics and labor market area characteristics. This study contributes to the understanding of family and household strategies from a multi-level theoretical and analytical framework. This study, thus, contributes to research that attempts to link micro- to macro-phenomena of family outcomes. In this chapter, the results are first summarized in relation to corresponding hypotheses. Secondly, policy implications and recommendations are proposed. Finally, limitations and future research are also discussed.

Summary of the Results in Relation to the Social /Embeddedness/Capital Perspective

In relation to the social embeddedness/capital perspective, it was expected to find that family and household structure determines work strategies (P11). A series of hypotheses was developed and tested. It was hypothesized that married families are more likely than "non-married" families and households to have a self-employed member. This hypothesis is supported and consistent with previous studies on selfemployment (Sanders and Nee 1997; Boyd 1991; Carr 1996),

Married families are more likely than "non-married" families and households to have a self-employed member.

It was also hypothesized that cohabiting families and households would be more likely than single-headed families and households to have a self-employed member. This hypothesis is also supported. Thus,

Cohabiting families and households are more likely than single-headed families and households to have a self-employed member.

Among single-headed families and households, it was hypothesized that female-

headed households would be less likely than male-headed households to have a self-

employed member. The following result is found:

Female-headed households are significantly less likely than male-headed households to have a self-employed member.

The above results indicate that the likelihood of self-employment differs

depending upon the family/household structure. The above relationship between family

structure and self-employment remains the same after other family/household

characteristics, such as family income, and labor market characteristics, such as the non-

metropolitan and metropolitan residence and the labor market area opportunity structure, has been controlled. Why self-employment is more prevalent among married families, and to a lesser extent among cohabiting families and households, than among singleheaded families and households? Why female-headed households are less likely than male-headed households to have a self-employed member? One can only speculate on the reasons for the differential effects of family structure on the likelihood of selfemployment. One possibility is that married couples are more likely to have a selfemployed member than other households because marriage offers an excellent partnership that is preferred to the use of other employees in a business. It helps not only to maximize the family income (rational interpretation) and solve business problems that employees may shirk (Borjas 1986). A related interpretation is that capital to start a business can be obtained from one spouse. When one spouse is working, that may insure against the risk of a fluctuating self-employment income. The spouse can work in the family business on a part-time business or on a full-time basis when the business is successful. The other alternative explanation to why married couples have greater chances for self-employment is that a spouse is a trustworthy person and a valuable source of information to business ownership. The data does not reveal any explanation to why these differential effects of family structure on self-employment, however, the findings suggest the need for further understanding how family organize its resources to adapt any work strategy. In relation to the social embeddedness/capital perspective, the family is a valuable source of social capital for its members that may help or eventually constrain certain activities including work related ones. Family and household work

strategies are embedded in family/household social relations. Most studies on social capital at the family level have focused on the effect of parental and kin support on children (Coleman 1988; McLanahan & Sanderfur 1994; Parcel and Menagham 1994; Hao 1994). More research is still needed to understand fully the mechanisms through which the family-base social capital influence different family work strategies.

Cohabiting households are like married couples on one account. They both have a very closely related adult (spouse and partner). This may explain why they are more likely than single-headed households to have a self-employed member. However, it does not explain why married households are more likely than cohabiting households to have a self-employed member. One explanation of the difference between married and cohabiting households in their likelihood of self-employment may reside in their differences. That is, the length of the relationship between married partners may have strengthened their social ties, thus their bounded solidarity. The other explanation may be cultural and legal — the legal ramifications of marriage make it strong and trustworthy. Therefore, married couples may have greater social capital based on bounded solidarity and enforceable trust than cohabiting households, and thus the greater the likelihood of self-employment for married couples than for cohabiting households.

Comparing female to male-headed households, this study finds that femaleheaded households are less likely than male-headed households to have a self-employed member. Gender is an important factor of self-employment and its effect on the likelihood of self-employment cannot only be explained by the headship or the composition of the household. Self-employment, on one hand, is very important for
families because it is an alternative and complementary productive activity to wagesalary employment. Thus, to understand it, one needs to locate it in the larger structure of the economy. On the hand, it is equally important to analyze the social aspects of selfemployment. The social embeddedness perspective offers a lens to analyze how social relations mediated by gender and class shape particular work experiences. Mingione (1991) is critical to the tendency to interpret informalization from points of view almost exclusively concerned with its macro-economic origins and impact. Instead, he stresses the importance of social organizations, life-styles, and survival strategies as factors explaining the heterogeneity of working activities rather than as mere consequences of it (76). Self-employment can be seen as a result of the interaction between both economic and non-economic factors at the family and household level.

Family/household structure also affects the likelihood of having additional earners in a different way than it does for self-employment. It was expected that: (1) married couples would be less likely than "non-married" households to have additional earners; (2) cohabiting households would be less likely than single-headed households to have additional earners; and that (3) female-headed households would be less likely than male-headed households to have additional earners. The above hypotheses were supported and the following significant results were found:

Married families are less likely than "non-married" families and households to have additional earners;

Cohabiting families and households are less likely than single-headed families and households to have additional earners.

Female-headed families and households are less likely than male-headed families and households to have additional earners.

These findings reveal that the family and household structure affects differently family and household work strategies. Single-headed families and households, particularly, male-headed households, are more likely than married or cohabiting households to have additional earners. One plausible explanation is in the male-headed households' composition. They are more likely than other households to host nonrelative members. This finding insights more research on cohabitation, including not just partners, but also non-related individuals who share the same roof. To what extent the social relations within this later type of cohabiting households affect their members' work strategy?

The presence and age of children were included in the model as controls. Families living with young children under 18 years of age are more likely than those with no children at home to have a self-employed member and the younger the children at home the greater the likelihood of self-employment. This may be explained by the fact that families with young children, especially preschool children, have greater time demanding for child care and rearing responsibilities. If there are few or no child care facilities, either because they are not available in the vicinity or because they are expensive, self-employment, particularly home-working self-employment, may be an attractive work strategy for families with young children, especially for women.

Families with young children are found to have relatively fewer additional earners than those without children. This may indicate that family members other than core members help in child rearing responsibilities, therefore, are less likely to join the paid labor force. Another alternative is that there may be no room in home for extra adults. However, when families with children are compared, the younger the age of children, i.e., the greater the responsibilities at home, the greater the chances for additional earners. For families with younger children, having additional earners may help out by increasing the family income and/or sharing the family living expenses.

Families and households are interconnected and embedded with other social institutions in their community. The child care facilities, the schools, businesses, the extended families, a network of friends and co-workers and other institutions affect somehow the survival and adaptability of families and households to social and

economic changes. I proposed that family and household social ties to the labor market area affect work strategies. (P12). I hypothesized that family/household residential mobility decreases the likelihood of self-employment and having additional earners. The results indicate that:

Family/household residential mobility decreases the likelihood of selfemployment and increases the likelihood of additional earners when all other variables are controlled.

People who live where they grew up are expected to have the strongest ties and social capital. Those who have moved will have weaker ties. The more the recent move, the weaker the ties, since it takes time to build up social capital in one's new location (Hagan et al. 1996). Also, family and household residential mobility means that relationships are disrupted, thereby reducing the social capital in the community. Therefore, the lower the chances for self-employment. This may be associated with loss of exchange networks with kin, friends and neighbors, memberships in clubs and other community organizations, information on jobs and businesses' opportunities that are crucial for starting and maintaining a business of your own. In contrast, those who have not moved, i.e., who have stayed longer in their community are more attached to their communities and, thus, more likely to have a self-employed member.

It was expected that family residential mobility would decrease the likelihood of additional earners. Families with greater ties to their communities tend to have more friends and connections. Thus, they may possess important information for job opportunities or may serve as an employment referral system to their members. However, the effect of residential mobility on additional earners is found positive. This

finding suggests more research that would account for community net migration, i.e., an account for both in migrants and out migrants. People may move without losing their social capital, particularly, if they move within the same community or move to a community in which they have loved ones or friends. More importantly, what needed most is to know what ties and of what kind people have in a community.

Both models of self-employment and additional earners control the economic capital of families and households. I find the importance of economic capital in shaping family/household work strategies. Families and households with greater economic capital are likely to have a self-employment business. They have investments to do so. More important, self-employment, and in general informal activities, varies by social class (Beneria and Roldan 1987). Nelson (1999) also shows that among "good" job households, informal economic activity most often took the form of an entrepreneur business clearly distinguished from, and subordinate to, regular work. In contrast, he finds that the members of "bad" job households are unable to develop independent, ongoing entrepreneurial businesses. Members of "bad" job households explicitly stated that they lacked sufficient capital to invest in the development of an on-the-side business. Instead, he finds that the later households are more likely, instead of ongoing entrepreneurial moonlighting, to pick up additional wage work. Some members of the "bad" job households have the opportunity to bring in income through the independent sale of goods and services but on a very casual basis (p30-31). The study of selfemployment requires to take into consideration social class. This would require to fully detail the different types of self-employment and understand the mechanisms through

which they relate to social classes. While households with more economic capital may be self-employed in addition to other activities, those with less income may be selfemployed for survival or need to complement their incomes.

Members of families and households with greater economic capital are also likely to have additional earners. Additional members of "high" class households, i.e., those with greater economic capital, especially adult children, may enter the labor force probably not to contribute to the family income but for personal needs such as going to movies or buying things on their own. The other alternative is that parents may initiate and socialize them to the world of paid labor.

Consistent with the embeddedness/capital perspective, it is argued that family and household work strategies vary depending on the family/household social structure. Besides the family/household structure, composition, life course stages, and economic capital, a series of control variables was introduced in the analysis to account for the variation in work strategies of families and households. The results indicate that

Families and households with higher education are more likely to have a selfemployed member. However, they are less likely to have additional earners.

Minority families are less likely than non-Hispanic White families to have a selfemployed member. They are also less likely to have additional earners.

It is expected that families with higher education would have greater likelihood of self-employment. They not only have the skills to manage their own businesses but also they can have access to investment money to start a small business than those with lower education. It was expected that families with higher education would be less likely to have additional earners. Families with lower education may have additional earners to complement their income while those with higher education may have additional earners for other reasons other than survival, most notably involving adult children in the paid labor force. This again indicates a class difference between families and households in the likelihood of self-employment and additional earners. As also expected, minority families are less likely than non-Hispanic White families to have a self-employed member. The lower likelihood of self-employment could be due to lower investments to start a self-employment business.

Families and households work strategies not only depend on family and household factors but also on factors of labor market areas in which they live. From a social embeddedness perspective, family and household work strategies depend not only on family/household social structure but also on larger social context in which they are linked.

Summary of the Results in Relation to the Restructuring Perspective

Economic restructuring has had a devastating impact on the economies of places, especially those in rural areas. From a restructuring perspective and its associated uneven development, it is expected that metropolitan and non-metropolitan areas have different opportunities. Life in non-metropolitan areas is different from that of metropolitan areas for not only economic reasons, but also social, cultural, and historic ones. I proposed that non-metropolitan/metropolitan residential location determines work strategies (P21). As I hypothesized, I found that:

Families living in non-metropolitan areas are more likely than those in metropolitan to have a self-employed member but less likely to have additional earners.

Non-metropolitan families and households face a wage/income structure that affords them low earnings and in which they have limited external resources to improve their financial situation. Any work alternative that may provide additional sources of income is important. The main sources of income in non-metropolitan areas have been paid employment, public assistance, but also kin supports. Strong reciprocal networks of information and trust that characterize rural places may explain the greater prevalence of self-employment. However, the lack of opportunity structure in non-metropolitan areas, compared to metropolitan areas, may explain the lower likelihood of families and household to have additional earners.

One possible explanation for the differences between metropolitan and nonmetropolitan areas in terms of work strategies is the opportunity structure of labor market areas in which families and households are located. It was proposed that industrial structure of a labor market area affects work strategies (p22). It was hypothesized that the greater the prevalence of core industries in a labor market area the lower the likelihood of self-employment. To account for the non-metropolitan/metropolitan differential in opportunity structure, it was hypothesized that the differences in selfemployment between non-metropolitan and metropolitan areas are primarily due to their differences in the proportion of core industries. The following results were found:

The greater the prevalence of core industries in a labor market area the lower the chances for self-employment.

Families living in non-metropolitan areas are far less likely than their metropolitan counterparts to have a self-employed member if they have access to good jobs.

From the restructuring perspective, it was also hypothesized that the greater the prevalence of core industries in a labor market area the greater the likelihood of additional earners. The hypothesis is supported and I find that:

The likelihood of having additional earners is enhanced by the quality of jobs in a labor market area.

Other labor market area factors, other than the industrial structure, significantly influence the likelihood of families and households to have a self-employed member and/or have non-core members participate in the labor force. I proposed that residential stability of labor market area affects work strategies. (P23). Contrary to what I expected, I find that:

The labor market area residential stability decreases the likelihood of selfemployment.

Finally, the economic disadvantage /inequality of a labor market area affects work strategies. (P24). Hypotheses related to this proposition were tested and the following results are found:

The labor market area economic disadvantage/inequality decreases the likelihood of self-employment and additional earners.

Families and households living in labor market areas that are disadvantaged may opt for self-employment or rely on the income of additional earners for survival reasons, i.e., in order to complement their poor incomes. In general those areas are characterized by low paying jobs and high unemployment rates. That may explain the lower likelihood of additional earners in those labor market areas. The likelihood of self-employment in disadvantaged areas may be limited because of the lack not only of financial resources to start a small business but also because of the lack of people who would make those small businesses profitable, i.e., people with steady and relatively high incomes. More importantly, residents of disadvantaged areas tend to be isolated from other business communities outside their niche, thus may be less likely to start their own businesses. Findings are summarized in table 11.

Proposition	Findings	
	Self-employment	Additional Earners
Family/household Level		
P11. Family and household structure determines work strategies.	Married families are more likely than "non-married" families and households to have a self-employed member.	Married families are less likely than "non-married" families and households to have a self-employed member.
	Cohabiting households are more likely than single- headed households to have a self-employed member.	Cohabiting households are less likely than single- headed households to have a self-employed member.
	Female-headed households are less likely than male-headed households to have a self- employed member.	Female-headed households are less likely than male-headed families and households to have a self-employed member.
	Families with children under 18 years of age are more likely than those without children to have a self-employed member.	

Table 11. Summary of Findings

Proposition	Findings		
	Self-employment	Additional Earners	
	Families with preschool children are more likely than those with school-age and/or adolescent children to have a self-employed member.		
	Families with school-age children are less likely than those with adolescent children to have a self- employed member.		
P12. Family and household social ties to the labor market area affect work strategies.	Family/household residential mobility decreases the likelihood of self-employment.	Family/household residential mobility increases the likelihood of additional earners.	
Level 2: Labor market area	l		
P21. Non-metropolitan- metropolitan residential location determines work strategies.	Non-metropolitan families and households are more likely than those in metropolitan areas to have a self-employed member.	Non-metropolitan families and households are less likely than those in metropolitan areas to have additional earners.	
P22. Industrial structure of a labor market area affects work strategies.	The greater the prevalence of core industries in a labor market area the lower the likelihood of self-employment.	The greater the prevalence of core industries in a labor market area the greater the likelihood of additional earners.	
	Families and households living in non-metropolitan labor market areas with a greater proportion of core industries are less likely than their metropolitan counterparts to have a self-employed member.		

Proposition	Findings		
	Self-employment	Additional Earners	
P23. Residential stability of a labor market area affects work strategies.	Residential stability of a labor market area is negatively related to self- employment.		
P24. Economic disadvantage /inequality of a labor market area affects work strategies.	Economic disadvantage/ inequality of a labor market area is negatively related to self- employment.	Economic disadvantage/ inequality of a labor market area is negatively related to additional earners.	

Policy Implications

The findings for this study can be used to understand families and household differences in their responses to environment surrounding them. The changes in the structure of industries and occupations and associated management decisions have different effects on families' economic resources and on the way they deal with such changes. Limited opportunities in some labor market areas or opportunities that influence available options for families. Families in metropolitan areas, for example, differ from their non-metropolitan counterparts in employment opportunities and in other alternative options for survival and/or adaptations to changes in their opportunities. With the continuing changes in the global economy, some labor market areas will benefit from new job opportunities while some others will continue to loose jobs and thus face periods of unemployment and layoffs and rising poverty and income inequalities. Policy aimed at helping families dealing with such macro changes should take into account differences in opportunities in a labor market area, not only in terms of number of jobs but also in terms of the quality of such jobs.

In addition, the findings in this study reveal that the labor market residential stability influences family and household work strategies. However, a closer look of the ways in which the labor market area residential stability and family and household work strategies are related is further needed. If stronger and dense relationships within a community and between communities help families in dealing with the changes in their environment, a recommendable policy would be what Putnam has indicated, that is, to reinvest and reinforce social capital.

Family and household strategies not only depend on larger social context in which they are embedded but also on family/household social structure. The findings in this study indicate that families and household work strategies differ depending on the family/household structure. With the continuing changes in family structures, especially single-headed and cohabiting families, policy aimed at helping families should take into consideration such changes given their differences in needs and in resources. In addition, the findings of this study indicate that families with children, especially young children, have different strategies than other families. They are more likely to have a selfemployed member, probably because having young children is a constraining factor for other opportunities. In addition, they are less likely to have additional members in the labor force because often adult members, especially adult children, may help in family child rearing responsibilities. Any policy that would help alleviate the burden of child care, especially in early ages, would allow parents to adopt strategies they normally

would not think of if they had not access to good quality and affordable child care in their vicinity. Therefore, policies that reinforce work-family relations, especially in this ongoing period of economic restructuring, would give families many alternative work strategies.

The findings of this study suggest that family and household work strategies are function of their economic capital. The income disparities between families no doubt has social and economic consequences. At the same time other social statuses such as race or immigrant statuses affect family and household work strategies. These findings may require policies not only help reduce the gap between the rich and the poor but may increase alternative choices of the poor and other disadvantaged groups, in situations such us the relocation of a major employer, a cut in welfare subsidies, a loss or decrease of an important source of income, or a loss of family social capital.

In summary, the findings have policy implications for rural development and for families. First, the labor market area social structure affects the ways families and households work strategies. The quality of jobs in an area is an important factor that help explaining the differences between labor market areas in family/household work strategies. In addition, the metropolitan and non-metropolitan differential effect on family and household work strategies should be taken into consideration in policies. Second, the family/household social structure influences whatever families do to deal with surrounding environments. Differences in structure, family-based social capital, and class should be taken into consideration and translated into adequate policies that help families to improve their well-being. The connection of families and households

with different institutions in their communities, including the world of work but also other institutions, will enhance the abilities of families and households to adapt to change in one of those the institutions.

Limitations and Future Research

While this study addresses the issue of family and household work strategies, it also has several limitations. One important limitation of this study is the use of secondary data analysis. Qualitative data would inform more about the different strategies of families and households given variable social context in which they are embedded. Families and households have different ways of adapting to whatever changes they are confronted with, given their different resources (economic, social, cultural). An in-depth interview on household work strategies would give more details of what exactly people do in their small businesses and whose household member is involved and helping out. More importantly, what is defined as an adaptive strategy for One family/household may not be an adaptive strategy at all for another family/household. As Wolf (1992:17) indicates, "if people or households were followed through time and qualitative data were gathered, there would be more awareness of how inaction may at times be part of a strategy." Also, Garrett et al. (1993) mention that "strategies are rarely defined as deliberate, self-conscious formulations of householders."

This study informs about two related family and household work strategies, selfemployment and labor force participation of non-core members. However, there are other related work strategies that need attention for future research. With the restructuring of the economy, more and more firms are relocating their businesses in

places where they can gain some profits, leaving some families in critical situations. One of the strategies for families is to commute, sometimes traveling long distances for better job opportunities in other places. Yet the competition with companies abroad will continue to influence the decisions for relocation of businesses abroad in search of cheap labor and away from unions.

Another household strategy in response to economic restructuring is **moorn**lighting. Stinson Jr. (1990) indicates that the number of multiple job holders **increased** by 52 percent from 1980 to 1989 (p3). Nelson (1999) also finds that in **addition** to individuals' regular jobs, at least one member of their respondents' household **engages** in a second activity — such a second activity is either an independent business **selling** goods and services for cash or in-kind exchanges or a second-waged activity (p28). Another related household strategy is "shift" work. With the increasing number of dual-earner families, more research is needed to analyze non-standard work schedules including working evenings, nights, week-ends or rotating schedules and how these emerging patterns of work affect family life (see Pleck and Staines 1985; Presser 1987, 1984). Future research should analyze different sources of income and support for families.

Future research is also needed to further analyze how gender affects family and household work strategies. Previous studies on informal and industrial homework activities also stress the importance of gender in explaining men and women's differences in such activities (Roldan 1987; Fernandez-Kelly 1989; Bose 1987; Gringeri 1990,1994; Dangler 1996; Boris 1994; Boris and Prügl 1996, Nelson 1999). More

research is still needed to account for the effect of gender on self-employment. Selfemployment is a productive activity that depends on capital and is linked to external economic forces, which are gendered in their structure. The consideration of gender relations is important because traditionally women, more than men, bear the responsibility of child care and other household chores (Hochschild 1989, 1997) and sex segregation remains a persistence feature of the formal labor force (Reskin and Padavic1993).

The multilevel-modeling approach no doubt has contributed significantly to the understanding of how labor market area characteristics in conjunction with family and household factors affect family and household work strategies. More analysis is still needed to account for the analysis of multilevel data and the specification of structural equations within and between labor market areas. See Kaplan and Elliott (1997) and Muthén (1994) for a review of such types of models. These models would allow to capture the complex social relations that exist within and between labor market areas.

Finally, optimal measures of social capital are further needed to better address the concept of social capital and how it influences work strategies. There are challenges associated with the use of social capital including its conceptualization and measurement. Can social capital be measured? Social capital is a multidimensional and a multilevel concept. Many studies have identified useful proxies of social capital using indicators such as trust, solidarity, norms of reciprocity, networks, membership in associations or social groups, ethnic diversity, social mobility, civic involvement and community engagement, community ties, community integrity and social structure, the

presence of long-term elderly members in a community and social interactions in a community etc. Social capital is not only a multidimensional concept but also it is measured at different levels of analysis. At the family level, social capital is conceptualized as a resource for its members. At the community level, social interactions among neighbors, friends, and groups generate social capital. At the firm level or any other organization, social capital is used to build and sustain efficient organizations including relations of trust among its members and working together for the common goal. Ethnic groups and other social groups provide examples of people who share common values and culture can band together for the mutual benefits. At the society level, a civic society, the functioning of the state and/or government are central to the welfare of society. Thus, measuring social capital is challenging because it is difficult to measure things like trust or community civic engagement but it is possible when someone identifies "good" proxies. Any measurement of a concept depends on ones' theory and conceptual framework.

In this study, social capital is used at both the family and labor market area levels. Family and household structure and family ties to communities as measured by the family residential moves, are used as a proxy for social capital. Both family structure and residential mobility were used as proxies for social capital (Coleman (1988); Hagan et al. 1996; McLanahan and Sanderfur 1994). However, they are crude measures of social capital. Further research is still needed to show how different family structures are endowed with different social capital and how they affect different work strategies. In this study, I find that, after controlling for other family characteristics, married families are more likely than other families to have a self-employment member, cohabiting households have a greater likelihood of self-employment than single-headed households, and male-headed families are more likely than female-headed households to have a selfemployment member. I also find that single-headed families are more likely than married and cohabiting families to have additional earners. This implies that intrafarmily / household relations have tremendous effect on self-employment and employment of its members. More research is needed to answer the following questions: What kinds of social ties exist in these different family structures? To what extent these social ties generate social capital that can be used by family members to do what they do best for their families? Families are sources of information for employment opportunities. They are also sources of investment money for family business. Family members are also used as cheap labor in family businesses. Family members are often the primary clients of family businesses' products.

Social capital resides in social relations within families and households that are beyond the presence or not of spouses or partners. It exists in the social interactions between family members, in their understandings and working together, in their social solidarity and trust, and in the long-run stability of the relationship. An emphasis here is not just on the presence of social ties but also the quality of those ties. An account of these social relations within families may explain why married families have greater social capital. A proper measure of social capital at the family level ought to account for these intra-family relations.

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Families are not isolated entities, they are well connected to communities in which they live in, particularly to institutions whin those communities. According to Coleman (1988), Hagan et al. (1996), McLanahan and Sanderfur (1994), leaving a community tends to destroy established bonds, thus depriving family and children a major source of social capital (see also Portes (1998). However, family-based social capital tends to compensate the loss of community social capital due to family moves (Hagan et al. 1996). This implies the need to analyze social capital at both family and community level. Family moves, however, are not very a good proxy for social capital. Some families may move out from a community and gain community social capital, especially, if they move in a community in which they have friends and relatives, a community in which they grew up and consider home. Further research needs to distinguish family moves within the same community from moves outside the community. Moves within the same area may not involve changing schools or other losses of social capital (Hagan et al. 1996). Also, families may stay longer in a community and have greater social capital due to friends and relatives nearby but remain isolated to the rest of the community, thus be deprived of sources of vital information and employment opportunities (Sack 1974; Wilson (1987, 1996). Thus, what is needed is a model that accounts for different social networks in community and how those networks are linked or eventually isolated.

Another limitation of this study is the use of cross-sectional data. Longitudinal data would enrich the analysis of household work strategies. It would allow to analyze family and work strategies overtime. Although, the macro-micro contextual framework

enriches the analysis of household work strategies, it is yet limited. It would be enriching to know when a particular strategy occurs and whether it is due to changes in family/household structure or to macro changes in the environment surrounding the family/household including not only economic but also political and social changes. Because social capital inheres in social structures and that social structures change overtime, a dynamic analysis of social capital is needed to fully understand its effects on work strategies in a given period. The life course perspective (Elder 1994; Hagan et al. 1996) considers the long-term implications of the interdependency of family members' lives, especially those of parents and children, and of the ways in which parental involvement in children's lives can, in addition to its main effects, also condition or buffer the effects of losses of social capital a result of social change such as a family move. This is true, mutatis mutandis, of long-term relationships that can help families to deal with stressful events or adopt any strategy as a result of changes in other environments surrounding the family. Therefore, a longitudinal study is needed to not only capture when specific events, such as work strategies, occur, but also to capture the effect of time-varying predictors such as social capital.

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APPENDICES

LABOR MARKET AREAS UNDER STUDY

Kalamazoo Van Buren		Allegan	Ionia	Kent	Montcalm	Muskegon	Newaygo	Oceana	Ottawa		Antrim	Benzie	Charlevoix	Cheboygan	Emmet	and Traverse	Kalkaska	Leelanau		Alcona	Alpena	Crawford	losco	Aontmorency	Ogemaw	Oscoda
121 121		122	122	122	122	122	122	122	122		123	123	123	123	123	123 G	123	123		124	124	124	124	124 N	124	124
26077 26159		26005	26067	26081	26117	26121	26123	26127	26139		26009	26019	26029	26031	26047	26055	26079	26089		26001	26007	26039	26069	26119	26129	26135
Wayne	Clinton	Eaton	Ingham	•	Clare	Gratiot	Isabella		Arenac	Bay	Gladwin	Huron	Midland	Saginaw	Tuscola		Lake	Manistee	Mason	Mecosta	Missaukee	Osceola	Wexford		Barry	Calhoun
116	117	117	117		118	118	118		119	119	119	119	119	119	119		120	120	120	120	120	120	120		121	121
26163	26037	26045	26065		26035	26057	26073		26011	26017	26051	26063	26111	26145	26157		26085	26101	26105	26107	26113	26133	26165		26015	26025
COUNTY NAME	Alger	Chippewa	Delta	Dickinson	Iron	Luce	Mackinac	Marquette	Menominee	Schoolcraft	Florence	Marinette		Hillsdale	Jackson	Lenawee		Genesee	Lapeer	Livingston	Macomb	Oakland	St. Clair	Sanilac	Shiawassee	Washtenaw
LMA90	114	114	114	114	114	114	114	114	114	114	114	114		115	115	115		116	116	116	116	116	116	116	116	116
Sdia	26003	26033	26041	26043	26071	26095	26097	26103	26109	26153	55037	55075		26059	26075	26091		26049	26087	26093	26099	26125	26147	26151	26155	26161

c	veneca	Wyandot		Allen	Auglaize	Mercer	Putnam	Van Wert		Monroe	Defiance	Fulton	Henry	Lucas	Ottawa	Paulding	Williams	Mood		La Porte	Marshall	t. Joseph	Starke	Berrien	Cass		Elkhart	Lagrange	Noble	Branch	t. Joseph		Fulton
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	133	133		134	134	134	134	134		135	135	135	135	135	135	135	135	135		136	136	136	136	136	136		137	137	137	137	137		138
	3914/	39175		39003	39011	39107	39137	39161		26115	39039	39051	39069	39095	39123	39125	39171	39173		18091	18099	18141	18149	26021	26027		18039	18087	18113	26023	26149		18049
	Butler	lermont	amilton	Warren		earborn	Decatur	ranklin	Ohio	Ripley	zerland		Clark	rawford	Floyd	larrison	efferson	hington	Bullitt	Carroll	Henry	offerson	Marion	Nelson	Oldham	Shelby	Spencer	Trimble	hington	I	lancock	Hardin	ındusky
		U	H			Δ		H			Swit			Ö		-	ň	Was				ň			•		•		Was		jili,		Š
	121	127	127	127		128	128	128	128	128	128		131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131		133	133	133
	1065	39025	39061	39165		18029	18031	18047	18115	18137	18155		18019	18025	18043	18061	18077	18175	21029	21041	21103	21111	21155	21179	21185	21211	21215	21223	21229		39063	39065	39143
NAME	Dtsego	ue Isle	mmon		ngign	Clark	linton	Darke	ayette	Jreene	zhland	Logan	Miami	omery	Preble	Shelby	I	ayette	Union	Vayne	•	Boone	racken	npbell	eming	allatin	Grant	centon	Lewis	Mason	dleton	Adams	Brown
COUNTY		Presq	Rosco		Chan		U		щ	U	Hij		_	Montg				щ		-			Ē	Car	FI	G		×			Pen		-
LMA90	124	124	124		125	125	125	125	125	125	125	125	125	125	125	125		126	126	126		127	127	127	127	127	127	127	127	127	127	127	127
FIPS	26137	26141	26143		39021	39023	39027	39037	39047	39057	39071	39091	39109	39113	39135	39149		18041	18161	18177		21015	21023	21037	21069	21077	21081	21117	21135	21161	21191	39001	39015

	i Wabash 18145 142 Sheiby 18037 147 Dub	18051 147 Gibs) Cass 18005 143 Bartholomew 18123 147 Per	Howard 18071 143 Jackson 18125 147 Pil	Miami 18079 143 Jennings 18129 147 Pose	Pulaski 18143 143 Scott 18147 147 Spence	Tipton 147 Vanderburg	. 18021 144 Clay 18173 147 Warrici	Blackford 18107 144 Montgomery	Delaware 18121 144 Parke 17047 148 Edward) Grant 18133 144 Putnam 17101 148 Lawrence) Henry 18153 144 Sullivan 17159 148 Richland	Madison 18165 144 Vermillion 17191 148 Wayn	Randolph 18167 144 Vigo 17193 148 Whit	18083 148 Kno	Adams 17183 145 Vermilion	. Allen 18007 145 Benton 18073 149 Jasper	. De Kalb 18015 145 Carroll 18089 149 Lake	Huntington 18023 145 Clinton 18111 149 Newtor	Jay 18045 145 Fountain 18127 149 Porte	Steuben 18157 145 Tippecanoe	Wells 18171 145 Warren 39019 150 Carrol	Whitley 18181 145 White 39031 150 Coshoctor	39067 150 Harrison	Boone 18027 146 Daviess 39075 150 Holme	Brown 18055 146 Greene 39151 150 Star	Hamilton 18093 146 Lawrence 39157 150 Tuscarawa	Hancock 18101 146 Martin 39169 150 Wayn	Hendricks 18105 146 Monroe	Johnson 18117 146 Orange 39043 151 Eri	Marion 18119 146 Owen 39077 151 Huro	Morgan 39093 151 Lorai
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	Boyd	Carter	Elliott	Jreenup	Rowan	awrence	Cabell	Wavne		Baraga	Jogebic	oughton	weenaw	tonagon	Ashland	Bayfield	Forest	Iron	Oneida	Price	Vilas		Barron	Burnett	Polk	Rusk	Sawyer	ashburn		McLeod	Meeker	edwood	Renville
				J	•	2 L	i					Η	Ke	Ö	-	щ												Ä		F		Å	padaq.
	171	171	171	171	171	171	171	171		210	210	210	210	210	210	210	210	210	210	210	210		211	211	211	211	211	211		212	212	212	212
	21019	21043	21063	21089	21205	39087	54011	54099		26013	26053	26061	26083	26131	55003	55007	55041	55051	55085	55099	55125		55005	55013	55095	55107	55113	55129		27085	27093	27127	27129
	ackson	Pike	Ross	Scioto	Vinton		Athens	Gallia	Meigs	Mason		laware	urfield	anklin	ocking	Knox	icking	adison	kaway	Union		shland	iwford	Aarion	lorrow	chland		nbi ana	noning	Iluduu	vrence	<i>dercer</i>	
	ſ						4			I		Ā	Fa	Fr	Ϋ́Η			Ŵ	Pic			A	C	~	Σ	Ř		Colun	Mał	L 2	Lav	4	
	157	157	157	157	157		158	158	158	158		159	159	159	159	159	159	159	159	159		160	160	160	160	160		164	164	164	164	164	
	39079	39131	39141	39145	39163		39009	39053	39105	54053		39041	39045	39049	39073	39083	39089	39097	39129	39159		39005	39033	39101	39117	39139		39029	39099	39155	42073	42085	
VAME		abul a	hoga	auga	Lake	edina	rtage	mmit		ngton	skson	sants	itchie	Wirt	Vood		msey	organ	mmgu	Voble	Perry	•	erson	ooke	icock		mont	onroe	shall	Ohio	lyler	etzel	
COUNTY N		Asht	Cuya	.5		X	Pc	Su		Washi	Jac	Plea	R		-		Gue	Ŵ	Muski	~			Jeff	B	Har		Bel	Ň	Mau		-	3	
LMA90		152	152	152	152	152	152	152		153	153	153	153	153	153		154	154	154	154	154		155	155	155		156	156	156	156	156	156	
FIPS		39007	39035	39055	39085	39103	39133	39153		39167	54035	54073	54085	54105	54107		39059	39115	39119	39121	39127		39081	54009	54029		39013	39111	54051	54069	54095	54103	

Tandin		Cedar	hnson	Louisa	catine	ington)	Senton	Iowa	Jones	Linn		Davis	ferson	eokuk	ahaska	Aarion	lonroe	Buren	apello	ı	itowoc	oygan		alumet	du Lac	n Lake	gamie	upaca	ushara	lebago	
-	•		Jo		Mus	Wash		щ						Jef	×	Ÿ	4	2	Van	3		Mani	Sheb		J	Fond	Greet	Outa	Ň	Wa	Winr	
020		221	221	221	221	221		222	222	222	222		223	223	223	223	223	223	223	223		224	224		225	225	225	225	225	225	225	
19083		19031	19103	19115	19139	19183		19011	19095	19105	19113		19051	19101	19107	19123	19125	19135	19177	19179		55071	55117		55015	55039	55047	55087	55135	55137	55139	
Crow Wine	ltasca		Dodge	Fillmore	Freeborn	Goodhue	Mower	Olmsted	Wabasha		Cerro Gordo	Chickasaw	Floyd	Hancock	Howard	Mitchell	Winnebago	Winneshick	Worth		Jasper	Marshall	Poweshiek	Tama		Black Hawk	Bremer	Buchanan	Butler	Fayette	Franklin	Grundy
216	216		217	217	217	217	217	217	217		218	218	218	218	218	218	218	218	218		219	219	219	219		220	220	220	220	220	220	220
27035	27061		27039	27045	27047	27049	27099	27109	27157		19033	19037	19067	19081	19089	19131	19189	19191	19195		19099	19127	19157	19171		19013	19017	19019	19023	19065	19069	19075
COUNTY NAME		Blue Earth	Brown	Le Sueur	Nicollet	Rice	Steele	Waseca	Watonwan		Benton	Mille Lacs	Sherburne	Stearns		Anoka	Carver	Chisago	Dakota	Hennepin	Isanti	Kanabec	Pine	Ramsey	Scott	Washington	Wright	Pierce	St. Croix		Aitkin	Cass
LMA90	1	213	213	213	213	213	213	213	213		214	214	214	214		215	215	215	215	215	215	215	215	215	215	215	215	215	215		216	216
FIPS		27013	27015	27079	27103	27131	27147	27161	27165		27009	27095	27141	27145		27003	27019	27025	27037	27053	27059	27065	27115	27123	27139	27163	27171	55093	55109		27001	27021

	Macon	Moultrie	Piatt	Shelby	•	Hancock	Henderson	Des Moines	Henry	Lee	Clark		Fulton	Knox	McDonough	Warren		Henry	Mercer	Rock Island	Stark	Clinton	Jackson	Scott		Bureau	La Salle	Marshall	Mason	Peoria	Putnam	Tazewell	Wandford
	235	235	235	235		236	236	236	236	236	236		237	237	237	237		238	238	238	238	238	238	238		239	239	239	239	239	239	239	239
	17115	17139	17147	17173		17067	17071	19057	19087	11161	29045		17057	17095	17109	17187		17073	17131	17161	17175	19045	19097	19163		17011	17099	17123	17125	17143	17155	17179	17203
	Green	Lafayette	•	Columbia	Dane	Iowa	Marquette	Richland	Sauk		Jo Daviess	Allamakee	Clayton	Delaware	Dubuque		Clark	Clay	Coles	Crawford	Cumberland	Edgar	Effingham	Fayette	Jasper	•	De Witt	Livingston	McLean		Champaign	Douglas	Ford
	230	230		231	231	231	231	231	231		232	232	232	232	232		233	233	233	233	233	233	233	233	233		234	234	234		235	235	235
	55045	55065		55021	55025	55049	55077	55103	55111		17085	19005	19043	19055	19061		17023	17025	17029	17033	17035	17045	17049	17051	17079		17039	17105	17113		17019	17041	17053
COUNTY NAME	Brown	Door	Kewaunee	Langlade	Menominee	Oconto	Shawano		Adams	Clark	Lincoln	Marathon	Portage	Taylor	Wood		Winona	Buffalo	Chippewa	Dunn	Eau Claire	Jackson	Pepin	Trempealeau	•	Houston	Juneau	La Crosse	Monroe	Vernon		Crawford	Grant
LMA90	226	226	226	226	226	226	226		227	227	227	227	227	227	227		228	228	228	228	228	228	228	228		229	229	229	229	229		230	230
FIPS	55009	55029	55061	55067	55078	55083	55115		55001	55019	55069	55073	55097	55119	55141		27169	55011	55017	55033	55035	55053	55091	55121		27055	55057	55063	55081	55123		55023	55043

Aenard	Aorgan	gamon	huyler	Scott		Bond	alhoun	Jersey	coupin	adison	gomery		Adams	Pike	Lewis	Marion	Pike	Ralls		Baxter	Boone	Carroll	eburne	Fulton	ndence	Izard	Marion	lewton	Searcy	Sharp	Stone	Buren
~	2	San	S				Ű		Ma	Σ	Montg	•	•			~ 4						•	Ū		Indeper	I	~	Z				Van
248	248	248	248	248		249	249	249	249	249	249		250	250	250	250	250	250		251	251	251	251	251	251	251	251	251	251	251	251	251
17129	17137	17167	17169	17171		17005	17013	17083	17117	17119	17135		17001	17149	29111	29127	29163	29173		5005	5009	5015	5023	5049	5063	5065	5089	5101	5129	5135	5137	5141
	Dent	Maries	Phelps	Pulaski	Reynolds	•	Iron	Madison	Perry	Ste. Genevieve	St. Francois	Washington	I	Monroe	St. Clair	Audrain	Crawford	Franklin	Gasconade	Jefferson	Lincoln	Montgomery	St. Charles	St. Louis	Warren	St. Louis city		Brown	Cass	Christian	Greene	Logan
	245	245	245	245	245		246	246	246	246	246	246		247	247	247	247	247	247	247	247	247	247	247	247	247		248	248	248	248	248
	29065	29125	29161	29169	29179		29093	29123	29157	29186	29187	29221		17133	17163	29007	29055	29071	29073	29099	29113	29139	29183	29189	29219	29510		17009	17017	17021	17061	17107
COUNTY NAME	Kenosha	Racine	Rock	Walworth		Dodge	Jefferson	Milwaukee	Ozaukee	Washington	Waukesha		Iroquois	Kankakee		Cook	DuPage	Grundy	Kane	Kendall	Lake	McHenry	Will		Boone	Carroll	DeKalb	Lee	Ogle	Stephenson	Whiteside	Winnebago
LMA90	240	240	240	240		241	241	241	241	241	241		242	242		243	243	243	243	243	243	243	243		244	244	244	244	244	244	244	244
FIPS	55059	55101	55105	55127		55027	55055	55079	55089	55131	55133		17075	17091		17031	17043	17063	17089	17093	17097	17111	17197		17007	17015	17037	17103	17141	17177	17195	17201

I inn	unuu Tiiseese	TIMINGSTON	Macon	Mercer	Monroe	Putmam	Randolph	Saline	Schuyler	Scotland	Shelby	Sullivan		Big Stone	Traverse	Sioux	Brown	Campbell	Corson	Day	Edmunds	Faulk	Grant	McPherson	Marshall	Roberts	Spink	Walworth		Becker	Beltrami	Clearwater	Hubbard
261	101	107	261	261	261	261	261	261	261	261	261	261		266	266	266	266	266	266	266	266	266	266	266	266	266	266	266		267	267	267	267
20115	2112	17767	29121	29129	29137	29171	29175	29195	29197	29199	29205	29211		27011	27155	38085	46013	46021	46031	46037	46045	46049	46051	46089	46091	46109	46115	46129		27005	27007	27029	27057
		Bollinger	Butler	Cape Girardeau	Carter	Mississippi	New Madrid	Ripley	Scott	Stoddard	Wayne	•	Mississippi	Dunklin	Pemiscot		Carlton	Cook	Koochiching	Lake	Lake of the Woods	Roseau	St. Louis	Douglas	,	Appanoose	Lucas	Wayne	Adair	Carroll	Chariton	Grundy	Knox
	757	107	257	257	257	257	257	257	257	257	257		258	258	258		260	260	260	260	260	260	260	260		261	261	261	261	261	261	261	261
	C100C	11067	29023	29031	29035	29133	29143	29181	29201	29207	29223		5093	29069	29155		27017	27031	27071	27075	27077	27135	27137	55031		19007	19117	19185	29001	29033	29041	29079	29103
COUNTY NAME		Oregon	Ozark	Shannon	Texas		Massac	Pope	Ballard	Calloway	Carlisle	Livingston	McCracken	Marshall		Clinton	Hamilton	Jefferson	Marion	Washington	•	Alexander	Franklin	Gallatin	Hardin	Jackson	Johnson	Perry	Pulaski	Randolph	Saline	Union	Williamson
LMA90	2 C L		251	251	251		254	254	254	254	254	254	254	254		255	255	255	255	255		256	256	256	256	256	256	256	256	256	256	256	256
FIPS		2 4 T 4 A	29153	29203	29215		17127	17151	21007	21035	21039	21139	21145	21157		17027	17065	17081	17121	17189		17003	17055	17059	17069	17077	17087	17145	17153	17157	17165	17181	17199

	Humboldt	Ida	Pocahontas	Sac	Webster	Wright	•	Adair	Audubon	Boone	Carroll	Cass	Clarke	Crawford	Dallas	Decatur	Greene	Guthrie	Madison	Polk	Ringgold	Shelby	Story	Union	Warren		Monona	Plymouth	Woodbury	Burt	Cuming	Dakota	Dixon
	274	274	274	274	274	274		275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275		280	280	280	280	280	280	280
	19091	19093	19151	19161	19187	19197		19001	19009	19015	19027	19029	19039	19047	19049	19053	19073	19077	19121	19153	19159	19165	19169	19175	19181		19133	19149	19193	31021	31039	31043	31051
	Wadena		Chippewa	Kandiyohi	Lac qui Parle	Lincoln	Lyon	Pipestone	Rock	Swift	Yellow Medicine		Lyon	O'Brien	Osceola	Sioux	Cottonwood	Jackson	Murray	Nobles		Clay	Dickinson	Emmet	Kossuth	Palo Alto	Faribault	Martin		Buena Vista	Calhoun	Cherokee	Hamilton
	269		271	271	271	271	271	271	271	271	271		272	272	272	272	272	272	272	272		273	273	273	273	273	273	273		274	274	274	274
	27159		27023	27067	27073	27081	27083	27117	27133	27151	27173		19119	19141	19143	19167	27033	27063	27101	27105		19041	19059	19063	19109	19147	27043	27091		19021	19025	19035	19079
COUNTY NAME	Kittson	Mahnomen	Marshall	Pennington	Polk	Red Lake	Cavalier	Grand Forks	Pembina	Steele	Traill	Walsh		Clay	Norman	Wilkin	Barnes	Cass	Dickey	Griggs	LaMoure	Ransom	Richland	Sargent	Stutsman		Douglas	Grant	Morrison	Otter Tail	Pope	Stevens	Todd
LMA90	267	267	267	267	267	267	267	267	267	267	267	267		268	268	268	268	268	268	268	268	268	268	268	268		269	269	269	269	269	269	269
FIPS	27069	27087	27089	27113	27119	27125	38019	38035	38067	38091	38097	38099		27027	27107	27167	38003	38017	38021	38039	38045	38073	38077	38081	38093		27041	27051	27097	27111	27121	27149	27153

	Ti al ano	aclede	Polk	Vebster	Wright)	Barry	wrence	Stone	Taney		lourbon	herokee	rawford	Barton	Cedar	Dade	Jasper	Newton	Vernon	Ottawa		Benton	Aadison	hington	Donald	elaware						
	-		-	-				ר				ш	σ	Ü										~	Was	W	Δ						
	207	167	297	297	297		298	298	298	298		299	299	299	299	299	299	299	299	299	299		303	303	303	303	303						
	20005	20105	29167	29225	29229		29009	29109	29209	29213		20011	20021	20037	29011	29039	29057	29097	29145	29217	40115		5007	5087	5143	29119	40041						
	5		Daviess	DeKalb	Gentry	Harrison	Henry	Holt	Jackson	Johnson	Lafayette	Nodaway	Pettis	Platte	Ray	St. Clair	Worth		Boone	Callaway	Camden	Cole	Cooper	Howard	Miller	Moniteau	Morgan	Osage		Christian	Dallas	Douglas	Greene
	295	205	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295		296	296	296	296	296	296	296	296	296	296		297	297	297	297
	29047	29049	29061	29063	29075	29081	29083	29087	29095	29101	29107	29147	29159	29165	29177	29185	29227		29019	29027	29029	29051	29053	29089	29131	29135	29141	29151		29043	29059	29067	29077
COUNTY NAME	Thurston	Wavne	l Inion		Adams	Fremont	Harrison	Mills	Montgomery	Page	Pottawattamie	Taylor	Cass	Dodge	Douglas	Sarpy	Saunders	Washington)	Atchison	Doniphan	Johnson	Leavenworth	Linn	Miami	Wyandotte	Andrew	Atchison	Bates	Benton	Buchanan	Caldwell	Cass
LMA90	280	280	280		282	282	282	282	282	282	282	282	282	282	282	282	282	282		295	295	295	295	295	295	295	295	295	295	295	295	295	295
FIPS	31173	31179	46127		19003	19071	19085	19129	19137	19145	19155	19173	31025	31053	31055	31153	31155	31177		20005	20043	20091	20103	20107	20121	20209	29003	29005	29013	29015	29021	29025	29037

