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PERCEPTIONS OF SELECTED HOUSEHOLD PRODUCTION BY MICHIGAN HUSBANDS AND WIVES: ACTIVITIES, CHOICES, AND VALUE

by

Patricia Marie Ormsby

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ABSTRACT

PERCEPTIONS OF SELECTED HOUSEHOLD PRODUCTION BY MICHIGAN HUSBANDS AND WIVES: ACTIVITIES, CHOICES, AND VALUE

By

Patricia Marie Ormsby

Families can maintain or raise their level of living by using their own human resources to produce goods and services. Household production uses human resources as non-paid labor with value because of its use within the family. This study identified selected household production activities as a contribution to real income. Using descriptive methodologies, the study examined household production by urban, small town, and rural families in mid-Michigan. A random sample of 107 husbands and wives whose oldest child was between the ages of six and twelve responded to an interview and self-administered questionnaire.

Household production activities included 178 possible activities both inside the home (within the family) and outside the home (interacting with other families and the community). The selected household production activities included those which need a degree of skill, and can be substituted with market activities. Amount of household production, frequency of decision choices and the perceived monetary value of household production were examined. Differences between husbands' and wives' responses and differences associated with the variables such as location of residence, family income, family

employment, and household size were analyzed by t-test and analysis of variance.

On the average, families participated in half of the household production activities in the survey. More production activities were done inside the home than outside. In addition, more production activities were done by husband and wife working together than by either of them working alone. Husbands and wives displayed significant differences in type and amount of household production participation. Given production choices on a smaller group of household production activities, respondents indicated the family chose to do most activities, hired or bought less, and omitted few activities. Husbands' and wives' perceptions of production choices differed significantly. Husbands and wives perceived the value of their combined average annual production contribution to be $2,736 per family. Demographic variables showed significant differences between groups for selected production activities, yet no overall significance associated with demographic variables and household production. Significant differences in activities of husbands and wives suggest that traditional sex role patterns prevail.

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Chapter 1

INTRODUCTION

Prior to industrialization, the household was the primary location for production. The major purpose of production was to supply goods and services to meet the needs of household members and to maintain the household. Men and women rarely worked outside the home environment (Sokoloff, 1977). With industrialization, income-producing work moved from the home to the factory. As business replaced many of the income-producing activities which were an integral part of daily household life, the perceived importance of the remaining household production activities, which had only use value for the family, diminished (Beutler and Owen, 1980). Household production tended to be done within the privacy of the household and therefore did not receive economic value or status (Reid, 1934).

Kuznets (1941) has noted a relationship between the amount of household production and the state of the economy. In times when monetary income has been scarce, as during periods of depression, inflation, or unemployment, production activities of the household have increased (Kuznets, 1941). A similar pattern appears in the depressed economy of the early 1980's.

During the 1970-1980 decade, the American economy was plagued by inflation and unemployment. Caplovitz (1981) reported that the majority

of American families were adversely affected by the current inflation and recession. He reported that the most common response among families for adapting to a slumping economy was lowered consumption of purchased goods and services. Other mechanisms for adapting included taking second jobs, working overtime, greater self-reliance, bargain hunting, and sharing with others.

A parallel trend among families has been to maintain or improve their level of living by increasing the amount of goods and services produced in the home environment. These efforts are aimed toward increasing real income and are believed to be a significant part of a family's total income. It has been estimated that household production, if considered, would be valued at 44 percent of America's Gross National Product (Peskin, 1982).

Escalating costs of fossil fuels may drive up costs of market processes and products causing even more families to turn to household production of goods and services. Modern families are confronted with the decision as to whether a certain good or service that is needed will be produced at home, bought in the marketplace or will not be used. This choice is an economic decision as it weighs goals and values and considers the distribution of resources.

Household production is characterized as activities performed by household members primarily for the benefit of household members. It is non-paid labor with value because of its use within the family. However, it may also have economic value in the market. Household production can be beneficial in meeting basic needs of family members, and also in building human capital of family members as they participate in various activities (Becker, 1981). Human capital in the form of

skills, time, and knowledge is used to produce goods and services instead of using monetary capital to purchase equivalent goods and services in the marketplace. Human capital may be utilized in market activity or paid work as well as household production.

In this way, household production is not simply product oriented, as in business, but is complex and interdependent in the lives of family members (Deacon and Firebaugh, 1981; Paolucci and Ching, 1982; Walker and Woods, 1976). Among other functions, household production aids in the growth and development of family members in such areas as developing values and language, teaching basic life routines and developing methods of problem solving (Paolucci, 1980). In addition to building human and material capital, it can also increase satisfaction with a family's perception of the quality of their life (Ezell, 1982).

Purpose

In the past, declining economic opportunities have resulted in increased household production activities within families. Since the early 1970's such economic conditions have existed in the United States. It would be beneficial in future planning for government, academia, and business to recognize families' efforts to adapt to the changing economic situation.

Families' efforts to adapt economically through non-paid labor for use value within the household have implications in the calculation of the Gross National Product and in the development of governmental programs designed to aid families in financial difficulty. Educationally, the development of human capital through families' efforts to provide for themselves and their needs is important to

consider. Businesses adapting to changing activities of households need to keep current with consumer demands. Currently, there is little research available on families' efforts in household production.

The purpose of this descriptive study is to identify activities which are being done within households to benefit household members and increase real income. This study is designed to explore current behaviors of husbands and wives specifically in household production. Location of the production, which could be within the private confines of the family or involving other families and the community, will be examined. The production activities of husbands and wives will be identified. Other research questions include inquiries as to how socio-economic variables relate to household production. Families residing in different geographical locations may have differences in levels of household production. Spousal employment and family income could also be significant in predicting production activities. Household size could be a significant factor in household production. Another purpose of the study is to examine the process of making decisions about household production. It is important to consider what do people choose to do for themselves, what do they choose to hire or buy, and what do they consciously leave undone. Finally, this research will examine husbands' and wives' perceptions of the value of the work they contribute to the household through their production efforts. The overall purpose of this study is to add empirical research to the theory and small amount of research that has been done on household production.

Conceptual Framework

Family Ecological Approach

Viewing specific household management and production within the broader framework of family ecology provides the structure to organize and understand the activities of the home environment. Within the family ecological approach, the family serves as the primary unit of analysis. Each family has needs that must be met to sustain life. The production process may be considered the primary method by which needs are met (Beutler and Owen, 1981). The process uses human and material resources.

In the family ecological approach, individuals and families are viewed in the context of the environment which supplies many alternative ways to meet their needs. The resources necessary to meet families' basic needs are found within themselves and their environment and are made available through interactions and transactions. A family is a system which is defined as "a set of parts coordinated to accomplish a set of goals" (Deacon and Firebaugh, 1981, p. 7). Society expects families to provide material resources for the physical maintenance of individuals, to maintain or increase family size through reproduction or adoption of children, socialize children for adult roles, maintain order within families and between families and outsiders, to maintain family morale and "produce goods and services necessary to maintain the family unit" (Hill, 1971, p. 16). The concept of a family includes the idea of people helping and sharing resources with others in the household.

The family ecological approach recognizes the basic interdependence of human systems with one another and with the environment (Andrews

et al., 1980, p. 43). The environments a family interacts with include a complex mixture of natural, human-constructed and human-behavioral components (Bubolz et al., 1979). The natural environment formed by nature is composed of physical, biological and space-time components and provides many of the resources to sustain life. The human-constructed environment consists of the physical, biological, and cultural modifications of the natural environment made by humans including buildings, technology, and scientific discoveries. The human-behavioral environments are other humans and their behaviors. These include social systems such as relatives, friends and neighbors. Both the immediate setting of the family with its physical and social surroundings and the larger societal systems with information, goods and varied services are environments for the family and provide opportunities for interaction and interdependency.

The interactions and interdependence of family and environmental systems can be a motivating force for change when disequilibrium between systems produces stress or tension. Related to this study's topic, for example, is the stress that inflation and unemployment can cause on a family system as their buying power is reduced. Family internal roles may be adapted if the mother enters the paid work force as a result. Families may choose to adapt by moderating their lifestyle or producing more for themselves. Feedback from the family to the environment can also cause changes in the formal support systems such as schools which include adult curriculum, health and other agencies; and nonformal support systems such as work and community groups or strengthened informal support systems such as networks of friends and neighbors (Andrews et al., 1980). These interdependencies illustrate the fact

that family systems are dynamic and as a result of feedback and response are constantly changing and adapting (Andrews et al., 1980).

Home Management

The family ecological approach can be applied to home management. Management in the ecological perspective is a set of particular responses and adaptations to a certain situation or environment (Deacon and Firebaugh, 1981). The process of changing and adapting within the household can be viewed as the management of environmental and human resources. The family adapts to the environment through a process using inputs, transformations, and outputs. The family also adapts by changing the environment. In any system, the input usually consists of energy as matter and information (Paolucci et. al., 1977). For families, the inputs are demands from their goals, values or events that require action as well as both human and nonhuman resources. Human resources include the cognitive, affective, or psychomotor traits or qualities within people, and nonhuman resources include temporal resources which are time and methods of using time, economic resources of money and property and environmental resources which are both physical and social (Nickell, Rice, and Tucker, 1976). Transformations are the processes of planning and implementing that change input into output. Outputs are met demands and used resources that result from the process of transformation. Information from the environment about the output returns to the family system as feedback (Deacon and Firebaugh, 1981).

A process of behavioral interactions allocates resources to attain goals. The process includes identifying and utilizing the family's

values and goals, resources and decision-making capabilities. It also includes identifying roles, division of labor, problem-solving techniques, and communicating with others (Nickell, Rice, and Tucker, 1976). The availability and use of resources can affect family processes (Melson, 1980). The family brings to the management process its own human resources including "varying levels of stability, openness to information, cohesiveness, flexibility, and proneness to conflict" (Melson, 1980, pg. 167). The use of time as a resource is important in the adaptation to the environment. Through use of time, families show present, past, and future time orientations. Family members assign priorities and sequence behavior of activities based on values. For example, participation in work outside the home affects time left to perform tasks related to the family (Melson, 1980).

An integral part of management is the decision-making process. Economic decision making, relevant to the household production decision-ing process, has been described by Diesing (1962). Two processes important in economic decision-making are exchange and allocation of resources. Exchange is a transfer of resources between units whereas allocation is a transfer of resources to alternative ends within the unit. Not all goals or ends can be achieved due to the scarcity of resources or means and the resulting competition (Diesing, 1962). Allocation is based on economizing which is "an evaluation and selection of ends, and it occurs when two or more ends are in competition with each other" (Diesing, 1962, pg. 43). The given goal is to maximize ends. Economizing is necessary when a problem exists and is possible only as alternative ends are comparable in some method of measurement. The values of a culture can determine which ends can be alternative and

what method of valuation can be used. Money measurement has become very widespread. Utility, defined as the usefulness or satisfaction with alternatives, can be measured and compared depending on whether the means and ends have a market price. The vaguest measures of utility occur in the economic activities furthest from the marketplace, such as the household, because measurement of emotional or psychological returns is difficult (Diesing, 1962). Becker (1981), however, has gone beyond traditional economic analysis to include nonmaterial behavior such as marriage, births, divorce, and division of labor in households in economic frameworks. Exchange, in contrast to allocation, is a transfer of values between economic units and is based on bargaining which is a social procedure involving two socially related economic units. Exchange is common both within and between families and other groups.

In summary, decision making is crucial to household production. Goals and resources must be weighed and allocated in order to meet family needs. A family may decide that putting most of its resources into market labor is to its best advantage or it may decide that using its human resources in household production is the optimal method of meeting the family's needs. Ecological conditions such as family location, income, employment, or social conditions can influence family economic decisions by placing constraints upon or allowing more resource utilization.

Household Production

A major methodological problem in research on household production is a definition of the activities which clearly identify production and

consumption (Hefferan, 1982a). A specific concern of the current research is the distinction between housework and household production, a distinction which is not clear in home management literature. Some consider these two terms synonymous while others view them as different concepts. Reid (1934), a pioneer in the conceptualization of household production, described household production as "unpaid activities which are carried on, by and for the members" (p. 11) which could be substituted with market production. In addition to providing the material goods for the household, Reid emphasized the human contribution of familial interaction and development through the production process. Since Reid's work have come many definitions of activities within the home. Terms such as housework, household production, and household obligations have all been used to describe similar phenomena. Major definitions and descriptions of household work and production are compiled in Figure 1.

Major theoretical work on household production has been done by Beutler and Owen who developed a theoretical model of household production using a family ecological perspective (Beutler and Owen, 1980, 1981; Owen and Beutler, 1981). The basic assumption of the model is that the family is a decision-making unit; this definition corresponds to the family ecological view. As a decision making unit, the basic task of the family is "to choose among competing ends in order to maximize satisfactions (or utility) subject to the limitations of scarce resources" (Owen and Beutler, 1981, p. 158) which clearly follows the economic decision-making process described by Diesing (1962) as part of economic rationality. Beutler and Owen describe three major components of the home production model: utility function, home production

Figure 1.--Definitions and Descriptions of Household Production Activities

Author* Term Used	Definition	Description
1. Reid, 1934 Household Production	"Unpaid activities which are carried on, by and for the members, which activities might be replaced by market goods, or paid services, if circumstances such as income, market conditions, and personal inclinations permit the services to be delegated to someone outside the household groups" (p. 11).	Provision of material and non-material goods such as household crafts requiring manual labor, household services, family relationships, available within the home, management including choice-making, shopping, child care and training, special care of family members.
2. Kyrk, 1953 Consumer Production	Production, for the use of the producer or his family, is the creation of utilities as services or economic goods. It is unspecialized, small scale, and decentralized production (pp. 244-247). It "is more a process of creating time, place, and possession utilities and less one of creating form utilities than heretofore" (p. 250).	Follows Reid's definition and includes only activities which can be delegated to those outside the family to differentiate production from leisure and consumption.
3. Becker, 1965 New Home Economics	Household "combines capital goods, raw materials and labour to clean, feed, procreate, and otherwise produce useful commodities" (p. 496).	
4. Morgan et. al., 1966 Home Production	"Unpaid productive activity other than regular housework" (p. 125) that "is largely a substitute for marketable goods and services" (p. 130).	Repairs, major house cleaning, painting, sewing, growing food, canning or freezing food, and other things that could save money.

*Authors listed in chronological order of work cited

Figure 1 (cont'd.)

Author* Term Used	Definition	Description
5. Steidl and Bratton, 1968 Work of Homemakers		Meal and other food preparation, dish-washing, regular and special care of the house, washing, ironing, and other care of clothes, care of family members, marketing, and records.
6. Robinson et. al., 1972 Household Care	Non-routine productive household activities	Gardening, animal care, shopping for goods other than food, home repairs, work in maintaining heat and water, paying household bills, care of elderly or ill family members.
7. Fitzsimmons and Williams, 1974 Household production	Creation of utility in the home following Reid's definition	Both physical and mental activity, such as housecleaning, yard and car care, sewing, managerial decisions, shopping, paying bills, providing transportation.
8. Nickell, Rice, and Tucker, 1976 Home-related work	Activities that keep "a house functioning while meeting a certain standard of cleanliness and safety in daily living" (p. 241)	Meal preparation and after-meal clean-up, physical care of family members, care of a living unit, laundry and other care of clothing, shopping, and record keeping.
9. Walker and Woods, 1976 Household work or Household Production	"Purposeful activities performed in individual households to create the goods and services that make it possible for a family to function as a family" (p. xx)	Meal preparation, regular house care and maintenance of yard, car and pets, physical care of family members, non-physical care of family members, care and construction of clothing, shopping, and management.
10. Beutler and Owen, 1980 Home Production	"Production by and for household members with the output having use value rather than exchange value" (p. 17)	Sewing, food preparation, gardening, preparing food from scratch, re-doing furniture, home repair, automobile care, carpentry work around the home, and management through formalized planning.

Figure 1 (cont'd.)

Author* Term Used	Definition	Description
11. Juster et. al., 1980 Household Production		Investments of education, child care, medical care, home improvement, social, organization and interpersonal communication into home maintenance, personal care, shopping, cooking and market work resulting in tangible and intangible outputs.
12. Deacon and Firebaugh, 1981 Household work	"non-paid productive activities occurring primarily in the home or performed for direct use in the home" (p. 142)	Meal preparation and clean-up, laundering, straightening up and cleaning the house, running errands, marketing, child care, care of adults, gardening, animal care, and travel necessary to accomplish these tasks.

activities, and decisions on what to produce. A summary of these components follows.

1. The utility function. Families have many diverse wants and needs that they strive to realize through their economic and social activities. In traditional economic theory, optimum resource allocation leads to the greatest satisfaction which is referred to as maximum utility. Abstract goods called characteristics, including feelings of well-being and success, directly influence utility. Characteristics can be ordered according to preferences. However, meeting human needs is a basic preference. The basic needs include safety, belonging and love, esteem and ultimately, self-actualization (Maslow, 1954). Utility is not derived directly from consumption, as theorized in economics, but comes from the characteristics produced through home production activities.

2. Production activities. Production can be divided into two major categories: market production and home production. Market production involves exchange transactions using money or in-kind exchanges. "Home production is by and for household members with the output having use value rather than exchange value" (Beutler and Owen, 1980, pg. 17). Home production is further broken down into separable and inseparable production. Separable production is composed of tasks that someone outside of the family could perform such as home or car repair. Other types of home production which are not possible to delegate to a paid worker due to the "unique human attribution and relationships involved in the activity" (Beutler and Owen, 1980, pg. 18) are called inseparable home production and are of three types: intrahousehold production, interhousehold grants, and community service.

Intrahousehold production involves production within the family unit such as a parent interacting with a child. Both interhousehold grants and community service "involve one-way transfers of goods and services from one household to another or to the community at large" (Beutler and Owen, 1980, pg. 128). Inseparable home production follows many principles of the grants economy (Boulding, 1973; Bivens, 1976).

Beutler and Owen's definition divides household production into two types. The current research, in light of its purpose to identify household production to augment the real income obtained through market production, followed the definition of household production given by Beutler and Owen. However, the present research did not distinguish separable and inseparable categories as the data used fell into both categories and division into categories would not facilitate the objectives of the research.

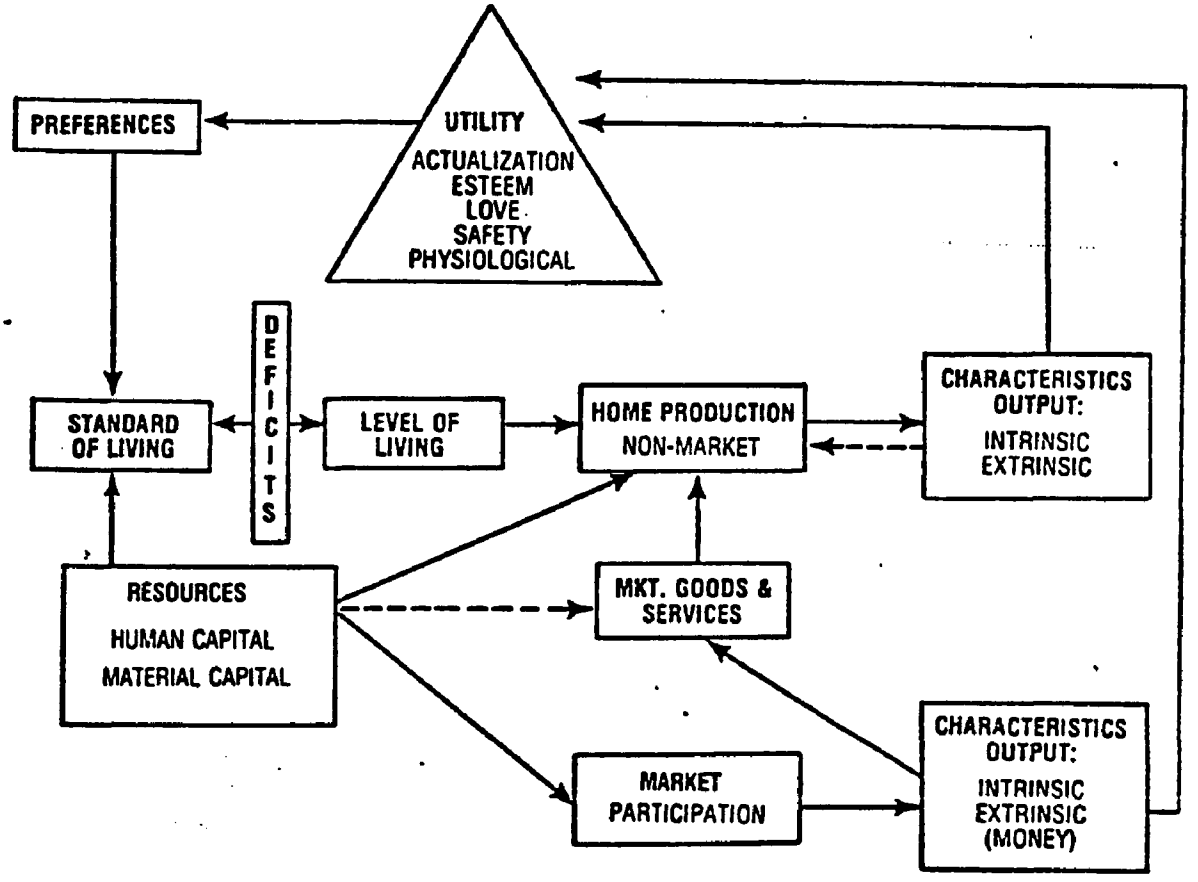
Home production is a process involving inputs, transformations, and outputs. For household production, outputs of the production include both the extrinsic characteristics and intrinsic characteristics of goods and services. Extrinsic characteristics are the measure of the production which are "external and independent of an individual's perceptions' or tastes" (Beutler and Owen, 1980, pg. 19) and which could be described as objective and universal (Lancaster, 1971). Examples include size, color, smell, capacity to perform and other properties important in decision-making (Owen and Beutler, 1981). In contrast, intrinsic characteristics are based on perception inherent to the individual and include such things as the meaning conveyed to a person due to the relationship between the producer and the individual (Beutler and Owen, 1980).

3. Decision of what to produce in the household. As mentioned as part of the utility function, two basic principles of decision-making are limited resources and family preferences. A family works toward an optimal combination of characteristics and maximum utility. This becomes a standard of living to be achieved or at least attempted (Davis, 1945; Beutler and Owen, 1980). By considering what it has and what it needs, the household can maximize utility and meet its human needs. Figure 2 shows Beutler and Owen's entire home production model (1980, pg. 24) which incorporates the three components summarized above.

Household work and production activities have been the object of much study (e.g. Reid, 1934; Robinson, 1977; Walker and Woods, 1976; Warren, 1940; Vanek, 1974). Most studies have concentrated on the traditional maintenance tasks that have been performed by women such as housework, meal preparation and clean-up, laundry and physical care of family members. This household work has been described as the activities that keep "a house functioning while meeting a certain standard of cleanliness and safety in daily living" (Nickell, Rice, and Tucker, 1976, pg. 241). The emphasis on routine maintenance is understandable as it accounts for almost four-fifths of household work time (Walker and Woods, 1976). Routine tasks are usually done in the context of other family activities and are common, discontinuous, generalized, and dovetailed with other activities and with one another.

A clear definition of household production is important to the present study. Some researchers use the terms home or household production to include all the non-market production activities carried on within the household regardless of the nature or frequency of the tasks. Others divide household work into categories due to the nature

Figure 2. -- A Home Production Activity Model



(Used with permission of the author)

From: Beutler, I.F. and Owen, A.J. A home production activity model. Home Economics Research Journal, 1980, 9, 16-26.

of the work. For example, Beutler and Owen (1980) use the categories of separable and inseparable production based on whether or not the task could be delegated to a person outside the family. Researchers studying time use often divide household work into two categories based on the frequency of the performance of the task (Morgan et. al., 1966; Robinson et. al., 1972; Walker and Woods, 1976). The first category was generally described as general housework with daily activities such as food preparation and clean-up, housecleaning, and laundry. The second category has been called by several titles including household care, other unpaid productive activities and less regular tasks. They include diverse, non-routine activities such as special house, yard, and car care, sewing, and food preservation. Some studies have focused only on the second group of activities (Church of Jesus Christ of Latter-day Saints, 1980, Owen and Beutler, 1981). All the above studies will be examined in greater detail in Chapter 2, but are mentioned here as rationale for the definition chosen for the present study.

Often in response to environmental conditions, people will choose specific strategies of resource management that they feel will best meet their needs. They will use their own efforts in certain household tasks to conserve a scarce resource such as monetary income. Of the two major categories of household work (routine and non-routine tasks), the second category would be more likely to be a situation where a family's human resources would be substituted for market services due to the infrequent nature of the tasks and the amount that could be saved from the monetary income. Routine tasks probably are already done using family human resources.

The present study focuses on the household production including efforts both within the family and with other families and the community where human resources are substituted for market goods and services. Production such as daily food preparation and clean-up, house cleaning, and laundry were not included in the questionnaire. Given the data delineated in the operational definitions, the researcher used all available data on household production activities. The majority of the data were on non-routine production activities. However, routine child care as a part of special family care was included specifically as it is a direct involvement in human capital development and in that light is an investment rather than maintenance.

Definitions

This research uses both theoretical and operational definitions which are presented next.

Theoretical Definitions

Family.--"A bonded unit of interacting and interdependent persons who have some common goals and resources, and for part of their life cycle, at least, share living space" (Andrews, et al., 1980, pg. 32). In this study, family and household are used synonymously.

Household or home production.--Nonpaid production activities performed by and for household members primarily for use in the home that facilitate the functioning of the household and provide for the well-being of household members (Deacon and Firebaugh, 1981; Walker and Woods, 1976). These activities can be substituted with goods and services in the marketplace and take a measured degree of skill. They

may use family resources or resources of other families and the community.

Level of living.--Actual bundle of characteristics attained by a household (Beutler and Owen, 1980).

Standard of living.--Household inventory, assemblage of goods for use and values reflected in lifestyle. It is not only specific goods and services, but a measure of fundamental values sought (Kyrk, 1953).

Real income.--The goods and services available for use at any period of time. In addition to money income, it includes service from owned property and possessions, fringe benefits from work or associations, and other use of human and economic resources (Nickell, Rice, and Tucker, 1976).

Operational Definitions

Family.--Consists of a husband and wife living together with the oldest child between the ages of 6 and 12.

Household production.--Includes the specific activities of: home care and repair, car care and repair, personal care, yard, lawn and other outdoor work, sewing, hobbies, and crafts, food preservation including gardening, care of family members, savings and investing, bartering services, sharing resources, using cooperatives, community recreation, community medical services, using free information, and using less expensive ways of shopping and recycling. Laundry, meal preparation and clean-up, and daily housework were not included.

Research Questions

In an effort to contribute to the study of household production the following categories were studied: household production activities, household production decision choices, and the perceived value of household production. For these categories, the following questions were posed:

1. To what extent are families participating in household production? Are there any differences in:
   a. Production activities done inside the home (basically with family members) and outside the home (with other families and community organizations)?
   b. Husbands' and wives' participation in household production?
   c. Amount of involvement according to: location of residence, family income, family employment status, or household size?
2. To what extent are families producing goods and services for themselves that are commonly produced in the marketplace? To what extent are they buying or hiring the goods and services? To what extent are they letting the activity go undone? Which activities do not apply to their situation? Are there any differences in:
   a. Husbands' and wives' participation in each of these choices?
   b. The decision choices according to: location of residence, family income, family employment status, or household size?

3. What do families perceive as the monetary value of their household production contribution? Are there any differences in:
   a. Husbands' and wives' perceptions of their contributions?
   b. The monetary value according to: location of residence, family income, family employment status, or household size?

Hypotheses

Several hypotheses were formed to contribute to the study of these research questions. These hypotheses were:

1. There is no difference between the amount of participation in household production inside the home compared to outside the home.
2. There is no difference between the amount of participation of husbands and wives in household production.
3. There are no differences in the amount of involvement in household production according to: location of residence, family income, family employment status, or household size.
4. There is no difference between husbands' and wives' perceptions of the families' household production decision alternatives.
5. There is no difference between husbands' and wives' perception of the families' household production decision alternatives according to: location of residence, family income, family employment status, or household size.

6. There is no difference in husbands' and wives' perceptions of the monetary value of their household production contributions.
7. There is no difference in husbands' and wives' perceptions of the monetary value of their household production contributions according to: location of residence, family income, family employment status, or household size.

Chapter 2

REVIEW OF LITERATURE

The purpose of this review of literature is to examine what has been theorized and studied regarding household production. This chapter will first focus on the theoretical foundations of household production. The background of the theory on household production, perspectives of the production, and other relevant theories will be discussed. Empirical research on household production will then be presented including studies on household production activities, decision choices, and value.

Background of Household Production Theory

Economic Perspective

Traditional economics has been concerned with measuring material well-being and developing appropriate accounting systems. The household has been considered the ultimate consumer of the economic system, as land, labor, and capital were all used in the market to provide goods and services for households. Economics has centered upon flows of material goods and services with the view that "individual and societal well-being depends on the combination of available goods plus available leisure" (Juster et al., 1980, pg. 2). This is further seen in the microeconomic time allocation model where the household choices were

limited to employment or leisure (Henderson and Quandt, 1971). Time working is considered "bad" and leisure time is "good" with an absence of consideration of time spent working at home (Juster et al., 1980).

Measurement of the national material well-being started in the early 1900's, as King devised the first quantitative estimates of the National Product (King, 1930). He was followed by Kuznets, Gilbert and Jaszi during the 1930's and 1940's who more clearly defined the boundaries and refined the estimates (Juster et al., 1980). Following economic theory, the boundaries developed indicated that production of goods and services took place only in the market production process, but ignored any value added within the household such as food preparation or clothing construction. Critiques of this system of accounting started in the late 1950's. Issues included: environmental benefits and costs, the future investment compared to current consumption in health and education, and the consideration of nonmarket products from the household (Juster et al., 1980).

Ideas from various economists helped to encourage change in the economic accounting system. Schultz (1961) described human capital as the useful skills and knowledge acquired by people as a result of deliberate investment. He stated that much of what is considered consumption is actually an investment in human capital. This includes education of youth and adults, health services, relocation for employment, and improvement of skills and knowledge in leisure time which eventually accounts for a rise in a worker's real earnings. Collectively, this can cause an increase in economic growth.

Following Schultz, Becker (1965) developed a new perspective on household production through a theory of allocation of time. This

approach is called the "new home economics." Becker's basic premise is that "a household is truly a 'small factory'; it combines capital goods, raw materials, and labour to clean, feed, procreate, and otherwise produce useful commodities" (1965, p. 496). The traditional separation between production and consumption, Becker reasoned, was due to the fact that firms controlled the working time exchanged for market goods while households had "discretionary" control over market goods and consumption as they created utility for themselves. Becker attempted to answer the problem of what mixture of household commodities should be produced to yield maximum utility (Berk, 1980). Time in Becker's theory is important as a scarce input which must be allocated between various productive activities. Time use only influences well-being through production and consumption of material commodities. Becker did not consider the enjoyment of the activities themselves.

Becker (1981) continued to expand his ideas in applying economic analysis to all aspects of family life. For example, optimal production decisions in families need to consider the skills of different household members and possible conflicts in their incentives. The assumption is made that everyone is initially identical and variations in skill result from different experiences and investments in human capital. Therefore, efficient households have a definite division of labor as measured by time use and specialized capital. Becker theorizes that specialization is the pattern of efficient households.

Lancaster (1966) added a new dimension to the approach by proposing that utility was a result of multiple characteristics of goods rather than from just the good itself. For example, people derive utility from the characteristics of washing equipment such as convenience,

reliability and quality of washing rather than from a certain brand and model of washer and dryer.

Pollack and Wachter (1975) explained the joint dependence of utility as it included both the end results of the production activities such as a meal served at home and the individual's preferences for the activities. Utilities are dependent not only on the objectives of the activities, but also on the nature of the time used which could be termed a process benefit. Recognition of process benefits and preferences increases the difficulty of using economic measures with household production theory and measures of household material.

Juster et al. (1980) attempted to link inputs of objective economic measures of well-being with subjective assessments of social indicators and quality of life to "effect the final outcomes of complex societal processes" (p. 9). They attempted to measure process benefits by considering both use of time and tangible goods as components of the household utility function. Their utility function included time devoted to activities, levels of stocks, quantities, and prices of goods purchased in the market, and commodities produced within the home with time and technological constraints. The system includes "a set of outputs of household production process, typified by the quantity and quality of children, meals, and orderly living quarters" (p. 34).

Household production in Juster et al.'s social accounting system combined household activities with GNP-type goods used by the household in producing tangible and intangible outputs. The tangible outputs were of two types: the intermediate product which was used up within the household in process of production and the net investment which changes

the household capital stock. The intangible outputs are the process benefits or the satisfactions from doing the activity itself.

Household production was classified into four categories: investment, intermediate, consumption, and biological maintenance activities. The investment and intermediate activities include elements that have been included in the definition of household production in this study. The outputs of these activities are listed in Appendix A-1. The intermediate product output sums to zero while investments can produce more household stocks. Process benefits are also net gains in utility or psychological satisfaction.

Gronau (1977) noted that by the time of his writing, the household production function of Becker, Lancaster, and others was an established part of economic theory and was used in "analysis of fertility, health, consumption, labor supply, and transportation demand" (p. 1100). Gronau added to this theoretical literature in developing the concepts of leisure, home production, and work. Mincer (1962) distinguished between work at home and leisure, but this distinction was omitted from Becker's theory. The assumptions for considering leisure and work at home together are that the two uses of time react similarly to changes in socioeconomic conditions and they act as a composite input with a constant relative price. However, recent time studies have found that leisure and work at home are affected differently by changes in socio-economic variables. Through economic analysis and studies, Gronau sought to provide evidence that a distinction between leisure and home work needs to be made in the time allocation theories. His distinction is that work at home is an activity that a person would rather have

someone else do for him/her, while leisure would be impossible to delegate to someone else (Gronau, 1977.

In the theories of household production, commodities are defined several ways. Reid (1934) called them goods and services for which there are market equivalents. Becker (1976) stated that a commodity was anything produced by nonwage labor that provides utility. Gronau (1977) combined the two to say that household commodities may or may not have market equivalents. These definitions share a common belief that commodities yield utility and have psychic benefits when consumed. In this light, households exchange labor and market inputs as they wish under income constraints to maximize utility.

Marxist Perspective

It must be recognized that not all scholars believe that the activities of the home can be analyzed economically. Brown (1982) states that the "new home economics" has not aided our study of the home "because its positivist methodological approach provides a logical rationalistic framework for a post hoc measurement of family response to economic variables" (p. 155). A major problem occurs with the principle of substitution of market goods and services for/by those provided by a homemaker such as flexibility in services, personalized care, and attention being available twenty-four hours a day which are not substitutable. Likewise, the idea of options and preferences in a family situation are considered optimistically.

The Marxist literature on household work views household labor as not just an input resulting in commodities, but as a topic of concern. Household labor is private production resulting in direct satisfaction

(without transformation) of the needs of the family (Berk, 1980). It is also private in that housewives work in isolation unless helped by household members and all perform similar tasks. Household labor does not produce commodities, it produces use-values (Himmelweit and Mohum, 1977). The greatest output of household labor is the production of labor power which is crucial to the continuation of the capitalist system (Della Costa and James, 1972; Ferneyhugh, 1974; Inman, 1973; Lerguia and Dumoulin, 1972). Producing labor power includes biological reproduction, education and nurturance of children, the sick, and the elderly, and services and daily care to family workers (Lerguia and Dumoulin, 1972). Housewives are seen as the invisible base of a class society which allows men to be the visible producers of commodities (Fee, 1976).

Understandably, the value of household commodities varies in the economic and Marxist perspectives. In economic terms, cost is the sum of the market values of labor and other inputs including time based on marginal utility (Becker, 1965). However, this is based on an impersonal market system and does not consider the personal nature of social relations within the household. The Marxist model emphasizes use-value within the household including the symbolic content and situated meaning of activities (Berk, 1980). Symbolic production activities can be considered part of the one-way transfers (or grants) that particularly take place in families (Boulding, 1973).

Motivation for Household Production

A major issue in household production literature concerns whose efforts and human capital are being utilized as input in the production

process. The current concern about liberating women from the drudgery of housework has made housework activities of great interest in time studies (Robinson, 1977a). Much information on this issue has come from household time allocation theories and studies.

Hill and Juster (1980) theorized that time allocation decisions in multi-adult households were determined by three factors. The first is constraints from time and resource limitations and short and long-run commitments. Situation constraints such as marriage, presence of children, or buying a home influence time allocation. Psychological values as to what is important are also a constraint. Within a multi-adult household it is reasoned that there is a measure of freedom of choice as to who will do a particular task. The second factor is productivity as measured by levels of skill in different activities. For example, in economic literature, skill in the market is determined by ability, formal training, and experience. However, there is little theory and no empirical work on the role of ability and formal training in household production. Preferences for activities are the third factor. People will generally have positive preferences for activities which they do well. In multi-person households, people can develop preferences which differ greatly.

Hill and Juster tested their theory with information from a time use study of 800 respondents from multi-adult households. They obtained information on time allocation, demographic and financial information, preference for activities, perception of sex roles, attitudes towards children and other items. The results showed that sex role identification with the activity was by far the strongest predictor of time use in non-market production. For employment, the higher the wage rate of

the spouse, the more time was spent by the respondent in household production. Also, the most important predictor for time in leisure activities was the amount of time spent by the spouse in the same activity.

In his analysis of marriage, Becker (1974) expanded upon the idea of relative market productivity of the spouses. He theorized that if market wages are unequal, the spouse with the highest wage should spend the most time in work regardless of sex roles, norms, and other variables. In reality, when both spouses are employed full time at fairly equivalent wages, women do most of the housework (Berk, 1980; Berk and Berk, 1978; Robinson, 1977; Walker and Woods, 1976.) This corresponds with his later writings on the sexual division of labor in families (Becker, 1981). Biologically, women have a much greater commitment to the production, feeding, and nurturance of children. Women are willing to spend a great deal of time and energy caring for children due to this investment. Men, less committed to care of children, have spent their energies on procuring food, clothing, protection, and market activities. Given this situation, "women have a comparative advantage over men in the household sector when they make the same investments in human capital, an efficient household with both sexes would allocate the time of women mainly to the household sector and the time of men mainly to the market sector" (Becker, 1981, p. 22). Women specialize in the household by an investment in human capital in raising children. By time measurement, men invest in capital that raises market efficiency. Becker sees the time of men and women not as perfect substitutes for each other but as complementary in producing many of the commodities produced in the household. Biological

differences are reinforced by the nature of their investments and their areas of comparative advantage. In addition, specialization of family tasks "implies a dependence on others for certain tasks" (Becker, 1981, p. 27) thus, the importance of marriage as a social institution.

Satisfaction with a certain activity often determines whether or not a person will do it when there is a degree of choice. Robinson (1977a) researched the satisfaction of persons with everyday activities. Respondents rated helping others and being with friends as some of the most satisfying activities. Women rated preparing food and shopping near the top half of their satisfying activities and men rated these activities lowest. There was a significant positive relationship between the degree of satisfaction and amount of time spent shopping, doing housework, preparing food, and making and fixing things supporting the idea that attitudes and behaviors are strongly interdependent.

Robinson (1977a) used this reasoning to explain partially a decline in women's housework between 1965 and 1975. Part of the change was due to demographic changes as there was more employment for women and they had fewer children. However, in addition to that factor, time spent in housecleaning activities went down and cooking time went up following the established preferences.

Another factor that motivates people to perform household production tasks is the desire to be self-sufficient. One method of dealing with unemployment or low income is to depend upon family resources to become self-sufficient in supplying needs such as food, clothing, recreation, and furnishings at needed levels for family members. There are constraints to self-sufficiency such as the investment needed in land and equipment (Fitzsimmons and Williams, 1974). In spite of this,

the "return to nature" movement of the past two decades has prompted many people to learn skills to become more self-sufficient. Particularly noticeable in this effort is the resurgence of garden growing, especially in urban areas (Newsweek, July 26, 1982).

Another factor related to household production is the desire for voluntary simplicity. Voluntary simplicity is a lifestyle which includes the "substitution of human energy for fossil fuel energy" (Wilhelm, 1981, p. 35). Elgin and Mitchell (1977) described those practicing material simplicity as self-determined individuals who may try to satisfy their needs by producing goods for consumption. Leonard-Barton and Rogers (1980) identified voluntary simplicity behaviors as biking, self-sufficiency in services and making goods, recycling of resources and durable goods, and closeness with nature. In a study of voluntary simplicity, they found education to be significantly correlated while income was not. There was a significant relationship between voluntary simplicity and mechanical ability which is defined as the basic skills required to produce a good or to repair an item.

The motivation for self sufficiency can result from economic need. Reactions to loss of income during the depression of the 1930's included reducing expenditures and generating alternative or supplemental forms of income (Elder, 1974). Successful adaptation to loss of income included motivation and familial and environmental support systems. Motivational level is influenced by socioeconomic status and intelligence. Elder maintains that status influences were: more familiarity with economic problems and middle class families' self image, sense of competence, and problem-solving skills. Even though lower class families were more familiar with economic problems, middle class

families had a greater range of alternatives and problem-solving capabilities. Motivation without the necessary capabilities and resources led to frustration.

Research on Household Production

Theoretical work far outweighs the empirical work in the economic models of household production (Hill and Juster, 1980). Most of the information about household production activities has resulted from studies on daily time use, household work, or family division of labor. Several of these studies, after data analysis, have concluded that household production is indeed a different set of activities than routine household maintenance tasks and report their data in that manner. Most studies, however, differ in the activities included as household production which makes comparison of studies difficult.

In analysis of time data findings, household activities have been categorized according to the frequency of performance of the tasks. The nature of activities reported in a multi-nation study with 30,000 respondents (Szalai, 1972) persuaded the researchers to divide household obligations into three groups. Although this dissertation is not international in nature, this particular study with its broad scope was included for comparison purposes. The main group of activities was usually done daily and included food preparation and shopping, house-cleaning, washing dishes, and laundry. The secondary activities were labeled "household care" and included diverse activities such as gardening, animal care, shopping for goods other than food, home repairs, work in maintaining heat and water, paying household bills and care of elderly or ill family members. The third group were activities

related to child care (Robinson, et al., 1972, p. 123-124). Omitted from the study were household information gathering activities, and contributions from traditionally women's activities such as sewing and canning (Robinson, 1977a).

Morgan et al., (1966) in their study of 2,214 families divided unpaid work into regular housework including meal preparation, regular cleaning, child care, straightening up, and other time spent working around the house. Other unpaid productive activities included home production defined as specialized work such as sewing, canning, gardening and repairing; volunteer work and getting more education.

Walker and Woods (1976) in their study on household work among 1,296 families also discovered household tasks that were performed regularly, time consuming, and had a "clearly defined work content" (p. 247). These activities (defined as being performed over one half of the surveyed days for one or more hours per day) were: regular meal preparation, regular house care, physical and non-physical care of family members and after-meal cleanup. The less regular and less time-consuming tasks were: special house care, ironing, special clothing care, yard and car care, management and special food preparation (p. 247-248).

Similar to the second category of the above studies is a study done to measure the self-sufficiency and home production of 800 Mormon families (Church of Jesus Christ of Latter-day Saints, 1980). The tasks in the survey included gardening, sewing, making household items, home canning, freezing and drying foods and storage of a supply of food, clothing, and fuel. Owen and Beutler (1981) had a similar perspective and developed a household production index with categories of sewing,

food preservation, gardening, preparing food from scratch, redoing furniture, home repair, automobile care, carpentry work around the home, and management through formalized planning (p. 164).

In the time allocation and housework studies conducted, it is a virtually undisputed finding that in multi-adult households women, if present, have the major responsibility for household work. This finding is obvious in both national and multi-national data (Szalai, 1972; Morgan et. al., 1966; Walker and Woods, 1976). In the international study (Szalai, 1972), men contributed an average of one-half hour per day to the routine work. Employed men contributed an average of three-fourths of an hour per day to extra household care which was the same amount women gave to this category. However, routine housework consumes three times the time of the occasional house care.

Child care was considered a category verging on leisure (Szalai, 1972). The daily average for child care, for persons with children, was 128 minutes for housewives, 72 minutes for employed women and 30 minutes for employed men. Employed men and women participated in child care on days off, especially on Sunday when housewives' time in child care decreased by one half. Age of the child was an important factor in time spent as younger children needed more time in care.

Patterns in sexual division of labor became obvious through the international data (Szalai, 1972). Men were generally employed (over 90 percent) and were responsible for 68 percent of the time spent in formal work, but only 22 percent of the household work. The patterns of employed women and housewives were also clear. Employment of women ranged from 30 percent to 92 percent internationally, with the U.S. at 49 percent. In all countries, married employed women spent less time

per day at work than men due to the prevalence of part-time employment. Employed women spent one-half the time of housewives in homemaking activities. It was a universal pattern that employed women with the dual role of worker and housewife spent less time in both activities compared to men and other women.

The American portion of the multi-national study done by the University of Michigan Survey Research Center has also been reported separately (Robinson, 1977a; Robinson, 1977b). The sample consisted of 2,000 American adults between the ages of 18-65 who were urban and employed and kept a time diary for one day in late 1965 or early 1966. In the sample, 1,244 were from the national sample and 788 were from Jackson, Michigan. There were no significant differences between the responses from the two sample areas. These data was also used for other reports (Juster et al., 1980; Vanek, 1974). A matching study was done in 1975-1976 (Hill and Juster, 1980; Juster et al., 1980; Peskin, 1982; Robinson, 1980, 1982). The findings for both studies were that housewives did more housework than employed women who did three times the housework of employed men. Specifically, housewives did 34.2 hours of basic housework and 6.9 hours of household production for a total of 41.1 hours per week. Employed women spend 18.1 hours in basic housework, five hours in household production for a total of 23.1. Men's weekly total of 7.7 hours was spent with 3.5 hours in basic housework and 4.2 in household production. Men's housework hardly increased on weekends when they had more time to help. For example, on Saturday, men spent two more minutes in child care and six more minutes in housework compared to weekdays (Robinson, 1977a). In child care, housewives spent seven times as much time as men, and employed women spent twice as much

time as employed men. Men's and women's time in child care was most comparable in play activities. Men also did almost 40 percent of the grocery shopping, most shopping on weekends and shopping for durables.

Another study on husband's participation in household production confirmed the trends found by Robinson (Eghan and Lawrence, 1982). They found husbands spent an average of two hours a day in household work, mostly in non-physical care of household members which included time with the children and maintenance of home, car, yard, and pets. The increasing age of the youngest child was related to decreases in the time the husband spent in caring for them until they reached adolescence when time spent increased. Husband's participation in household work was unaffected by wife's employment or education level, occupation or age of husband, family income or season of the year.

Family division of labor has been found to be strongly linked to sex role expectations. Lovingood and Firebaugh (1978) reported that husbands and wives specialized with differentiated roles. Wives tended to do more household activities. Of the six categories similar to this study, in reports by both husbands and wives, wives did the most home decoration, grocery shopping, contacting doctor, and caring for the child. The husband did more household repairs, and both kept track of money and bills. Larson (1974) found the majority of husbands and wives in the study perceived housework (74 percent), meals (62 percent), and child care (62 percent) to be the wives' activities and odd jobs (63 percent) to be the husbands' activities and outside chores (51 percent) to be father and son activities. Albrecht, Bahr, and Chadwick (1979) also found a preferred division of labor between spouses. For the provider role, there was greater acceptance of female

participation in the role among young people (though older respondents were most likely to share the role). Preferences for division of family labor in child care, kinship, and housekeeping roles remained traditional. In child care, there is a trend for greater involvement of the husband even though wives do most of the work. Berk and Shih (1980) studied spousal consensus patterns in the allocation of 45 household labor tasks. In the findings for most tasks there was greater agreement with wives' rather than husbands' contributions. Agreement was higher on the sex-role stereotyped tasks. Disagreement between spouses was usually due to underestimation of partner's work in child care. In a study of 1,200 couples, Ericksen, Yancey, and Ericksen (1979) reported on sharing roles. Results showed that the husband's income negatively related to shared roles and wife's education positively related to shared roles. Black couples were more likely to share household tasks than white couples. Even with the small amount of work done by men around the house, less than one-quarter of the wives reported that they wanted more help (Robinson, 1977a). Those that said they wanted help were the younger, employed and black wives. Robinson suggested that women feel benefits and rewards with household work and feelings of competence and self-esteem from clearly defined roles. Men may feel ignorant in the women's domain and she in his, and thus it is safer for both to remain in their areas of competence.

Little research has been done to examine household production in which both husband and wife participate together and where more than one activity is occurring. Time use studies, the most common research in household activities, have done little to examine shared activities in the household. Snow (1950) and Thorpe (1956) expanded the breadth of

the activities and families' use of time. Snow (1950) included doing household activities, going on errands, going to community affairs, and taking care of personal needs in family activities. Thorpe (1956) included house care, personal care, child care, and sewing under shared family activities. Davey and Paolucci (1980) examined the number of family interaction episodes by activity category including social, eating, household tasks such as special house care, yard care, and marketing, care of family members, and management. They found that over 75 percent of the family interaction time was in social and eating activities. Less than ten percent of the time spent together was used for working in household tasks and less than four percent of this was in household production tasks. The most common pattern of family interaction was the mother and the children together followed by the whole family together. Steeves et al. (Hefferan, 1982a) with a sample of 378 employed women examined productive activities simultaneously with more than one person or with more than one activity. Respondents indicated that they worked more than one-half of their household productive time alone, one-third with another family member, and the rest of the time with someone other than a family member. Concerning the tasks being done, shopping was most likely to be done alone as a separate task (54 percent) while travel was least likely (14 percent). Other activities were done as a separate task between one-quarter to one-third of the time. The most common combination of activities was any of the seven productive categories done with interactive family care and personal interactions. Demographic characteristics were more related to total household time than to simultaneous production activities. Those categories that showed increase in simultaneous

activities were married status, higher number of children, and greater number of hours worked per week.

Factors Influencing Household Production

Reid's definition of household production is based on "theories of allocation of scarce resources, including time, in light of expected benefits and cost of uses foregone" (Reid, 1980, p. 47). The household production definition creates a useful framework for viewing behavior related to time allocations. It is a theoretical behavioral perspective that focuses attention on motivation rather than on result. The anticipated result is satisfaction of a want or need which arises from a physiological need or culturally determined preference (Reid, 1980).

Factors that affect the motivation to produce at home have not received much study. Certainly, as Reid explained, the primary motivation is to satisfy wants and needs. Robinson (1966) studied 23 possible motives and incentives for household production. He concluded that home owners with a high achievement orientation do the most household production. The other variables made little difference. Issues that have been studied slightly in relation to the motivation to produce at home are limitations of resources, personal preferences, and the desire for self-sufficiency.

Knowledge and resource constraints could hinder household production. One study asked respondents why they did not perform a task if they reported not doing it (Church of Jesus Christ of Latter-day Saints, 1980). Respondents indicated they did not have knowledge to make household items (22 percent) or preserve food (12 percent). They did not have enough time to sew (16 percent) or make household items

(32 percent). They also did not have enough money to store food (37 percent) or clothing (22 percent).

Another factor in why a household task is or is not performed is personal preference of the household member. Many studies have been done on household task preference. The most liked tasks in the studies were cooking and meal preparation and looking after children. The least liked tasks were cleaning, ironing, dishwashing, and care of the house (Steidl and Bratton, 1968; Nickell, Rice, and Tucker, 1967). Reasons for liking a household task were found to be: the task was creative and challenging, satisfying, showed results, pleased the husband and family, was relaxing and the person enjoyed the time spent, supplies, and materials. Reasons for disliking a task were that it is boring, monotonous, repetitious, results were not satisfying, it was physically strenuous and time consuming, had short-term results, and another adult was usually not present (Wyskiel, 1960; Maloch, 1963).

It has been hypothesized that many different factors influence household production activities. Among these are: family composition (size and complexity of household), family employment, family income, type and location of residence, and other family demographic factors. Specific variables and the studies using them are listed in Figure 3.

Figure 3 was designed to present the major variables analyzed in household production studies. However, the definition of household production methodologies, statistical analysis, and reporting differed greatly in the studies so that they are not directly comparable. General findings observable from Figure 3 are: family characteristics were found to be significant factors by the majority of the researchers, employment of wife, where it was studied was highly significant and

family income and demographics were not often found to be significant. Employment of wife was not studied by these researchers prior to 1976 indicating a recent concern and focus on the variable. The general categories of variables will be examined in greater detail in the following subsections.

Family Composition. As family size increases, it stands to reason that the responsibilities of the family head(s) would also increase with more individuals to nurture and direct. During their younger years, children are also more dependent upon parents for support and care. These factors all have bearing on household work.

Robinson (1966) found that married couples with large families (7-8 people) and no children under two years old at home, devote much time to household production. Owen and Beutler (1981) stated that household size and stage in family life cycle were strongly correlated to the amount of production done in the household. Household production is a means by which young families can try to achieve their expected standard of living. Walker and Woods (1976) found high correlations between family characteristics and the amount of total time of all workers for household work. Number of children had the strongest statistical relationship. The closest correlation for the categories of physical care of family members and all family care was the age of the youngest child. The amount of time spent with a child decreased from three hours a day with an infant to six minutes per day with a teenager. The most complex families were those with the most children and a low age for the youngest child. Family type was closely correlated with non-physical care of family members.

Figure 3.--Socioeconomic Variables Considered in Household Production Studies

Variables	Reid, 1934	Morgan, 1966	Walker & Woods, 1976	Robinson, 1977	Robinson, 1980	Beutler & Owen, 1981	Oritz, et. al., 1981	Sanik, 1981
Family Composition								
Number of children			**	*	**			
Age of youngest child	H	*	*	*			*	
Age of oldest child			*					
Size of household	H	*			-	*		
Family type (complexity)	H	*	**	*				
Stage in family cycle		*						
Age of head		*		*				
Employment								
Employment of wife			**		**		**	**
Employment of husband			-					*
Education								
Education of wife		*	-	*		-	*	-
Education of husband		*						
Residence								
Home ownership		*			-			
House type		*	*					
Location of home	H	*	*			*	-	
Income								
Family Income	H	*		-			*	
Demographics								
Technology owned	H	*			-			
Race		*		*	-			
Religion					-			

H=hypothesized relationship
-=studied and not significant
*=studied and significant
**=studied and highly significant

Note: These studies are not directly comparable as their methodologies and definitions of household production differed greatly. This table is presented as a summary of variables that have been studied frequently in connection with household production.

Robinson (1977) found similar correlations in his examination of household production in a 1965 time study. Family composition was the major determining factor in the household work. There was a 10 percent increase in time for each additional child in families with preschool children and a 5 percent increase for each additional child once they are over four years of age. Men had no significant increase in time spent in housework with additional children in the family. In the child care category, the major determinant of time spent was the age of the child. The major portion of the correlation was with the custodial care such as feeding and dressing rather than with the interactional time. Another family characteristic found to have an effect on housework was the age of the husband and wife. As they grew older, they spent more time in household work. There was no direct explanation for this especially with children leaving home except that they may become more particular in housework standards or have more time on their hands. Robinson (1980) found presence of children to be the second most important predictor of time spent in household production. Size of household, however, had no effect on household production. Sanik (1981) also found a major negative effect of the age of the youngest child on the wife's use of time.

Employment. Married women's roles have greatly changed in the last fifty years. Fifty years ago, only one married woman in eight was in the paid labor market. Now over one-half are employed and an increasing number have children under age 18. This has caused a change in household work patterns (Hefferan, 1982b). Between 1929 and 1966, time spent by married women in household tasks ranged between 52 and 56 hours a week (U. S. Department of Agriculture, 1944; Vanek, 1974). During this

period, time use in the household shifted from food preparation and cleanup and housecleaning to more time in managerial and family care activities. The 1970's was the first time household work time significantly decreased. In 1975, the average time was 44 hours for non-employed married women and approximately half that time for employed married women (Hill, forthcoming). Most of the downward trend is due to the employment of women. It has also been suggested that changing family composition, work patterns of family members, household technology, and personal standards influence the amount of time spent in household work (Hefferan, 1982b).

Walker and Woods (1976) found employment of wife to be significantly and negatively related to total time used by all family workers with the exception of some of the additional activities of marketing, yard and car care, special clothing care, and special food preparation. The effects of the employment of wives tended to be interrelated with the effects of the number of children.

Robinson (1977a) reported that the significance of the effect of employment on women's housework was great; however, it was also affected by other factors such as employed women being less likely to be married or have children. Robinson (1980) reported in the later study that employment was the greatest predicting factor in family care. Sanik (1981) also found that the greatest predictor of wife's time spent in housework was the number of hours employed. The contribution of husbands and children to housework time was unchanged for the most part by the hours the wife was employed except for a small effect on husband's food preparation and dishwashing time (Sanik, 1981). Ortiz et al., (1981) in a study of meal patterns reported that employed

homemakers spent less time in food preparation and their families ate more meals away from home. The number in the family and location of residence were not important factors in food preparation.

Strober and Weinberg (1974) have studied the strategies used by employed women to cope with life of work and home responsibilities. They found no differences in expenditures between employed and non-employed wives in purchase of time and labor saving equipment. Only family income and assets were significant in purchasing equipment. Strober and Weinberg (1980) found only slight differences between employed and non-employed wives in strategies to relieve time pressures including: substitute capital equipment for nonmarket labor, substitute labor of others, reduce quality or quantity of household production, or decrease time to volunteer and community work, leisure or sleep. With income and life-cycle stage held constant, wife's employment was not significant in owning labor-saving devices, method of meal preparation, or shopping behaviors.

Education of women is related to their employment. More highly educated women are more apt to be employed due to their training and desire to remain in the work force. Owen and Beutler (1981) reported the effect of wives' education on amount of household production was slight. Walker and Woods (1976) found a relationship between wife's education and time spent on all household work. In contrast, Robinson (1977a) reported that higher education for women was associated with less housework, particularly in meal preparation. Sanik (1981) reported wives with higher educational levels had more family members together to share meals. Robinson (1966) reported more household production among families when the head had at least some high school education.

Family Income. Robinson (1966) found high-income families reported more household production than low-income families. Walker and Woods (1976) found that socioeconomic level had little effect on time used in housework. Robinson (1977a) likewise found that income was not correlated with time in housework. This was surprising as those with higher incomes could afford to hire help and also had a higher economic value on their time. Ortiz et al. (1981) found that the number of meals eaten away from home rose as family income increased. Family income also rose as wives took paid employment.

Location of Residence. Owen and Beutler (1981) in their study of household production found community size did relate to production. They hypothesized that families from rural or semi-rural areas would participate in more household production because of the greater availability of factors of production, lifestyle, and time inconvenience to go shopping. Robinson (1966) reported that families from rural areas produced more within the household. Location of residence and type of house were only slight predictors of housework time reported by Walker and Woods (1976). Slightly more time was spent on family care in suburban compared to urban areas. Location of residence was not significant in predicting the effect of homemakers' employment on meal preparation (Ortiz et al., 1981).

Demographic Factors. Additional factors studied included home ownership, race, religion, and household technology. Robinson (1966) found that white families living in single-family structure produced more than other families. In a later study, Robinson (1980) found no relationship between these demographic factors and housework time. Even though he was specifically studying household technology, there was

little evidence that recent declines in housework time were due to machinery in the home. With race as a factor, Robinson (1977a) found that black women reported time expenditures far below the average for garden and pet care, errands, and miscellaneous chores.

Additional Activities as Household Production

Some of the activities included in the present study not often included in household production studies are savings and investment strategies and intra-family transfers of goods and services. Due to the uncertainty of the rapid inflation of the 1970's, by 1979, the majority of Americans considered saving a desirable practice and wanted more liquid assets (Katona, 1980). However, in practice, they purchased many durable goods or made down payments to get what they wanted before prices went up. Saving and investing behavior is closely tied to personal circumstances (Lazarro, 1982). Evans (1981) reported most of the personal saving in the United States is done by people with over $25,000 a year income who have at least a college education. Strober (1977) found families with working wives saved less than families where the husband was the single earner. These families consumed more with an increased need for work related goods and services. Also, families with young children had fewer savings and couples with long marriages had increased savings (Smith and Ward, 1979).

Research on intra-family transfers began as mutual aid within the kin network and expanded in the late 1960's and 1970's to include interfamily transfers with both kin and nonkin (Danes, 1978). Intrafamily transfers are the resources reallocated within families from those possessing more than they consume to others who consume more than

they possess (Baerwaldt and Morgan, 1973). Sussman (1953 and 1954) studied interdependence in middle class families. Parents gave their married children material goods such as furniture, household equipment, aid in obtaining a house, and loans of money in addition to services such as gardening and landscaping, home construction and repair, care of grandchildren, and arranging for inexpensive vacations. Children, in return, gave their parents continued affection and services similar to those given the children. Mutual aid relationships among related nuclear families in Detroit was studied by Sharp and Axelrod (1956). They found seven out of ten couples exchanged help with relatives outside the nuclear household, but most help occurred between close relatives. Babysitting help during illness, financial aid, and help with housework were the most frequent forms of help. Young wives received more help than other wives. Sussman (1959) studying kin relationships among families in Cleveland found few significant differences in help patterns between middle- and working-class families. However, families in these two classes received more help than families from the other social classes according to Sussman and Burchinal (1962). Parents, children, siblings, and more distant relatives exchanged services, gifts, advice, and financial help. Financial help was usually from parents during early years of marriage. Emerson (1978) studied help patterns and family characteristics. Help was associated with high income, employment, and an urban residence. Baerwaldt and Morgan (1973) reported the most help was received by young families and those with an aged head. They also reported that donations of time instead of money did not increase from the norm in low income families.

Morgan (1978) studying intrafamily transfers defined family income as paid market labor, value of time spent on housework and child care, subsidy value of food stamps and return on net equity in an owned house. The housework of both heads of households and spouses was calculated. Each individual's contribution to family income was calculated by subtracting their net consumption from the individual's total contribution. Analysis of intrafamily transfers showed that heads, spouses, and others aged 25 to 64 were the net contributors and those older and younger were generally the recipients of these transfers. Calculated for the nation, intrafamily transfers equalled one-third of the GNP.

Choices in Household Production

One of the major choices involved in household production is whether to produce what is needed at home or seek outside help. Robinson (1966) was one of the few researchers to study the question. Outside help was defined as free and paid help, and included assistance "for regular housework, laundry, child care, painting and repairs around the house, lawn care, and the time saved by eating out rather than preparing meals at home" (p. 163). Robinson found that a family averaged five hours a week of outside help. Families with special needs, such as with working wives or young children averaged 19 hours of help per week. Robinson suggested three types of factors that influence the amount of outside help: (1) economic factors such as wage rate and the cost of outside help; (2) constraints such as lack of available outside help; and (3) individual's motives and desires. Meaningful factors in the amount of outside help included income and amount of paid work. Family heads with high hourly wages who worked more than full-

time got more outside help. Single men also got more outside help particularly by eating out and having their laundry done. Use of outside help also increased as wives worked more hours in paid employment. Working wives over 35 received less outside help than younger women especially those with children. This analysis was not an additive model as some factors affected one group and others affected different groups. When the results were analyzed through a multiple regression model, the important factors in order were husband's earnings, age of youngest child under 18 living at home, difficulty of hiring outside work around the house, hourly earnings of wife, and size of house.

The family is faced with a myriad of decisions in providing for its needs and wants. Employment for husband and wife including what kind of work, where, wages, and how long are all considerations. Families for the most part are under some constraints and limitations to work for money. However, a family has control over certain means to provide goods and services. Either leisure time or money is exchanged for the goods and services. Robinson (1966) attempted to measure the flow of substitutes through a comparison of hours of help received versus hours of household production. The results of the study were that those receiving more help compared to production were single men, families where the head made $7.50 an hour or more and particularly if the head worked more than 2,000 hours a year, families where the wife worked more than half-time particularly if the wife had young children under 18, and families that lived in a city of 10,000 or more. Those that produced more than they bought were families where the husband made less than $7.50 an hour, or the wife worked 1,000 hours or less for money

particularly in a smaller city or rural area. Robinson concluded that families with higher incomes could afford to hire others and did not need added real income from household production. Living in a large city facilitated hiring services and young children increased the need for services.

Little research has been done on the choices a family makes in providing for its needs through household production. Robinson was the only researcher found who studied these choices. No studies were found which analyzed work left undone which is a concept to be included in the present work.

Value of Household Production

A discussion of the value of household production in the broad perspective includes economic theory which at one time gave no value to non-market work. Economists, feeling a discrepancy in this area, are now sharing ideas on the value of time, human services, and well-being. Mostly since the 1970's, attention has been turned to giving household production a monetary value in the GNP. Likewise, a housewife's work has been valued as well as other productive work within the home.

Monetary Value

Measurement of the monetary value of household production is a difficult task due to the number of activities involved and lack of definite monetary value for these activities. The United States Department of Commerce in 1978, in order to provide statistics to the users of the GNP, started a project to measure nonmarket activities, such as household work and the services that are made available by consumer durables (Peskin, 1982). Housework in the Department of

Commerce study included activities that produced a good or service that could be purchased, activities that could be accomplished by a third person without reducing the utility to the household and other activities including hobbies and volunteer work. The monetary value of the work was calculated by the specialist cost technique which assigns dollar values to hours of household work based on the wage rates of paid workers who would perform a similar task. The wage rate depends upon the type of activity performed. This valuing technique is uncertain due to variation in efficiency between the household worker and the paid worker, and the output of household work not being truly stated by the market cost of the product. Because of this uncertainty, two alternative valuation techniques were also used. The housekeeper cost technique valued all hours by the wage of a private household worker and opportunity cost technique valued the hours by the wage the person could have earned in the market (Hefferan, 1982).

Using the specialist cost technique of valuation, the value of total household work in 1976 totalled $752.4 billion or 44 percent of the GNP. (The valuation based on the housekeeper cost was 28 percent less and the valuation based on gross compensation of the opportunity cost was 35 percent higher than the specialist cost valuation.) In 1976, women as the principal household workers, accounted for 68.4 percent of the total household work worth $6,694 per year. Men put in only 15.1 hours of household work a week compared to the women's 33.8 hours. The value of the men's work was $3,475. The value of each hour of housework depended upon the type of activity and degree of skill. As men and women tended to specialize in certain activities, their household work value varied. For example, men did 77.7 percent of

the home repairs and hobbies which was the category assigned the highest wage rate. Women did more than 80 percent of the child care and instruction which received the lowest wage rate. If we assume that household work time use has not changed greatly since 1976, estimates of value for 1981 are $10,000 a year for women and $5,000 a year for men. The value of household work for women is approximately two times their income from paid wages. The annual average for a full-time homemaker is $12,500.

Household work can be generally categorized into routine maintenance household work and household production activities. These findings are reported in Appendix A-2. Women contributed 12.9 hours to household production which was valued at $2,719 per year. Men contributed 9.4 hours which counted as a $2,356 per year contribution.

For women, the value of their household work varied according to several factors which affected the number of hours they contributed to household work. For example, employment status, number of earners in the family, presence of children, age and own earnings all caused the value of household work to vary. A summary of the effect of these factors is found on Appendix A-3. These are only estimates as the sample was small and there was no consideration of correlations among variables. Employment for women caused a decline in hours spent in all household work with child care declining the most. The value of the work declined from $8,405 for non-employed women to $6,243 for those employed part time and $4,040 for those employed full time. For employed women, market purchased goods and services appear to be substituted for household work in the case of paid child care and perhaps in meals eaten out of the home (Hofferth and Moore, 1979; Ortiz

et al., 1981; Strober and Weinberg, 1980). The value of household work also dropped as the wife's earning rose. Other differences associated with variables included: household work increased as the number of children increased and decreased after the children were age four; the age of the women affected their household work value in that before age 29 it rose sharply and then leveled off while cleaning and gardening rose sharply after age 65.

Other researchers have also given consideration to the value of household labor in the GNP and the value of household work. Murphy (1978) estimated the value of unpaid productive work to be 35 percent of the GNP. Morgan et al., (1966) estimated it to be 38 percent and Gauger (1973) figured household work would add $204 billion to the GNP in 1967. Walker and Gauger (1973) also calculated the value of household work by the specialist cost technique for husbands, wives, and teenage children. They included the variables of wife employment, age of wife, number of children and age of youngest child. For a non-employed wife, aged 25-39, the household work value was $4,500 and her husband's was $900 per year. Updated for 1981 dollar values (Deacon and Firebaugh, 1981) the values would be $6,750 for wives and $1,350 for husbands. This estimate is less than that reported by Peskin (1982). Vanek (1974) disagrees with the concept of monetary valuation of homemaker's work and stated that "homemaking represents an occupational role that is not reducible to the dollar costs of its constituent tasks" (p. 190).

Another much less common way to put a monetary value on household work is to value the product of the labor. Morgan et al., (1962) in a study of home production as a source of income surveyed for two types of production: home-grown food and home additions and repairs done by

families. About fifty percent of the respondents reported that they saved through these activities an average of $370 in 1959. For the entire sample, this averaged out to $182 saved per family. Those people who saved the most were home owners, families with children and those living in small towns and rural areas. Families with heads with a higher wage rate produced more than those with a lower wage rate who presumably would need to supplement their income. There was a tendency for people who worked long hours also to work more in home production. A large portion of the people who worked long hours were farmers who could have used part of their job skills in household production. Education was related to production as those with college degrees produced the least and those who went beyond high school but did not finish college produced the most. There are variations in production according to geographic area as those in the South and North Central regions produced less than other areas. Young families and those who just retired were the groups producing the most. Measures of achievement motivation and of the perception that hard work pays had no significant relationship with home production. They could have resulted in more effort at the main job or taking a second job rather than more home production. Also lower income families tended to save a small amount by growing food while higher income families saved much more by doing their own home maintenance and repair (as more of them were homeowners and they had more money to invest). This study is of special interest in this dissertation study as it directly dealt with the amount of money saved through home production efforts.

Non-monetary Value

The above studies have all used a monetary measurement of the value of household work and home production. There are also other outputs of the production process that cannot be valued in this manner. For example, fatigue, stress, and time spent could be considered negative outputs in terms of used human resources (Deacon and Firebaugh, 1981). Also, energy spent, in terms of human and non-human resources is an important way of valuing household production (Odum and Odum, 1976). Satisfaction and dissatisfaction with the output are also important considerations. Several studies have been done on satisfaction with housework and women's employment. Campbell et al., (1976) reported on women who felt completely satisfied with their housework. Thirty-four percent of the employed women felt satisfied, compared to 45 percent of the part-time employed women and 52 percent of the full-time housewives. Women who considered their household work as important as their employment were more satisfied than those that emphasized their paid job. Other measures of satisfaction with household work were reported by Robinson (1982). The 1975 time use study from the Survey Research Center asked the respondents about the quality of their housework product. Examples of the quality were the cleanliness of the house and laundry, the goodness and adequacy of food and how well the children were being raised. Subjective ratings of the respondents (with characteristics such as age, income, and marital status controlled) showed no difference between employed and unemployed homemakers except full-time homemakers rated quality of the main meal higher.

Valuation of household production by using both social and monetary means was the result of an ambitious attempt of Juster et al. (1980) to

develop a social accounting system to measure well-being. Juster et al. (1980) applied their social accounting system to the empirical time data from the Survey Research Center for 1965 and 1975. They aggregated the data to get measures of the time spent nationally on household production activities, and the monetary values of the services (housing and non-housing), non-durables (including depreciation) and government purchases. The two sets of time data were measured individually and also compared. The comparison showed a change in time use over the decade from production in both the market and home to the consumption category. It also showed less time in market work and in the household tasks of home maintenance, shopping, administration, and cooking. The greatest increase was in passive leisure due to increased television viewing. Time in education, medical care and home improvement expanded, while child care diminished. [The use of material goods of medical care dropped with increased child care and interpersonal communication (perhaps due to more long distance telephoning).] The intangible outputs of process benefits were measured by preferences for activities. In the 1975 time study, respondents were asked to indicate on a 0-10 scale (with 0 being the least enjoyable and 10 being the most enjoyable) how much they enjoyed doing a particular activity regardless of the results of the activity. On this scale, the household production activities rated as most enjoyable were child care (8.76), followed by crafts (6.53), cooking (6.16), repairs (5.19), organizations (4.83), shopping (4.61), and cleaning (4.36). Additional factors analyzed with the satisfaction scale distinguished high from low levels of satisfaction. Women reported lower process well-being than men, married people reported lower than single people, older people lower than younger

people, those with children lower than those without, and those in the labor force higher than those not in the labor force. Level of income was of no significance. Juster et al.'s study is one of the few that tackle the difficult problem of measurement of intangible household production output through the concept of process benefits. Satisfaction with a production activity could be the very reason why people participate in one activity over another and more study needs to be done in this area.

Summary

Most theoretical work on household production has resulted from the efforts of economists who view the home as a factory producing people and commodities (Schultz, 1962; Becker, 1976; Reid, 1934; Beutler and Owen, 1980, 1981). Part of the process of producing people is the maintenance of the household. This is time consuming and routine work. Household production is a separate set of activities, that can be considered investments in people and uses human skills and other resources. The production itself is a process whereby a person can receive benefit or utility.

Most information on household production has been a result of time use studies, housework studies or research on division of labor within the family. These studies have identified the amount of time spent in household production and who participates in the activities (usually husband or wife). Motivation to participate in household production could be due to high achievement orientation (Robinson, 1966), resource limitation or personal preferences. Of particular interest was the analysis done on relevant family situational factors. Robinson (1966)

found married couples with large families (7-8 people) with no children under age two with high incomes from rural areas living in single family structures produced more than other families. Owen and Beutler (1981) found a relationship between the amount of household production and household size, stage in family cycle, and community size. Other researchers found employment of wife and age of youngest child to be highly significant. There is also a clear agreement among many researchers that household tasks are generally performed according to sex role preferences. The sharing of household production tasks has received little attention in research. Choices of whether to buy or produce a particular good or service were studied by Robinson (1966). Among the identifying characteristics of those that hire services are families with high incomes, working wives, families with children, single men, those with access to hired services, and those with larger homes.

Valuation of household production as a part of the GNP has been a concern for approximately ten years. Valuations of household production range from 44 to 35 percent of the GNP (Peskin, 1982; Murphy, 1978). One study done earlier (Morgan et al., 1962) valued the product of two household production activities: home grown food and home care and repairs. Families that produced the most were home owners, families with children, those living in small towns and rural areas, and those with higher incomes. Other researchers have also considered the value of household production in terms of used resources, satisfaction and dissatisfaction with output and the quality of the product. Juster et. al. (1980) developed a model to value household production using both social and monetary means.

Chapter 3

METHODOLOGY

The present study is part of a larger study whose purpose was to identify involvement in household production among young urban, small town, and rural families in mid-Michigan. The larger study, "Contributions of Household Production to Family Income," was sponsored by the Department of Family and Child Ecology of Michigan State University and the Michigan Cooperative Extension Service and the Michigan Agricultural Experiment Station (Project 1363H).

The data for the study were collected in Ingham County, Michigan during the months of May and June 1980. The family was the unit of analysis for the larger study and was defined as a male and female living in the same household with the oldest child between the ages of six and twelve. Each of these three family members was given a survey questionnaire.

This study was designed to investigate household production done among young Michigan families by studying husbands' and wives' responsibilities in household production decisions of buying, producing or ignoring a possible production activity, and the perceived contribution of household production to family income. The relationships between these aspects of household production and selected demographic variables were also studied.

The content of this chapter includes descriptions of the: (1) research design of the study; (2) description of the sample; (3) instrument development; (4) scoring procedures; (5) variables; (6) statistical analysis; and (7) limitations of the study.

Research Design

The purpose of this exploratory study was to examine various facets of household production that could provide insight into household production decisions, including activities done, husband and wife participation in production and perceived monetary value of household production contributing to family income. The research method used was a survey questionnaire based on recall of household production activities. The theoretical and operational definitions of the variables are found in Chapter 1.

The population selected for interview in this study was Ingham County, Michigan which is included in the Lansing Standard Metropolitan Statistical Area (SMSA). Within the county is the state capital and the associated government agencies, a diverse agricultural industry, many business and manufacturing firms related to the automobile industry, and institutions of higher education including Michigan State University, a large state university. The county also contains a heterogeneous population of urban, small town, and rural households. The sample was designed to reflect the characteristics and activities of young families residing in these three locations. Families participating in the study all lived in private households within one of these three geographic locations. A minimum of thirty families from each area was considered appropriate for a sample.

The sample selection process was designed to be as random as possible given the study's definitional and geographic constraints. In each of the three geographic locations, a randomly selected starting point was chosen. Within the residential blocks households were randomly selected and contacted using a skip pattern. The procedure for the skip pattern was started when a family was qualified and agreed to participate in the study. When this occurred, the next house on the block or road was skipped and not contacted. The following house was then contacted.

The urban sample was from Lansing, the state capital and the largest population center within Ingham County. Lansing is centrally located in mid-Michigan. The major employers are industry (principally transportation equipment, fabricated metals, and non-electrical machinery), state government, and the university.

In order to identify a sample from Lansing, a school census was obtained from the Tri-County Planning Commission to locate areas within the city with the highest percentage of school-age children between the ages of six and twelve. An area in the southern part of Lansing was identified as having the largest number of young children. The second highest percentage of young children was in north Lansing. A visit by the researchers to these areas revealed several indicators of children such as swing sets and homes with signs in the windows identifying them as shelters for school-age children. A census tract area in south Lansing was chosen as the first neighborhood to be sampled. An adjacent tract was identified as the second area to be sampled in Lansing in the event that additional families were needed. To choose a random sample, city blocks within the census tract were numbered. All apartment

buildings were individually numbered and treated as if they were city blocks. Block numbers were randomly selected as starting points before the interviewers started contacting families. All of the blocks in both census tracts were sampled in order to obtain the required number of families.

Mason, the county seat of Ingham County, was chosen as the site for the small town sample. It has no major industry, but does have several small industries and service agencies. The town is located within commuting distance of Lansing and Jackson, Michigan. As a result, about 85 percent of the employed persons living within the corporate limits work outside of Mason. Those living and working in Mason are mainly factory workers, and state employees. There are also retired farmers, staff and faculty from Michigan State University. The town's corporate limits were the boundaries for the sample. Initially, the Ingham County Extension Home Economist identified the areas with the largest number of school children. Interviewing began with these areas, but eventually included the entire town due to the small population. As in Lansing, city blocks were randomly selected as starting points before the interviewers contacted any families.

Wheatfield Township, selected for the rural sample, is the closest rural area to Lansing and is within commuting distance. The population is scattered and houses are located approximately every quarter mile on each of the township roads. To select a sample, east-west, and north-south roads within the township were numbered and randomly selected as starting points. In contrast to Lansing and Mason where the skip pattern was used, every house within the township was visited due to the sparse population and distance between houses. There were not

sufficient qualified families from Wheatfield Township, so families were interviewed from a rural area adjacent to Wheatfield to the west. LeRoy Township was included in the sample using the same procedure.

Data Collection Procedures

The data were collected by a market research firm contracted by the research project directors. Six trained interviewers hired by the firm collected data during the months of May and June 1980. Members of the Household Production Research Project team held training sessions with the interviewers prior to the data collection. An outline of a training session as developed by the research team appears in Appendix B-2. The interviewers were instructed in how to conduct each step of the interview process.

Interviewers were responsible for screening the households for eligibility. After eligibility was established, the interviewer explained the study and asked the family to participate in the study. Families were told that their responses would remain anonymous by the interviewers in a letter from the project directions (Appendix B-3). If the family agreed to be part of the study, the interviewer obtained written consent to participate from one or both spouses as required by the University Committee on Research Involving Human Subjects. If only one parent was at home, his/her written consent was obtained at the time of the initial contact and the spouse was asked to sign before the questionnaires were returned. Parents gave consent for their children (Appendix B-4).

Among the participating families, the adult family member who answered the door was asked an open-ended question about the family's

method of stretching income. Then, the interviewer explained the procedures for completing the questionnaires and gave the family three questionnaires; one each for the husband, wife, and child. Spouses were requested to complete their questionnaires independently. However, parents could help their child with the child's questionnaire if the child's reading level was not adequate to complete it alone. Each questionnaire booklet was distributed inside an envelope to help family members maintain confidentiality and independence of responses. The interviewers left the questionnaire with the family for several days. The interviewers then called the urban and small town families to arrange for collection of the questionnaires. Rural families were to mail in their questionnaires due to the expense of collection where houses were scattered. The rural families were also called as a reminder. The families who returned completed questionnaires as agreed from the three family members received $5.00 and later a summary of the findings.

A total of 701 households were contacted in order to obtain the sample. Information on contacting the 701 households is found in Appendix B-5 and B-6. One hundred thirty-nine households appeared to be eligible and were given questionnaires which they returned. Of the 139 households, 32 were disqualified from the study for various reasons. In 19 families, the oldest child was over 12 years and 12 months old and in five families, one or both spouses had children over 12 years and 12 months not living within the household. Examination of the questionnaire booklets indicated eight families colluded on answering the questions. Collusion was determined by identical handwriting or answers

on spouses' questionnaires. In particular, questions 19 and 42 were checked as they required handwritten answers.

Description of the Study Sample

The sample for the larger Household Production Project consisted of 107 families (husband, wife, and oldest child between the ages of six and twelve). This study used only the husband and wife data from the 107 families. Thirty-two families were from the urban area, 38 were from the small town and 37 were from the rural area. Demographic information from the Tri-County Planning Commission provided the following data for the sampled areas.

Urban Sample.--The urban sample area included census tracts 36.01 and 36.02. The 1980 median household income in these areas was $19,400 and $14,800, respectively. The areas were 63.7 percent and 69.7 percent Caucasian and 30.5 percent and 24.0 percent Black, respectively.

Small Town Sample.--The small town sample area included the entire town of Mason. The 1980 median household income was $18,400. The area was 96.5 percent Caucasian and 0.01 percent Black.

Rural Sample.--The rural sample area included Wheatfield Township plus the western part of LeRoy Township bordering Wheatfield Township. The 1980 median household income was $17,900. The area was 98.7 percent Caucasian and 0.5 percent Black.

The racial balance of the entire sample is similar to that of the 1980 census. Over 87 percent of the adult respondents in the sample were Caucasian and fewer than 12 percent were Black or of Spanish origin. Most of the Black and Mexican-American respondents were from the urban sample. Adults in the sample ranged in age from 22 to 50.

The wife's average age was almost 32 while the husbands averaged almost 34 years of age (Table 1). The average length of marriage was 11.66 years. The majority of couples (70.9 percent) were married 10 to 15 years. Included in the sample were couples living together as families who did not report they were married. They were labeled as husband and wife in the data.

The households were composed of the husbands and wives, total number of children, total number of other relatives and total number of other individuals living in the household. The number of persons in the household ranged from three to seven. Most households had four members: husband, wife, and two children. Only one family reported a non-relative living in the household. No other relatives were indicated living in the households.

The average number of children per household was 2.4. The number of children per household ranged from one to five. The number of children per household in the sample varied from the Lansing SMSA average as the sample specified families with at least one child and therefore, childless couples were not included. The children in the sample were evenly distributed by age. The largest number of children were 11 years old (20.5 percent).

Educational levels varied between husbands and wives. Over nine percent of the wives and 6.4 percent of the husbands reported not completing high school. The highest level of education for 35 percent of the wives and 32 percent of the husbands was the 12th grade. One-third of the wives and one-fourth of the husbands started college, but completed less than four years. Over one-fifth of the wives

Table 1.--Characteristics of Young Michigan Families in the Household Production Sample as Reported by Husbands and Wives[a] (Summer 1980, Michigan Houshold Production Study)

Characteristics	Frequency (n=107)	Percentage (100.0)	Mean	Median
Age in Years				
Husbands				
21-25	2	1.8	33.79	33.46
26-30	22	20.6		
31-35	52	48.5		
36-40	24	22.4		
41-45	3	2.7		
46-40	4	3.7		
Wives				
21-25	3	2.8	31.89	31.85
26-30	32	29.8		
31-35	52	48.5		
36-40	18	16.8		
41-45	2	1.8		
46-50	0	0		
Years Married				
0-3	6	5.6	11.66	12.39
4-6	6	5.6		
7-9	9	8.4		
10-12	34	31.7		
13-15	42	39.2		
16-18	8	7.5		
19-21	2	1.8		
Number of Persons in Household*				
3	11	10.3	4.41	4.79
4	52	48.6		
5	34	31.8		
6	9	8.4		
7	1	0.9		
Number of Children*				
1	11	10.3	2.40	2.32
2	52	48.6		
3	35	32.7		
4	8	7.5		
5	1	0.9		
Age of Oldest Child*				
6	14	13.1	9.14	9.13
7	12	11.2		
8	16	15.0		
9	16	15.0		
10	14	13.1		
11	22	20.6		
12	13	12.1		

*Reported by the wife

Table 1. (cont'd)

Characteristics	Frequency (n=107)	Percentage (100.0)	Mean	Median
Education Level				
Husbands				
1-3 years of high school	6	5.6		
Completed high school (high school diploma)	35	32.7		
Less than 4 years of college	27	25.2		
4 years of college	18	16.8		
5 or more years of college	20	18.7		
Wives				
1-3 years of high school	9	8.4		
Completed high school (high school diploma)	38	35.5		
Less than 4 years of college	36	33.6		
4 years of college	7	6.5		
5 or more years of college	16	15.0		
Employment Status				
Single-earner	56	52.8		
Dual-earner	48	44.9		
Both employed	3	2.8		
Midpoint of Family Income Category (Annual)**				
$7,500	1	0.9	$26,752	$25,519
$9,000	1	0.9		
$11,000	0	0		
$13,500	4	3.7		
$17,500	16	15.0		
$22,500	23	21.5		
$27,500	20	18.6		
$32,500	26	24.3		
$42,500	13	12.1		
$50,000-over	4	3.7		
Missing Data	1	0.9		

**1979 total income before taxes. Husband's and wife's personal income was added together for Family Income.

Table 1. (cont'd)

Characteristics	Frequency (n=107)	Percentage (100.0)	Mean	Median
Occupation				
Husbands				
Professional-Technical	30	28.8		
Managerial-Administrative	14	13.1		
Sales	3	2.8		
Clerical	7	6.5		
Craftsman, operative, transport, laborer	44	41.1		
Service	5	4.7		
Private household workers	0	0		
Farmer	2	1.9		
Housespouse/Student	2	1.9		
Wives				
Professional-Technical	11	10.3		
Managerial-Administrative	3	2.8		
Sales	2	1.9		
Clerical	20	18.7		
Craftsman, operative, transport, laborer	3	2.8		
Service	7	6.5		
Private household workers	4	3.7		
Farmer	1	0.9		
Housespouse/Student	56	52.3		

[a]a figures reported in table represent the mean number of activities self-reported by respondents for each category

(21.5 percent) finished four or more years contrasted with more than a third (34.5 percent) of the husbands who finished four or more years.

Employment was another factor that characterized the families in the sample. Fifty-two percent of the couples were single-earner families and 44.9 percent had both husband and wife employed. At the time of the sample, both adults were unemployed in 2.8 percent of the families. This was less than the overall population where 12.6 percent of the workers in the Lansing SMSA were reported as unemployed for May

of 1980. Specifically, 12.5 percent were unemployed within the city of Lansing.

The median familiy income for the sample was $25,519. This was higher than the 1980 census estimated median incomes for the four census tracts where the urban median income was $19,400 and $14,000 (tracts 36.01 and 36.02, respectively), small town was $18,400 and rural was $17,000. The per capita income was calculated by dividing the total family income by the number of persons in the household dependent upon the income. The per capita average income was $5,622.

The occupations of husbands and wives were classified according to the 1970 United States Census Occupational Codes. For reporting, the occupations were combined under larger categories. Twenty-eight percent of the husbands and 10.3 percent of the wives were professional-technical workers. More husbands than wives were managerial-administrative workers (13.1 percent of the husbands and 2.8 percent of the wives). A few families were working in sales activities (2.8 percent of the husbands and 1.9 percent of the wives). Most of the employed wives were clerical workers (18.7 percent). Only 6.5 percent of the husbands were in clerical work. Most of the employed husbands were in blue collar jobs such as craftsmen, transport workers, operatives, and laborers (41.1 percent). In contrast, only 2.8 percent of the wives had those types of employment. Husbands and wives working as service and private household workers were 4.7 percent and 10.2 percent of the employed persons. Only 2.9 percent of the employed husbands and 0.9 percent of the wives were farmers. The greatest difference between the spouses was that wives were classified as house spouses or students

(52.3 percent) while only 1.9 percent of the husbands reported being in this category.

In summary, the families in the sample were a diverse group representing many income levels, educational levels, and occupations. Some respondents were professionals, some clerical workers, and others were craftsmen or worked in stores or factories. Eighty-five percent of the men were employed at the time of the survey, and 12 percent were laid off. Forty-seven percent of the wives were employed outside the home.

Instrument Development

A comprehensive questionnaire was developed specifically for the overall project to investigate household production. The questions were developed by the Household Production Project members or adapted from questions developed by other researchers. The project team members consisted of three faculty members from Michigan State University and graduate students. This researcher participated in cleaning the data and preparing it for analysis, creating variables, analysis decision sessions, determining statistical procedures, examining for collusion, and development of production scoring.

The questionnaire was developed according to the following procedure (Ezell, 1981, p. 71):

1. Reviewing of relevant literature including professional journals and books, research reports, theoretical papers, magazine, and newspapers.
2. Asking experts to review and add to a list of household production activities.
3. Synthesizing the information gathered and developing a preliminary questionnaire.
4. Obtaining inital approval from the University Committee on Research Involving Human Subjects for pretesting the questionnaire.
5. Pretesting the questionnaire on a selected group of families.

6. Altering the questionnaire to include recommended changes in the final questionnaire.
7. Obtaining final approval from the University Committee on Research Involving Human Subjects before beginning interviews in the sample.

Related Literature

Four major categories were studied in the questionnaire development: household production, quality of life, human capital development, and family demographics. Sources used to research and develop questions of household production were: Berk and Shih, 1980; Beutler and Owen, 1979; Leonard-Barton and Rogers, 1980; Morgan et al., 1974; Walker, 1973; Walker and Woods, 1976. The questions on quality of life were adapted from the work of Andrews and Withey (1976). The research team developed their own questions on human capital development. Demographic questions were from the Quality of Life Research Project done by the Departments of Human Environment and Design, and Family and Child Ecology at Michigan State University and the Department of Clothing and Textiles, University of Minnesota. (The Michigan Agricultural Experiment Station Project Numbers were: 1249 "Clothing Use and Quality of Life in Rural and Urban Communities," 3151 "Families in Evolving Rural Communities." The Minnesota Agricultural Experiment Station Project number was: 53-086 "Clothing Use and Quality of Life in Rural and Urban Communities.")

Using the literature review, project conferences, and responses of persons asked to review a preliminary list of household production activities, the initial questionnaire was developed. Specific attempts were made by the project members to state all questions as simply and as

clearly as possible. Informal review by project members caused some modifications of the questions.

The questionnaire was pretested by members of the Household Production Project staff. Urban, small town, and rural families (nine total) not living in the sample areas participated in the pretest. Their responses resulted in minor modifications to the questionnaire.

Description of the Variables

Only part of the questionnaire data was used in this analysis. The sections of the questionnaire used in this study included: (1) activities at home (pp. 4-9, 11); (2) saving and investing (p. 12); (3) activities outside the home (pp. 23-26); (4) value of home activities (p. 27); and (5) family situation (pp. 28-32, 34, 36-37). These sections are included in Appendix B. Only husbands' and wives' questionnaires were used as the childrens' data were not comparable.

Scoring

Several scores were developed in order to better understand the collected data and answer certain research questions. One score focused on the number of production activities done on both the individual and family levels. Computations were also made to develop a measure for household production decisions and the amount of production activity compared to other alternatives including buying it, omitting it, or letting it go undone. Likewise, computations were made to develop a perceived value of household production.

Perceived Household Production Activities

Household production activity scores were computed by summing the positive responses to adult questionnaire items 2-10, 12-13, 32, 34-40. Most of the items were scored on a yes-no basis: a yes response indicated the individual did the activity himself/herself and a no response indicated that the respondent did not do it. Six of the questions (2-6, 9) had more detailed alternatives to choose from: usually hire it done or buy it, usually do it myself, usually do it together with other family members, usually done by another family member or friend, let it go or doesn't apply. In order to examine household production as a category, it became necessary to aggregate the responses. This was done two ways: as individuals and as family units.

1. Individual Score. The individual score was designed to identify who did the work within the family. For each activity, every family was scored as to whether the husband did the activity by himself or the wife did it by herself. If either husband or wife indicated that they did it with another family member, then they were given credit that it was done by either husband and/or wife with another family member. However, if both husband and wife marked that they did it by themselves, the family was scored as conflicting because both husband and wife could not be solely responsible for the task. Only those questions with detailed alternatives (2-6, 9) had information on other family members doing the activity. For the yes-no questions, the husband only and wife only scoring was the same as described above. If both husband and wife marked yes, then the score was both did the activity together. The names given to the scores were:

Husbands only: Total of the positive responses marked by husbands only

Wives only: Total of the positive responses marked by wives only

Together: Total number of responses: questions 2-6, 9 marked by either husband or wife that they did it with another family member, or on the remainder of the questions (yes-no) marked by both husband and wife that they did it.

Conflicting: Total number of responses marked by both husband and wife that they did the activity by themselves (questions 2-6, 9).

2. Family Collective Score. The family collective score was made by totaling all the positive responses to a total possible 178 production activities by the family. The family score called a Total Score is the sum of the Husbands only, Wives only, Together, and Conflicting scores. An example of the scoring procedure is in Appendix B-7.

For the perceived household production activity score, the production activities were divided into two groups of activities done basically within the household and activities done with other families or with the community (Table 2). The eight activities done within the home, called for this analysis in-home production activities, included: home care and repair (questions 2, 7.5, 7.6, 7.8, 7.9, 7.13); car care and repair (question 3); yard, lawn and outdoor care (questions 5, 7.7); personal care (question 4); sewing, crafts, and hobbies (questions 6, 7.1, 7.2, 7.3, 7.11, 7.12); food preservation (questions 8, 7.10, 7.14); care of family members (questions 9, 10); and recycling within the home (questions 12.1, 12.10-12.12). There were a total of 84 in-home production activities. The nine activities done with other families or in the

community, called for this analysis out-home activities, included: saving and investing (question 13), bartering services (question 32); using cooperatives (question 34); sharing resources (question 35); using community recreational activities (question 36); using community medical

Table 2.--Household Production Activities Categories
(Summer 1980, Michigan Household Production Study)

Categories	Total Possible Activities in Each Category (N)
In-home	
Car care and repair	9
Care of family members	6
Food preservation	13
Home care and repair	26
Personal care	4
Recycle (in home)	4
Sewing, hobbies, and crafts	14
Yard, lawn, and outdoor care	8
Total	84
Out-home	
Bartering Services	7
Community medical services	7
Community recreation	9
Cooperatives	6
Free information	14
Recycle (out of home)	10
Savings and Investments	24
Sharing Resources	7
Shopping alternatives	10
Total	94
Total	
17 categories	178

services (question 37); using "free" information (question 38); using shopping alternatives (question 39); and recycling outside the home (questions 12.2-12.9, 12.13). There were a total of 94 out-home activities.

Perceived Household Production Choices

For six of the items in the questionnaire (2-6, 9), there were six possible responses for the respondent to choose (see p. 77). These possibilities indicated the results of a decision-making process by the individual or the family unit as a whole. The question of interest was whether anyone in the household did the activity, or whether it was hired out, omitted or it did not apply to the family's situation. Therefore, the responses to any of the categories which indicated production (usually do it myself, usually do it together with other family members and usually done by another family member or friend) were counted as a positive response for family production. Friends were included as they often have human resources necessary for a certain task that are available to a family at no monetary cost. The responses for the four possible decision categories were: do it, hire it or buy it, omit it, or doesn't apply. These categories were summed separately and amounts in each category were compared.

Perceived Monetary Value of Household Production

The adult questionnaire asked the individual's perceived monetary value of their annual contribution to the family's income through 12 specific production activities (question 40). They answered indicating one of four ranges for each activity: less than $50, $51-100, $100-450, and more than $450. For the analysis, the mid-value of each range was used ($25, $75, $275) with the exception of the last range where the lower limit of $450 was used. The values of the 12 items were summed for each individual to obtain a total perceived contribution.

Demographic Variables

The responses of husbands and wives in each of the three scoring categories (perceived activity, perceived production choices, and perceived value of production) were analyzed by comparison of husbands' and wives' responses and were further analyzed by demographic variables. The independent demographic variables included: location of residence (urban, small town, and rural); employment of husband and wife (single-earner and dual-earner families); family income (under $20,000; $20,000-24,999; $25,000-29,999; and over $30,000); and size of household ("3", "4", "5", or "6 or more" persons).

Statistical Analysis

Descriptive statistics were used to characterize the sample. Mean, median, and standard deviation were calculated where appropriate to describe the sample. In this study, paired t-tests and one-way analysis of variance tests were also done to determine significance of the differences found.

The paired t-test was used particularly to compare husbands' and wives' responses. A t-test enables the researcher to identify and evaluate differences between two sample means. Assumptions of the t-tests are that the samples are normally distributed, have homogeneous variances, and are randomly selected from the population. A difference score is calculated for each pair of cases.

Analysis of variance (ANOVA) was used to compare different groups such as families with varying income levels or employment status. ANOVA is an inferential statistic used to measure group differences. The SPSS program (Nie, et al., 1975) ANOVA uses one dependent variable with any

number of independent variables. The oneway ANOVA assumes that observations are independently selected from normal populations with homogeneous variance. ANOVA measures the effects of one categorical independent variable apparent at any level on a continuous dependent variable. The result is statistically significant differences between the means of independent variable categories. The statistical significance is determined by an F-test.

The probability of error is a major consideration in any statistical testing. Error results from rejecting a null hypothesis when it is true and from failing to reject a hypothesis when it is false. Acceptable levels of error must be established according to the credible research practices and the specific nature of the research. In this analysis, the data were reported up to the .10 probability of error levels. The reason for this relatively high level of acceptance was that the research was exploratory. The .10 level could identify differences that would not be apparent at lower levels. It needs to be considered, however, that the .10 level allows more chance for error and the lower levels (.05 or .01) are more reliable indicators of significance.

The data analysis for this study was performed on the Control Data Corporation Model 750 computer at Michigan State University. The statistical programs used were all from the Statistical Package for the Social Sciences (Nie, et al., 1975), version 7.0.

Limitations

The present analysis is generalizable to young families with children living in the United States. The study is limited in application by the sample, but nevertheless has useful findings. A limitation of the present analysis is that it used only the responses of husbands and wives and not all family members. Technically, the family score is a spouse reponse score. Another limitation of the study is that the activities that were surveyed were the choice of the researchers. This is not a serious limitation, however, due to the large number of activities included. Also, respondents could write in additional activities and few did so. Amount of household production was measured by a positive response to the activity and did not consider frequency of the activity nor amount of time spent. For the study, a limitation is that the decision alternatives and perceived value questions were only asked on a selected number of activities. None of these were from the out-home category which limited the comparison between in-home and out-home activities. The responses are based on recall and self-report which can result in inaccuracies as there was no observation as to who actually performed the production activities. Also, respondents may have tired due to the length of the questionnaire.

Chapter 4

FINDINGS

This chapter contains the results of the data analysis. The results are contained in three sections under the following headings: (1) perceived household production activities; (2) perceived household production choices; and (3) perceived monetary value of household production. Each section contains research questions and hypotheses.

Perceived Household Production Activities

The first research question on general household production was:

1. To what extent are families participating in household production? Are there any differences in:
    a. Production activities done inside the home (basically with family members) and outside the home (with other families and community organizations)?
    b. Husband and wife participation in household production?
    c. Amount of involvement according to: location of residence, family income, family employment status, or household size?

Household production questions were asked of both husbands and wives on the survey questionnaires. The survey included 178 possible

production activities in which the respondents, singly or together, might decide to participate. A list of all 178 production activities and the percentage of husbands and wives responding that they do the activities is in Appendix C-1. It is important to note that throughout this research, amount of household production is measured by number of positive responses to various activities and does not consider time spent or frequency of doing one specific activity. The most frequently done activities (done by over 50 percent of the respondents) included home care and repair, car care and repair, yard, lawn and other outdoor care, some types of recycling, use of community recreational activities and shopping. The activities done by the fewest respondents (less than 25 percent) were care of family members, savings and investing, some recycling, bartering services, using cooperatives, sharing resources, using community medical services, and using free information.

Ho 1. There is no significant difference between the amount of participation in household production activities inside the home compared to outside the home.

The average family participated in over 50 percent of the production activities mentioned in the survey. The average was 90.2 activities per family. Families reported participating in approximately 63 percent of the possible production activities in the in-home category (53.39) and only 38 percent of the possible production activities in the out-home category (35.66) (Table 3). Analyzed through a two-tailed t-test, this difference proved to be significant at the .001 level. Based on these results, the hypothesis was rejected.

More activities were done by husbands and wives working together on activities compared to either husbands or wives doing activities by

themselves. For the in-home activities, husbands and wives together did almost 26 percent of the possible activities together compared to 23 percent for husbands alone and 14 percent for wives alone. When compared by scores, husbands and wives together did over three more activities than husbands alone and almost ten more than wives alone. The same general trend was true for the out-home category. Wives together did almost 20 percent of the possible activities together compared to almost seven percent for husbands alone and almost 11 percent for wives alone. Together they did more than 12 activities more than husbands only and more than nine more compared to wives alone. Summing in- and out-home activities, husbands and wives on the average did almost 23 percent of the possible activities participating together compared to almost 14 percent for husbands alone and almost 12 percent for wives alone.

Ho 2. There is no difference between the amount of husband and wife participation in household production.

The responses of husbands and wives indicating they participated in a production activity were analyzed to test for any difference in the amount or type of participation in household production activities. The production participation of husbands and wives varied greatly within the in-home and out-home categories. Husbands did almost nine percent more activities than wives in the intra-home category, which is significant at the .001 level. Wives did almost four percent more activities in the out-home category than did their husbands which is significant at the .001 level (Table 3). In the in-home group, husbands participated more than wives in home care and repair, car care and repair, and yard, lawn, and other outdoor work. Wives participated more than husbands in

Table 3.--Mean Household Production Participation Scores for In-Home, Out-Home, and Total-Home Activities[a] (Summer 1980, Michigan Household Production Study)

Scores	Categories					
	In-Home (n=84)		Out-Home (n=94)		Total-Home (n=178)	
	mean	(%)	mean	(%)	mean	(%)
Husbands	19.06	(22.69)	6.68	(7.11)	25.56	(14.36)
Wives	11.81	(14.06)	10.22	(10.87)	22.03	(12.38)
Together	21.70	(25.83)	18.77	(19.97)	40.47	(22.74)
Conflicting[b]	2.66	(3.17)	*	*	2.66	(1.49)
Family Total	53.39****	(62.37)	35.66****	(37.94)	90.20	(50.67)

[a] figures reported in table represent the mean number of activities
[b] self-reported by respondents for each category
* not collected for out-home activities
**** comparison of in-home and out-home family total by t-test is significant at the .001 level

personal care, sewing, hobbies, and crafts and in food preservation. The differences in participation (measured by a multiple t-test method) by husbands and wives was significant at the .001 level in every category except for recycling which was significant at the .01 level (Table 4). In the out-home participation, the husband/wife activity difference was not as distinct as in the in-home scores. Nevertheless, there were significant differences in participation in bartering services, community recreational activities, community medical services, shopping, and recycling. On the basis of these differences, Ho 2 was rejected.

Ho 3. There are no differences in amount of involvement in household production according to: location of residence, family income, family employment status, or household size.

Table 4.--Comparison of Husbands' and Wives' Participation in Household Production Activities[a]
(Summer 1980, Michigan Household Production Study)

Category	Husbands' Mean	Wives' Mean	T Value	Sign.
In-home	18.88	11.81	6.11	.001****
Car care and repair	3.39	.32	14.57	.001****
Care of family members	.10	1.05	-8.45	.001****
Food preservation	.93	4.00	-8.90	.001****
Home care and repair	10.42	.65	14.57	.001****
Recycle (in home)	.10	.32	-2.62	.010***
Personal care	.10	1.22	-10.75	.001****
Sewing, hobbies, crafts	1.63	3.81	-7.19	.001****
Yard and outdoor care	1.85	.47	6.87	.001****
Out-home	6.68	10.22	-4.65	.001****
Bartering services	.94	1.71	-3.21	.002***
Community medical serv.	.48	.77	-2.37	.020**
Community recreation	.91	1.22	-1.54	.127
Cooperatives	.17	.19	-.31	.759
Free information	1.00	1.23	-1.01	.314
Recycle (out of home)	.69	1.05	-2.39	.019**
Savings and investments	1.15	1.10	.28	.781
Sharing resources	.54	1.03	-3.16	.002***
Shopping alternatives	.80	1.91	-4.81	.001****

[a]figures reported in table represent the mean number of activities self-reported by respondents for each category
**Sign. at .05 level
***Sign. at .01 level
****Sign. at .001 level

The production categories of in- and out-home activities and total family activities were further analyzed by location of residence (urban, small town, rural), family income (under $20,000; $20,000-24,999; $25,000-29,999; $30,000 and over), family employment status (single- or dual-earner families) and household size ("3", "4", "5", or "6 or more"). Location was a statistically significant variable for several scores. In in-home activities, the wives' group mean score was significantly higher for the small town and rural groups than for the urban group. The conflicting group mean score was higher for the urban group

Table 5.--Husbands' and Wives' Household Production Activities Analyzed by Location[a]
(Summer 1980, Michigan Household Production Study)

			Location				
Cateogry	N	Mean	Urban (n=32)	Small Town (n=38)	Rural (n=37)	F Value	Sign.
In-home							
Husbands	106	19.06	18.58	18.24	20.30	.50	.6046
Wives	107	11.81	9.28	13.13	12.65	.51	.0078***
Together	107	21.70	22.56	20.95	21.73	.20	.8171
Conflicting	86	2.66	3.67	1.96	2.42	4.02	.0214**
Total	107	52.39	49.80	52.30	54.70	1.86	.1608
Out-Home							
Husbands	107	6.68	7.25	6.08	6.81	.72	.4873
Wives	107	10.22	8.47	11.53	10.38	2.56	.0821*
Together	107	18.77	17.19	20.42	18.43	1.51	.2265
Conflicting	-	-	-	-	-	-	-
Total	107	35.66	32.90	38.00	35.60	2.97	.0555*
Total							
Husbands	107	25.56	25.25	24.32	27.11	.62	.5386
Wives	107	22.03	17.75	24.66	23.03	5.83	.0040***
Together	107	40.47	39.75	41.37	40.16	.12	.8877
Conflicting	86	2.66	3.67	1.97	2.42	4.02	.0215**
Total	107	90.20	85.80	91.80	92.30	1.99	.1423

[a]figures reported in table represent the mean number of activities self-reported by respondents for each category
*Sign. at .10
**Sign. at .05
***Sign. at .01

compared to the other groups. Those from small towns were also the highest for the wives only mean score and the total collective mean score in out-home activities (Table 5). Family income was significant in the out-home husbands' mean score where the $30,000 and over income group participated in more activities than the other income groups

Table 6.--Husbands' and Wives' Household Production Activities Analyzed by Family Income[a]
(Summer 1980, Michigan Household Production Study)

Category	N	Mean	Family Income: Under $20,000 (n=24)	$20,000-24,999 (n=27)	$25,000-29,999 (n=27)	Over 30,000 (n=28)	F Value	Sign.
In-home								
Husbands	105	18.94	19.57	18.22	20.22	17.89	.37	.7762
Wives	106	11.86	12.58	11.59	12.44	10.93	.50	.6826
Together	106	21.73	23.00	21.44	21.22	21.39	.15	.9300
Conflicting	86	2.66	3.70	2.05	2.68	3.36	1.95	.1278
Total	106	52.35	54.30	51.30	53.90	50.20	.96	.4147
Out-home								
Husbands	106	6.70	5.83	6.89	5.70	8.21	2.21	.0912*
Wives	106	10.27	9.96	10.48	10.55	10.07	.07	.9771
Together	106	18.77	17.67	18.44	20.70	18.18	.74	.5286
Conflicting		--	--	--	--	--	--	--
Total	106	35.75	33.50	35.80	37.00	36.50	.75	.5247
Total								
Husbands	106	25.46	24.58	25.11	25.93	26.10	.11	.9563
Wives	106	22.13	22.54	22.07	23.00	21.00	.24	.8694
Together	106	40.50	40.67	39.89	41.93	39.57	.14	.9369
Conflicting	86	2.66	3.70	2.05	2.68	3.36	1.95	.1278
Total	106	90.25	90.90	88.70	92.70	88.80	.44	.7282

[a]figures reported in table represent the mean number of activities self-reported by respondents for each category
*Sign. at .10
**Sign. at .05
***Sign. at .01

(Table 6). Family employment as a variable was significant for wives in the in-home activities as the single-earner group had a higher mean score than the dual-earner group (Table 7). Household size was not estimated to be significant for any scores except for the conflicting category (Table 8).

Table 7.--Husbands' and Wives' Household Production Activities Analyzed by Employment[a]
(Summer 1980, Michigan Household Production Study)

Category	N	Mean	Employment Status		F Value	Sign.
			Single-Earner (n=56)	Dual-Earner (n=48)		
In-Home						
Husband	103	19.15	19.53	18.65	.22	.6377
Wives	104	11.81	12.66	10.81	2.83	.0955*
Together	104	21.90	21.50	22.38	.18	.6742
Conflict	83	2.66	2.58	2.75	.10	.7518
Total	104	52.64	53.30	51.80	.56	.4561
Out-Home						
Husbands	104	6.74	6.82	6.65	.05	.8301
Wives	104	10.28	9.63	11.04	1.56	.2139
Together	104	18.96	18.79	19.17	.06	.8084
Conflict	--	--	--	--	--	--
Total	104	35.98	35.20	36.90	.87	.3533
Total						
Husbands	104	25.67	26.00	25.29	.11	.7463
Wives	104	22.09	22.29	21.85	.06	.8128
Together	104	40.89	40.29	41.54	.19	.6601
Conflict	--	--	--	--	.10	--
Total	104	90.75	90.60	91.00	.02	.8831

[a]figures reported in table represent the mean number of activities self-reported by respondents for each category.
*Sign. at .10 level

The group mean scores for husbands only, wives only, and together were broken down into the 17 separate production activities. These activities were analyzed by each of the four variables. Location as a variable showed more significant differences than the other three factors. Location was not a significant variable for any of the activities for husbands only. Wives from small town and rural areas did participate in significantly more food preservation than those in urban areas. Small town wives also used significantly more community medical

Table 8.--Husbands' and Wives' Household Production Activities Analyzed by Household Size[a]
(Summer 1980, Michigan Household Production Study)

Category	N	Mean	Household Size 3 (n=11)	4 (n=50)	5 (n=32)	6 or more (n=10)	F Value	Sign.
In-Home								
Husbands	103	19.05	19.72	19.08	19.63	16.30	.34	.7965
Wives	103	11.91	10.45	11.70	12.22	13.60	.59	.6249
Together	103	21.81	19.18	22.58	21.56	21.60	.34	.7954
Conflict	103	1.96	3.39	1.92	1.72	1.40	2.84	.0419**
Total	103	52.77	49.36	53.36	53.41	51.50	.61	.6099
Out-Home								
Husbands	103	6.65	7.27	6.56	6.63	6.50	.09	.9630
Wives	103	10.34	8.27	11.08	9.97	10.10	.79	.5020
Together	103	18.79	20.18	17.94	19.90	17.90	.57	.6394
Conflict		--	--	--	--	--	--	--
Total	103	35.78	35.72	35.58	36.50	34.50	.15	.9328
Total-Home								
Husbands	103	25.70	27.00	25.64	26.25	22.80	.31	.8193
Wives	103	22.25	18.72	22.78	22.19	23.70	.68	.5654
Together	103	40.59	39.36	40.52	41.47	39.50	.09	.9665
Conflict	103	1.96	3.36	1.92	1.72	1.40	2.84	.0419**
Total		90.50	88.45	90.86	91.63	87.40	.31	.8201

[a]figures reported in table represent the mean number of activities self-reported by respondents for each category
**Sign. at .05 level

care compared to wives from other locations. Husbands and wives from urban locations did more car care and repair together than those from other areas. Rural husbands and wives did significantly more yard, lawn, and other outdoor work than did those from the other locations. Small town husbands and wives used significantly more community medical care than those from other areas (Table 9).

Family income was significant for husbands only score in the recycle out-of-home category where the $25,000-$30,000 income group

reported recycling more than other income groups (Table 10). Wives from the $20,000-24,999 income level group did significantly more car care and repair as compared to the other wives' groups. Wives from the $25,000-29,999 group used significantly more cooperatives than wives from the other income levels. There were no significant differences in the together score by family income.

When analyzed by family employment status, husbands from single-earner families did more child care and reported sharing more resources than other husbands (Table 11). Wives from dual-earner families participated more in saving and investing and recycling out-of-home compared to single-earner families. Together, husbands and wives from dual earner families used significantly more free community information than single-earner families.

When household size was used as a variable, husbands from households with six or greater reported doing more personal care than husbands from lesser sized households (Table 12). There were no significant differences according to household size for wives or together scores. Due to the differences discovered, Ho 3 was rejected.

Perceived Household Production Choices

Some of the household production activities questions included six decision choices as the responses. This information was used to examine the second research question:

2. To what extent are families producing goods and services for themselves that are commonly produced in the marketplace? To what extent are they buying or hiring the goods or services? To what extent are they letting it go? Which activities do not apply to their situation? Are there any differences in:

Table 9.--Report of Husbands' and Wives' Significant Production Activities Differentiated by Location[a]
(Summer 1980, Michigan Household Production Study)

Category	N	Mean	Location: Urban (n=32)	Small Town (n=38)	Rural (n=37)	F Value	Sign.
Wife							
In-home							
Food preservation	95	4.52	3.62	4.89	4.82	2.41	.0959*
Out-home							
Community medical	57	1.44	1.15	1.62	1.43	2.57	.0863*
Together							
In-home							
Car care and repair	107	1.75	2.38	1.74	1.22		.0232**
Yard, lawn, and outdoor care	107	4.36	3.41	4.63	4.92		.0120**
Out-home							
Community recreation	101	4.84	4.33	5.41	4.68	2.81	.0654*

[a]figures reported in table represent the mean number of activities self-reported by respondents for each category
*Sign. at .10 level
**Sign. at .05 level

Table 10.--Report of Significant Mean Production Activities Differentiated by Family Income[a]
(Summer 1980, Michigan Household Production Study)

Category	N	Mean	Family Income: Under $20,000 (n=24)	$20,000-24,999 (n=27)	$25,000-29,999 (n=27)	Over 30,000 (n=28)	F Value	Sign.
Husband								
Out-home								
Recycle (out of home)	55	1.33	1.38	1.38	1.46	1.00	2.45	.0736*
Wife								
In-home								
Car care and repair	20	1.70	1.83	2.20	1.29	1.50	3.95	.0277**
Out-home								
Cooperatives	17	1.18	1.00	1.00	1.50	1.00	2.80	.0814*

[a]figures reported in table represent the mean number of activities self-reported by respondents for each category
*Sign. at .10 level
**Sign. at .05 level

Table 11.--Report of Husbands' and Wives' Signficant Mean Production Activities Differentiated by Family Income[a] (Summer 1980, Michigan Household Production Study)

Category	N	Mean	Employment Status: Single-earner (n=56)	Employment Status: Dual-earner (n=48)	F Value	Sign.
Husband						
In-home						
Care of family members	9	1.22	1.50	1.00	3.89	.0892*
Out-home						
Sharing resources	38	1.53	1.73	1.25	3.25	.0797*
Wife						
In-home						
Care of family members	59	1.81	1.92	1.60	2.83	.0957*
Out-home						
Recycle (out of home)	62	1.74	1.56	2.04	4.29	.0427**
Savings and investments	65	1.82	1.61	2.03	3.37	.0710*
Together						
Out-home						
Free Information	47	2.09	1.77	2.48	3.12	.0843*

[a]figures reported in table represent the mean number of activities self-reported by respondents for each category
*Sign. at .10 level
**Sign. at .05 level

Table 12.--Report of Husbands' and Wives' Significant Mean Production Activities Differentiated by Household Size[a] (Summer 1980, Michigan Household Production Study)

Category	N	Mean	Household Size: 3 (n=11)	4 (n=50)	5 (n=32)	6 or more (n=10)	F Value	Sign.
Husband								
In-home								
Personal care	103	.31	.11	.09	.06	.50	7.01	.0003****
Together								
In-home								
Recycle	103	2.17	1.64	2.18	2.44	1.90	3.24	.0254**

[a]figures reported in table represent the mean number of activities self-reported by respondents for each category
**Sign. at .05 level
****Sign. at .001 level

a. Husband and wife participation in each of these choices?

b. Household production choices according to: location of residence, family income, family employment status, and household size.

Six of the categories of production included a choice of responses indicating a decision process involved in household production. The choices of response were: usually hire it done or buy it, usually do it myself, usually do it together with other family members, usually done by another family member or friend, let it go, and doesn't apply. For analysis, the three responses "usually do it myself", "usually do it together with other family members" and "usually done by another family member or friend" were considered as one response indicating the family decided to produce the good or service for themselves by some means. Families either used their own efforts and skills or those offered by friends. The six categories of production, with a total of 54 items, were home care and repair (Question 2) with 21 items; car care and repair (Question 3) with nine items; personal care (Question 4) with four items; yard, lawn, and other outdoor work (Question 5) with seven items; sewing, hobbies, and crafts (Question 6) with nine items; and care of family members (Question 9) with four items.

Ho 4. There is no difference between husbands' and wives' perceptions of the family's household production choices.

Both husbands and wives reported that the majority of the 54 items were done by the family. Husbands reported 40 items (74 percent) were done by the family and wives reported 41 items (76 percent). Husbands' reports generated a mean of five items (9 percent) as hired or bought

while wives' reports a mean of eight items (15 percent). Those activities hired or bought include repairing major appliances, repairing the car and car body, shoe and handbag repair, reupholstering furniture, and occasional care for children. In addition, husbands reported hiring more hair cuts compared to having the family do it and wives reported buying draperies and slipcovers more than doing it themselves. Few production activities were deliberately not done. Fourteen percent of the husbands and over 11 percent of the wives responded they omitted insulating hot water pipes which was the highest percentage in the omitted category. In the doesn't apply category, husbands reported 11 activities (20 percent) did not apply and wives reported four activities (7 percent) that did not apply. The majority of both husbands and wives responded that refinishing hardwood floors, and coloring hair did not apply. The majority of husbands also mentioned home permanents, cutting wood, and making slipcovers, reupholstery, and making quilts as not applicable. Most of the differences between husbands and wives occurred in the sewing, hobbies, and crafts category. A summary of husbands' and wives' responses in all four categories is found in Appendix C-2. Husbands and wives differed in their perceptions of and responses to family household production decisions. A dependent t-test showed significant differences between husbands and wives in three of the four categories (Table 13), therefore, Ho 4 cannot be accepted.

Ho 5. There is no difference between husbands' and wives' perceptions of the family's household production choices according to: location of residence, family income, family employment status, and household size.

Table 13.--Comparison of Husbands' and Wives' Household Production Choices[a] (Summer 1980, Michigan Household Production Study)

Category	Mean	Median	Percent	Range	S.D.	T Value	Sign.
Family does it							
Husbands	33.81	33.88	62.81	12-54	7.73	-2.47	.015**
Wives	35.30	35.36	65.37	10-51	7.56		
Hire or buy it							
Husbands	9.28	9.06	17.19	0-31	6.20	-3.34	.001****
Wives	11.17	10.86	20.69	0-26	5.67		
Omit it							
Husbands	1.05	0.30	1.94	0-16	2.42	.95	.345
Wives	0.80	0.25	1.48	0-6	1.48		
Does not apply							
Husbands	9.74	9.57	18.03	0-34	5.75	5.30	.001****
Wives	6.56	5.61	12.15	0-28	5.32		

[a]figures reported in table represent the mean number of activities self-reported by respondents for each category
**Sign. at .05 level
****Sign. at .001 level

Using the same process as for Ho 4, the four decision choices were analyzed by location of residence, family income, family employment status, and household size. When location was considered, rural wives responded significantly more often that family does it compared to the urban or small town wives (Table 14). Urban wives responded significantly more than other wives that the production activities did not apply to them. When family income was used as a variable, significantly more husbands and wives from the highest income group ($30,000 and over) responded that they hired or bought a good or service compared to other income groups (Table 15). When employment status was used as a variable, significantly more wives in dual-earner families hired or

Table 14.--Household Production Choices of Husbands' and Wives' by Location[a]
(Summer 1980, Michigan Household Production Study)

Category[b]	Mean	Location: Urban (n=32)	Small Town (n=38)	Rural (n=37)	F Value	Sign.
Family does it						
Husbands	33.81	33.53	32.87	35.03	.75	.4710
Wives	35.30	33.28	34.97	37.38	2.65	.0752*
Hire or buy it						
Husbands	9.28	9.13	10.61	8.65	1.67	.2024
Wives	11.17	10.73	12.42	10.22	1.54	.2199
Omit it						
Husbands	1.05	1.44	0.63	1.14	.10	.3722
Wives	0.80	0.66	1.13	0.59	1.47	.2349
Does not apply						
Husbands	9.74	9.69	9.87	9.65	.02	.9849
Wives	6.56	9.09	5.32	5.65	5.67	.0046**

[a]figures reported in table represent the mean number of activities self-reported by respondents for each category
[b]n=107
*Sign. at .10 level
**Sign. at .05 level

bought goods and services compared to single-earner families (Table 16). There were no significant differences between the categories when analyzed with household size as a variable (Table 17).

The four household production choices (family does it, hire or buy it, omit it, and does not apply) were analyzed by the demographic variables and type of household production activity. The location of residence variable will be considered first (Table 18). Under the category family does it, rural husbands responded that the family did significantly more car care and repair than was reported by husbands from other locations. Rural husbands' and wives' reponses suggested

Table 15.--Household Production Choices of Husbands and Wives by Family Income[a]
(Summer 1980, Michigan Household Production Study)

			Family Income					
Category[b]	N	Mean	Under $20,000 (n=24)	$20,000-24,999 (n=27)	$25,000-29,999 (n=27)	Over 30,000 (n=28)	F Value	Sign.
Family does it								
Husbands		33.76	35.04	32.41	35.26	32.54	1.07	.3672
Wives		35.30	36.88	34.93	37.00	32.68	1.98	.1215
Hire or buy it								
Husbands		9.31	6.63	9.30	9.59	11.36	2.64	.0537*
Wives		11.20	8.25	11.00	11.37	13.75	4.44	.0057***
Omit it								
Husbands		1.06	1.08	1.22	1.37	0.57	0.55	.6451
Wives		0.81	0.67	1.33	0.85	0.39	1.99	.1210
Does not apply								
Husbands		9.75	11.25	10.93	7.78	9.29	2.11	.1039
Wives		6.52	8.04	6.63	4.63	6.93	1.89	.1358

[a]figures reported in table represent the mean number of activities self-reported by resopndents for each category
[b]n=106
*Sign. at .10 level
***Sign. at .01 level

that the rural family does significantly more yard, lawn, and other outdoor work than urban or small town families. This fact is consistent with the earlier finding that rural families do more yard, lawn, and outdoor work than families from other locations (see page 92). Urban husbands reported they omitted sewing, hobbies, and crafts significantly more than husbands from other locations. Location as a variable showed more significant differences in the category doesn't apply when compared to the other demographic variables. Urban wives responded that home care and repair, sewing, hobbies, and crafts did not apply significantly more than women from other locations. Small town husbands reported

Table 16.--Household Production Choices of Husbands and Wives by Employment[a]
(Summer 1980, Michigan Household Production Study)

Category[b]	N	Mean	Employment: Single-Earner (n=56)	Employment: Dual-Earner (n=48)	F Value	Sign.
Family does it						
Husband		33.83	34.34	33.23	8.10	.4736
Wives		35.37	36.45	34.10	2.62	.1086
Hire or buy it						
Husbands		9.48	8.61	10.50	2.47	.1191
Wives		11.31	10.07	12.75	6.02	.0159**
Omit it						
Husbands		0.90	1.02	0.77	0.38	.5371
Wives		0.83	0.95	0.69	0.77	.3819
Does not apply						
Husbands		9.66	10.02	9.25	0.47	.4952
Wives		6.33	6.41	6.23	0.03	.8533

[a]figures in table represent the mean number of activities self-reported by respondents for each category
[b]n=104
**Sign. at .05 level

significantly more that family care does not apply compared to reports of husbands from other locations. Urban husbands and wives both indicated that yard, lawn, and other outdoor work does not apply more than those from other locations.

When the four demographic variables were analyzed by family income other significant differences emerged (Table 19). Wives from the lowest income group reported that the family did significantly more car care and repair compared to the reports of wives from other income levels. Significantly more wives from the highest income level reported buying or hiring home care and repair and car care and repair. Significantly more husbands from the highest income level reported buying or hiring

Table 17.--Household Production Choices of Husbands and Wives Analyzed by Household Size[a]
(Summer 1980, Michigan Household Production Size)

Category[b]	Mean	Household Size 3	4	5	6 or more	F Value	Sign.
		(n=11)	(n=50)	(n=32)	(n=10)		
Family does it							
Husbands	34.05	33.09	32.92	35.84	35.00	1.12	.3462
Wives	35.57	33.45	35.56	36.38	35.40	0.45	.7184
Hire or buy it							
Husbands	9.26	9.18	9.20	9.06	10.30	0.10	.9580
Wives	11.09	11.91	11.12	10.97	10.40	0.13	.9430
Omit it							
Husbands	1.06	0.64	1.48	0.75	0.40	1.01	.3932
Wives	0.79	0.82	0.70	0.84	1.00	0.14	.9348
Does not apply							
Husbands	9.50	10.64	10.32	8.25	8.20	1.21	.3091
Wives	6.39	7.27	6.48	5.75	7.00	0.32	.8105

[a]figures reported in table represent the mean number of activities
[b]self-reported by respondents for each category
n=103

sewing, hobbies and crafts, and family care. Significantly more wives from the second income level ($20,000-24,999) and from the highest income level reported hiring personal care. There was no difference in the omit it category due to family income. Husbands from the second income level reported significantly more than others that family care is not applicable to them.

Family employment status showed some significant differences between single and dual-earner families in the categories of household production decision choices (Table 20). These were all in the area of family care. Significantly more wives with a family size of four bought or hired personal care compared to wives from other sizes of households (Table 21). Significantly more wives from a household of three members

Table 18.--Report of Husbands' and Wives' Significant Responses to Household Production Choices Differentiated by Location[a] (Summer 1980, Michigan Household Production Study)

Category[b]	Mean	Location: Urban (n=32)	Small Town (n=38)	Rural (n=37)	F Value	Sign.
Family does it						
Husband						
Care care and repair	6.30	6.62	5.66	6.70	2.93	.0576*
Yard, lawn, outdoor care	5.88	5.34	5.82	6.40	8.01	.0005****
Wife						
Yard, lawn, outdoor care	5.95	5.34	6.03	6.38	7.55	.0009****
Buy or hire it						
Husband						
Care care and repair	2.47	2.19	3.16	2.00	3.29	.0412**
Yard, lawn, outdoor care	0.31	0.47	0.29	0.19	2.40	.0953*
Wife						
Yard, lawn, outdoor care	0.35	0.66	0.18	0.24	3.42	.0362**
Omit it						
Husband						
Sewing, hobbies, crafts	0.32	0.69	0.18	0.14	2.70	.0717*
Does not apply						
Husband						
Child and other care	0.20	0.06	0.45	0.05	4.94	.0090***
Yard, lawn, outdoor care	0.73	1.03	0.89	0.30	5.12	.0076***
Wife						
Home care and repair	2.93	4.16	2.37	2.43	3.01	.0536*
Sewing, hobbies, crafts	1.76	2.72	1.16	1.54	5.84	.0040***
Yard, lawn, outdoor care	0.68	0.94	0.79	0.35	4.04	.0204**

[a]figures reported in table represent the mean number of activities
[b]self-reported by respondents for each category
n=107
*Sign. at .10 level
**Sign. at .05 level
***Sign. at .01 level
****Sign. at .001 level

responded that they bought yard, lawn, and other outdoor work. There were no significant differences in the omit it category. Significantly more husbands in households with four members, marked does not apply, in reference to personal care. In summary, there were significant

Table 19.--Report of Husbands' and Wives Significant Responses to Household Production Choices Differentiated by Family Income[a] (Summer 1980, Michigan Household Production Study)

			Family Income					
Category[b]	N	Mean	Under $20,000 (n=24)	$20,000-24,999 (n=27)	$25,000-29,999 (n=27)	Over 30,000 (n=28)	F Value	Sign.
Family does it								
Wife								
Care care and repair		6.04	6.67	6.37	5.96	5.25	2.21	.0916*
Buy or hire it								
Husband								
Child and other care		0.61	0.63	0.33	0.70	0.79	2.25	.0872*
Sewing, hobbies, crafts		1.66	1.04	1.30	1.52	2.68	2.85	.0412**
Wife								
Car care and repair		2.75	2.08	2.33	2.96	3.50	2.61	.0558*
Home care and repair		3.68	2.29	3.67	3.89	4.68	2.46	.0674*
Personal care		0.65	0.38	0.81	0.59	0.79	2.28	.0834*
Does not apply								
Husband								
Child and other care		0.20	0.08	0.56	0.11	0.04	4.20	.0076***

[a]figures reported in table represent the mean number of activities
[b]self-reported by respondents for each category
n=106
*Sign. at .10 level
**Sign. at .05 level
***Sign. at .01 level

differences in the four decision choices when analyzed by the four variables; therefore Ho 5 was rejected.

Perceived Monetary Value of Household Production

The third research question was:

3. What do families perceive as the monetary value of their household production contribution? Are there any differences in:

Table 20.--Report of Husbands' and Wives' Significant Responses to Household Production Choices Differentiated by Employment[a] (Summer 1980, Michigan Household Production Study)

Category	Mean	Family Employment Status: Single-Earner (n=56)	Dual-Earner (n=48)	F Value	Sign.
Family does it					
Husband					
Care of Family Members	3.13	3.30	2.92	4.41	.0382**
Wife					
Care of family members	3.04	3.34	2.69	10.48	.0016***
Buy or Hire it					
Husband					
Care of family members	0.61	0.46	0.77	5.12	.0258**
Wife					
Care of family members	0.82	0.55	1.33	10.12	.0019***

[a]figures reported in table represent the mean number of activities
[b]self-reported by respondents for each category
[b]n=104
**Sign. at .05 level
***Sign. at .01 level

Table 21.--Report of Husbands and Wives' Significant Responses to Household Production Choices Differentiated by Household Size[a] (Summer 1980, Michigan Household Production Study)

Category	Mean	Household Size: 3 (n=11)	4 (n=50)	5 (n=32)	6 or more (n=10)	F Value	Sign.
Buy or hire it							
Wife							
Personal care	0.65	0.55	0.84	0.47	0.40	2.71	.0490**
Yard, lawn, outdoor care	0.28	0.73	0.24	0.22	0.20	3.34	.0225**
Does not apply							
Husband							
Personal care	1.87	1.82	2.06	1.78	1.30	3.03	.0328**

[a]figures reported in table represent the mean number of activities
[b]self-reported by respondents for each category
[b]n=103
**Sign. at .05 level

a. Husband and wife perceptions of their contributions?

b. The monetary value according to: location of residence, family income, family employment status, or household size.

Husbands and wives were asked what they perceived to be the monetary value of their annual individual contribution to family income for each of twelve activities with four specific production activities. They answered by indicating one of four intervals for each activity: less than $50, $51-100, $100-450, and more than $450. For the analysis, the mid-value of each range was used with the exception of the last range where $450 was used.

Ho 6. There is no difference in husbands' and wives' perceptions of the monetary value of their household production contribution.

The perceived value of the twelve production activities was summed for each husband and wife (Table 22). The resulting average estimate for husbands was $1,390 and for wives was $1,346. Analyzed by a t-test, the difference between the averages was not significant. Combined husbands and wives contributions would equal an average of $2,736 contributed annually to family income through household production.

Consistent with the findings that husbands and wives did different types of activities, their perceptions of the value they contributed varied by category and by amount. The husbands perceived they contributed over $200 per year to each of the activities: home care and repair, car care and repair, and do-it-yourself projects. Only in the area of home care and repair did the wives perceive they contributed over $200 per year. Husbands had two categories: yard, lawn, and other outdoor work and gardening in the $100-200 per year range. The wives had seven activities in this group. The lowest amount of contribution

Table 22.--Comparison of Perceived Value of Household Production by Husbands and Wives[a]
(Summer 1980, Michigan Household Production Study)

	Value (in Dollars)					
	Husbands		Wives			
Activity	Mean	Median	Mean	Median	T Value	Sign.
Care care and repair	218.93	268.61	102.10	30.06	6.89	.001****
Car pooling, walking	74.53	14.58	48.13	17.28	2.04	.044**
Care for children	87.15	21.30	178.51	69.44	-4.07	.001****
Care for family members[b]	2.34	1.01	4.43	0.88	-.73	.467
Do-it-yourself projects	220.79	268.48	117.06	23.68	5.76	.001****
Food preservation	76.63	13.33	167.05	82.14	-5.41	.001****
Gardening	118.46	64.29	116.35	69.44	.16	.872
Home care and repair	309.35	283.88	231.08	270.16	4.19	.001****
Hunting and fishing	46.26	12.27	27.57	6.08	1.89	.062*
Personal care	33.88	20.17	89.95	36.59	-5.05	.001****
Sewing, hobbies, crafts	25.95	5.33	128.50	68.30	-7.25	.001****
Yard, lawn, outdoor care	175.70	85.55	134.81	71.35	2.53	.013**
Total	1,389.95		1,345.56		.51	.613

[a]figures reported in table represent the mean number of activities self-reported by respondents for each category
[b]n for this item was small: 8 for husbands and 7 for wives
*Sign. at .10 level
**Sign. at .05 level
****Sign. at .001 level

was in the category of caring for other family members, where less than 7.5 percent of the husbands and wives indicated they participated in this production activity. A more detailed report of the production

activities and the perceived monetary values is in Appendix C-3. This evidence does not support Ho 6 and the hypothesis was rejected.

Ho 7. There is no difference in husbands' and wives' perceptions of the monetary value of their household production contribution according to: location of residence, family income, family employment status, and household size.

There was a significant difference in the perceived value of the household production when considering the husbands' responses by location of residence. The rural group estimated the amount of money contributed through household production to be significantly higher than the other groups, at the .05 level. The other variables, family income, family employment status, and household size did not make any significant difference in the perception of the value of the production activities by either husbands or wives (Appendix C-4). There was one significant relationship, therefore Ho 7 was rejected.

Summary

The three categories for analysis were: household production activities, household production decision choices, and perceived value of household production. A general finding across all three categories was that husbands and wives differ greatly in their participation in household production; specifically in types of activities, in perceived household production decision choices, and perceived value of their own household production contribution. For this reason, the husbands' and wives' responses were analyzed separately in this research with the exception of the family score which was designed to measure the total amount of household production per family.

Under perceived household production activities, it was found that the husbands and wives in this study participated more in the within the home and family activities compared to the outside the home and community activities. Husbands did significantly more household production activities than wives. It must be remembered that this study did not examine family involvement in maintenance-type household activities such as cleaning, cooking, and laundry where wives are likely to be more active. Despite the finding that husbands participate more in production, both husbands and wives were active in household production and did more than 50 percent of the activities in a total of 178 possible activities. These 178 possible activities included options for families with varying skills and interests. Families were not expected to do them all. Husbands and wives followed traditional sex role patterns in their choice of production activities.

Various demographic factors had significant relationships with household production. The factors considered were: location of residence, family income, family employment status, and household size. It was found that rural families were the most active in in-home production, but the small town families were more involved in out-home activities. Compared to other wives, wives from small towns were the highest producers in both in- and out-home activities. Considering family income, the most in-home production was done by the lowest income group who were also the lowest in the out-home category. The next highest in-home production group was the $25,000-29,999 income group who were also the highest out-home group. Juxtaposing the lowest income group with the higher income group, results of this study revealed that the lowest income group actively works inside the home, but is much less

involved with production activities outside the home, while the greater income group was highly involved in both home and community. Concerning family employment, there were no significant differences in production between single- and dual-earner families with the exception of wives' in-home activities. Household size associated with production had few significant differences.

In the study of perceived household production choices, husbands and wives responded that the family did most of the activities (63-65 percent), they hired or bought less (17-21 percent), they omitted very little (1-2 percent), and some activities did not apply to their situation (12-18 percent). Differences again emerged in husbands' and wives' perceptions. Wives thought families did more, and hired and bought more than did the husbands. Husbands thought more activities were omitted or did not apply. When analyzed by the demographic factors, rural wives responded that their families did more than wives from other areas. Urban wives responded that fewer household production activities applied to them in their situation compared to other wives. Those husbands and wives with the highest income also bought or hired the most goods and services. Dual-earner wives also indicated that they bought more. Additional analysis pinpointed this difference as being paid child care. Household size again made no difference.

In the study of perceived value of household production, husbands perceived that they contributed slightly more to family income than the wives with their production work. Together they added over $2,700 to family income annually. This estimate may be low for their total household production as only 12 specific items were counted and $450 value was used in calculating the "over $450" category. This value may

be less than the respondents assumed. The only difference according to the demographic variables is that rural husbands valued their contribution higher than husbands from other locations.

Chapter 5

IMPLICATIONS AND CONCLUSIONS

This summary chapter includes an overview of the study with major conclusions and an integration of the findings with related studies. Also included are implications and suggestions for further research.

Overview of the Study

Household production is one method by which families can meet their needs especially in time of economic difficulty. The major purpose of this study was to examine various facets of household production including the kinds of household production done, production decision choices, and the perceived value of household production. The data were taken from a larger study "Contributions of Household Production to Family Income" (Michigan Agricultural Station Project 1363H). The family was the unit of analysis. The sample was 107 families from urban, small town, and rural locations in mid-Michigan. Each husband, wife, and oldest child (between the ages of six and twelve) were given a self-administered questionnaire. Only husbands' and wives' responses were used for this analysis because data from children were not comparable in all categories. Data were analyzed to examine differences in husbands' and wives' responses and to examine the relationship with the variables of: location of residence, family income, family

employment status, and household size. Statistical tests used were analysis of variance and paired t-test.

The major conclusions of the study were:

1. Husbands and wives participate in household production. On the average, families did over 50 percent of the 178 total possible activities in this study.
2. Husbands and wives participated more in production activities involving their own family than in production involving other families and the community.
3. Husbands and wives differ significantly in the types of activities in which they participate. Husbands did more activities involving the family (in-home) and wives did more with other families and the community (out-home). Husbands did more home and car care and repair, and yard, lawn, and outdoor work while wives contributed more to sewing, hobbies, and crafts, food preservation, personal and child care, bartering services, using community recreational and medical services, shopping and recycling.
4. More production activities were done by husbands and wives working together and/or with another family member or friend than by either of them working alone.
5. Generally, families produced three-fifths of the goods and services utilized in the household, and bought or hired one-fifth. They indicated less than one-fifth of the activities did not apply to them and consciously omitted only a small number of activities.

6. Husbands and wives each perceived their household production in selected activities contributed on an average over $1,300 a year to the family income, i.e., a total estimated average of over $2,700 per year.
7. None of the demographic variables (location of residence, family income, family employment status or household size) had a significant relationship to the total amount of household production, perceived alternatives, or perceived value. However, there were some significant relationships between specific categories of production done by husbands and wives separately or together and variables mentioned above.
8. Wives' responses had more significant correlations with the demographic variables than husbands' responses. Wives had 28 significant correlations compared to 19 for the husbands. The significant differences included (1) wives from small town and rural areas produced more than urban wives; (2) wives from single-earner families produced more than wives from dual-earner families on in-home activities; (3) when examining production alternatives, rural wives reported their families did more than wives from other areas; (4) urban wives indicated fewer activities applied to them; and (5) dual-earner wives indicated they hired more child care than other wives.
9. Both husbands and wives from the highest income level reported buying more goods and services than husbands and wives from other income levels.

10. Husbands in the highest income level reported doing more out-home activities compared to other husbands. Rural husbands reported a higher perceived value of their household production contribution compared to other husbands.

Discussion of Findings

A discussion of the findings includes the research questions posed for this study, the study findings and a consideration of the relationships with other research. The first research question was:

1. To what extent are families participating in household production? Are there any differences in:
   a. Production activities done inside the home (basically with family members) and outside the home (with other families and community organizations)?
   b. Husband and wife participation in household production?
   c. Amount of involvement according to: location of residence, family income, family employment status, or household size?

This study found that families did participate in household production activities. They generally did the majority of work that they could hire someone else to do. A unique aspect of this research is that it included activities done with other families and the community as household production.

The measure of household production used in this study was the number of household production activities performed. This is a similar approach to that taken by Owen and Beutler (1981) and the Church of Jesus Christ of Latter-day Saints (1980). These studies, however,

sampled only a small number of possible activities in comparison to the 178 possible items in this study. Measurement of household production by the number of household production activities also contrasts with time utilized which is the most common measurement of household activities.

The amount of time spent in a task has been the major method of measurement of household production. Internationally, Robinson et al., (1972) reported men and women spent equal time in household production except for child care where women spent more time. The American data (Robinson, 1977a) showed women spent about 6.9 hours a week in household production compared to men's 4.2 hours. American women also spent more time in child care than employed men.

This analysis confirmed the findings of other studies that husbands and wives are involved in household production. Men were more involved with activities involving the immediate family (in-home) and women were involved more with other families and the community (out-home). Comparing men and women, there were significant differences in their perceptions of their own household production involvement. This is similar to findings of other researchers that husbands' and wives' roles are specialized and are clearly related to sex role expectations (Hill and Juster, 1980; Lovinggood and Firebaugh, 1978; Larson, 1974; Albrecht, Bahr, and Chadwick, 1979).

It was also found in the study that husbands and wives participate more in household production activities together or with another family member than they do alone. This did not agree with data from Robinson (1966) who found few joint activities. Hefferan (1982a) reported that employed women spent half of their household productive time alone,

one-third with another family member and the rest with someone other than a family member. More study needs to be conducted on this topic to determine if activities are done by two or more family members participating at the same time in an activity, or at different times in the same activity and the effects of this kind of familial interaction.

The relationship of some demographic variables to household production was examined. This study found no significant effect of geographic location, family income, family employment status, or household size on the amount of household production at the .10 level. The relationship with location of residence was meaningful (at the .14 level), however, and more detailed analysis revealed some significant relationships with specific production activities. Other research on the effect of the various socio-economic variables has been inconsistent in the results. Owen and Beutler (1981) found household size, stage in family life, and size of community to be strongly correlated to amount of household production. Robinson (1966) found marital status, type of house, household size, education of household head, location of residence, and age of children explained 11 percent of the variance in amount of household production. Later, Robinson (197/a) found household size to be insignificant. He also found (1980) employment of wife and presence of children and age of husband and wife to be important factors in time spent in household production. Walker and Woods (1976) found that employment of the wife results in less time in household work except for the household production activities. Others have reported the decline in time spent in household work by employed women (Sanik, 1981; Ortiz et al., 1981). Education of women, associated with employment, was found to have only slight effect on household production (Owen and

Beutler, 1981) and a negative effect on household work (Robinson, 1977a). Family income was found to have no effect (Walker and Woods, 1976); Robinson, 1977a). Eghan and Lawrence (1982) found husbands' participation in household work unaffected by wife's employment or education, occupation or age of husband, family income or season of the year. The inconsistent results from various researchers suggest that methodologies of the research need to be examined to determine if they are comparable. Another source of discrepancies may be that definitions of household production differed, and various activities were included in the studies, and measurement techniques were not standard as some used time studies and others used surveys.

The second research question was:

2. To what extent are families producing goods and services for themselves that are commonly produced in the marketplace? To what extent are they buying or hiring the goods and services? To what extent are they letting the activity go undone? Which activities do not apply to their situation? Are there any differences in:
   a. Husband and wife participation in each of these choices?
   b. The decision choices according to: location of residence, family income, family employment status, or household size?

In considering household production choices for six activity categories, this study found husbands and wives generally responded that the family did 63-65 percent of the activities. This illustrated that families do consider household production as a viable way to meet their needs using their own human resources. They reported hiring or buying

only one-third as much as they produced (17-21 percent). Slightly less reported that the activities did not apply to them in their situation (12-28 percent). Only a few husbands and wives reported consciously omitting activities (1-2 percent). Analysis according to demographic factors indicated that rural wives perceived greater production within their families compared to other wives. Compared to other wives, urban wives reported that significantly fewer activities applied to them. This could be due to the characteristics of the urban setting such as close proximity to stores and suppliers of goods and services and a lack of a tradition of production. Husbands and wives with the highest income level bought the most goods and services. This seems logical as they would presumably have more disposable income than other income groups. Dual-earner wives indicated they bought or hired goods and services more than other wives. Additional analysis showed the only difference between wives in single and dual-earner families in hiring services to be in the category of paid child care.

Robinson (1966) did some major research on the topic of household production choices as he examined families' choice of work or leisure and use of outside help. He found the use of outside help, both paid and free help, was influenced by the income of the family head; gender and marital status of respondent; wife's employment, education, and age, hours worked by family head; and age of youngest child under 18. When hours of hired help were compared against hours of household production, the following variables influenced the findings: gender and marital status of head of family; wife's age and amount of employment; income of head, size of community, and age of youngest child under 18. Considering the demographic variables, Strober and Weinberg (1980) found

little difference between employed and nonemployed wives in hiring services of others. Their finding is consistent with the findings of this analysis with the exception of child care.

Other research on household production choices includes a study that named lack of knowledge, time and money as factors limiting household production (Church of Jesus Christ of Latter-day Saints, 1980). Implied from this finding is that the presence of necessary resources would facilitate household production and lack of resources such as skills, time, knowledge, or physical materials may cause persons to buy the good or service or forego it. Following the theory that people do tasks they prefer (Hill and Juster, 1980) several publications have named characteristics of preferred and least preferred tasks (Steidl and Bratton, 1968; Nickell, Rice, and Tucker, 1967; Wysiel, 1967; and Maloch, 1963). In light of the theory, families may prefer household production over hiring perhaps due to the inherent characteristics of production, i.e., challenging, rewarding, and nonroutine.

This study found that husbands and wives perceived their annual contributions of household production to the family income to be over $1,300 for each spouse. Husbands and wives differed significantly in the amounts they perceived they contributed in each category of household production. This corresponds to the findings in research question 1 that there were significant differences in perceived household production involvement by men and women. Rural husbands perceived they contributed significantly more than husbands from urban locations.

The most comparable study (Morgan et al., 1962) also reported on the monetary value of the products of household production. Value was

obtained on only two activities, however, so total value cannot be compared. Morgan et al., (1962) found those that contributed the most thorough household production were young or newly retired families, home owners, families with young children, and those living in small or rural towns. Families with heads with a higher income level produced more than other families. Many of these characteristics of families with a high value for production describe the families used in the sample for the present study. This indicates that the sample for this study is a more highly productive group than the normal range of the population and therefore their perceptions of the value of their production might be higher than the average.

In addition to valuing household production as a monetary benefit for families, other studies have been concerned with valuing household work for the GNP (Peskin, 1982; Gauger and Walker, 1973; and Murphy, 1978). Using the specialist cost technique, women's household production annually is valued at $2,719 and men's is $2,356 (Peskin, 1982). They found that employment status, number of earners in the family, presence of children, age, and own earnings all caused value of household work to vary for women. It would be difficult to compare the value of production computed for the GNP and the value found from the present study as the present study used twelve specific activities and the GNP studies used time diaries which would cover more activities as the basis for valuation. It is notable that in one study the men's production was valued higher and in the other women's had the higher value. Employment was not found to be a significant variable in determining the perceived value of household production in the present study as it was in the GNP studies.

The consideration of the monetary value of household production is not meant to imply that its only worth is its dollar value. Monetary value was one focus of the present study and was a convenient comparison to use for worth. However, the value of household production in human capital development or in familial interaction time could be equally or more valuable to the people involved.

Recommendations for Further Research

This study identified and described many dimensions of household production. It identified what activities are being done and who is doing them from among husbands and wives. Out of four possible decision choices, the study results showed the most frequent decision was to have someone in the family do it, followed by buying or hiring the task done. Husbands and wives also perceived their household production work as being a contribution to the family's real income. Research needs to continue to gain a clear understanding of the many facets of household production. If this study were repeated to increase knowledge on household production, this researcher would recommend that several changes be made.

1. The sample would draw from a wider variety of families than were surveyed in this study. It could include the range from childless young couples to retired older couples. This would allow much more diversity in the variable, household size. One reason why household size did not prove to be a significant variable (as in Beutler and Owen, 1981) may have been that the families in this study were too homogeneous in nature due to the constraint in selection based on the age of the

oldest child. A study of a greater variety of families illustrating the life cycle could also shed light on the development of some production skills and perhaps a decrease in others. Single adult and single parent families should be included. Children over 12 years old could also be surveyed as a variety of families are considered. Also the effect of changes in income and how this affects household production choices could be studied with a variety of families.

2. Questions on decision choices would be asked for a greater number of household production activities, especially those activities done by fewer number of respondents. These would include community activities where the only data are the yes-no responses. There is no information as to why these activities were not performed (i.e., consciously omitted or perhaps bought or hired). More activities (especially in the out-home category) would include a question on the perceived value. Perhaps one reason why people are not participating in out-home activities is because they perceive their efforts in this area as having little value.
3. Additional questions need to be included about household production. The four demographic variables studied offered few significant relationships with household production. Other questions regarding the psychological motivational factors for household production need to be investigated such as: preference for production activities, personal satisfaction from production, perceptions of what activities a person does well, and the process benefits of production. These

findings could be applied to the theories of Hill and Juster (1980) and Juster et al., (1980). The present study offered little data that could be applied to these theories.

Research can be expanded from the descriptive findings of this study to investigate the family ecological model. To contribute to ecological research, instruments need to be developed to address the issue of household production specifically. As ecological research is still developing, this researcher would like to suggest two perspectives as possibilities for future research. One perspective would examine the flow of resources in the production process, and the second would be to study the effect of various environments on household production.

The objective of the first perspective would be the determination of the inputs, transformations and outputs of the production process. Inputs would include both human and material resources such as the perceived production skills of household members as human resources. Educational level is not the equivalent of skills, but may be included in the survey. Also the perceived availability of material resources, information, and other human resources (family and friends) would be important as inputs. This could be compared to the actual availability of materials and information resources in the community. For example, in this study, free sources of information were not widely used, but this could be due to respondents' lack of awareness of their availability in the community. Transformations include the process and technical decisions using the inputs. Questions on process benefits and competence could identify the relationship between the available inputs and outputs. The present study basically described the outputs or products of household production and the number of activities involved.

Also included as outputs are the satisfactions with the good or service produced. The relationship of the output of household production and the input and transformation process needs to be studied. The research of Owen and Beutler (1981) used a household production index (composed of seven production items) which were analyzed in a path analysis model measuring direct and indirect relationships between factors. This is an ecologically oriented study and its concepts could be greatly expanded.

The second perspective in the ecological study of household activities would be to investigate effects of various environments on production. The model for research would include both immediate environments and those that are more distant from the family. The immediate environments include personal characteristics of family members including: production skills, attitudes, and preferences. Of concern may be traditions of production within the family as inter-generational transfers may affect skills, attitudes, and preferences. Other characteristics of the immediate environment include access to resources such as money, time, and transportation. The second environmental level would include the size and characteristics of the community, number, and accessibility of friends and relatives who may be a resource in the production process, accessibility to resources and traditions and attitudes towards production in the community. The third environmental level would include the climate, geographical, and economic characteristics of the general region. If an international comparison of household production activities were desired, this level may include the entire country or region of the world. Analysis of these data would necessarily be both within and between levels. A statistical method such as multi-level analysis which has only been used on classroom and

school educational situations up to this point may be a useful analytical tool.

The proposed research would ask additional questions to more fully understand the decision-making process within the ecological framework related to household production. For example, are there any social environmental constraints such as a stigma against homemade objects or do-it-yourself projects? Are there physical constraints, i.e., type of home or tools or geographical location within the United States?

Geographical location may be a significant ecological variable to consider. There is little information on the effect of geographical region with varying climates and economic conditions on household production. Morgan et al., (1962) found region to be a significant factor in the monetary value of household production as the Northeast region produced more by value in comparison to the South and North Central regions which produced the least. They speculated that the Northeast produced more because there is no large supply of inexpensive labor to do household work, there are high prices for produce because of metropolitan markets, the tradition of self-reliance and fewer second jobs available. The South, in contrast, has inexpensive labor and lower food prices. However, additional study needs to be done on this topic especially with the higher incidence of household production in rural and small town areas.

Special study needs to be done on the influence of the environment upon wives and how this affects household production. Overall in the present study, wives' household production was associated one-third more with the demographic variables studied compared to their husbands. This could indicate that women's participation in household production is

more sensitive to environmental and situational constraints than is men's participation. Perhaps this is due to their responsibility, as research has shown, to housework. As shown in this study, women appear to be utilizing a greater variety of environmental resources than men to meet the needs of the household. They have most likely built up networks and linkages in the community to accomplish their purposes. Different locations appear to offer different resources for the wives. Those from small towns were higher in food preservation and community medical care than other wives whereas rural wives were higher in yard, lawn, and outdoor care. Urban wives appear to have decided that they were limited in their production possibilities as they responded that home care and repair, sewing, hobbies, and crafts and yard, lawn, and outdoor work did not apply. This perception deserves more study as most families in the study were buying their own home and would have similar production possibilities within the home even if yards were limited. Also, rural women perceived greater production within their families compared to other wives. Could rural wives be more conscious of production possibilities due to a social or preference value they place on it? Could urban wives be undervaluing their production due to their distance from a former agrarian existence? These are questions that remain to be researched.

Study on household production in international settings should be continued. Szalai (1972) reported on time use and household production in twelve countries. Most of the study sites in the study were industrialized European countries. Some of the major ecological variables to consider in international household production studies are: (1) physical environment including the availability of resources and

geographical characteristics; (2) human-constructed environment including the type and nature of home and power sources; and (3) human-behavioral environment including the social environment (nature of the class system and expectations, general locus of control, nature of the family structure, and availability and accessibility of information) and the economic environment (degree of modernization and industrialization of the country, family income levels and the availability of paid or hired services). Household production in some countries may be a way for people to raise their level of living especially in the extended family situation where human resources are present. In other countries, household production may be the only alternative as there are no paid services available to substitute for family labor or where family incomes are too low to afford bought goods and services. An international study on household production may be able to assess the cross-cultural generalizability of the findings of the present analysis. It could also aid those involved in international development programs in their efforts to help families and economies in lesser developed areas.

Implications

The findings of this study can be applied by family educators, community leaders, and those in business. Family educators could use the findings for information about family economic practices and family members' roles. Economically, it was found that families can make a contribution to their real income through household production. Home care and repair is the major contributing category of activities. Many activities that could contribute to real income were not utilized,

especially involving other families and the community. For example, savings and investing practices were traditional and community medical facilities were not widely used. Families could be encouraged to identify and participate in community activities that would contribute to their real income. In family roles, this study clearly described the current division of household production labor within families. However, the most household production work was done with husbands and wives working together with other family members. Families may be encouraged to increase interactional time through household production. Community leaders may want to encourage families to use resources available to them in the geographical area. This could be done through mass media or other information sources. Businesses, recognizing the widespread practices of household production, may encourage this trend by offering resources, tools, and instructions for those wishing to produce the good or service themselves.

Conclusion

This study offers a unique contribution to household production research in that it specifically studied household production and not daily housework. It surveyed a large number of possible production activities. Activities using families' human resources outside the home in conjunction with other families and the community added breadth to the list of activities. Research questions identified some trends in household production. The null hypotheses which were rejected, indicated a relationship between variables and household production. Household production was found to be a widespread practice among husbands and wives with young families, especially in activities done

basically within the home. As a trend, household production is likely to increase as economic environmental conditions worsen throughout the country because it is a way not only to contribute to a family's real income, but also to aid in the development of skills and human resources. Household production is a topic that has not received much study, but is becoming a more important and worthy research topic as families participate in household production to meet their family's needs.

APPENDICES

APPENDIX A

A-1.--Details of Juster et al.'s Household Output Account

Activities (Hours/year)	GNP Goods (Constant Dollars)					Tangible Household Output (natural units)					Intangible Household Output Process Benefits (Utility)
	Private Services					Intermediate Product		Investment			
	Housing	Non-Housing	Non-Durables	Deprec. of Dur.	Gov. Pur.	Total	Prod (+)	Use (-)	Gross (+)	Deprec. (-)	Net
Investment											
Education									Skills		
Child care									Child Development		
Medical care									Health		
Home improvement									Social Networks		
Social									Social Networks		
Organizational									Social Networks		
Interpersonal Communication											
Intermediate											
Home maintenance							Orderly home				
Personal care							Personal appearance				
Shopping/Admin							Good and services				
Cooking							Meals				
Market work							Income				

[1]Taken from Juster et al. The Theory and Measurement of Well-being: A suggested framework for accounting and analysis. Institute for Social Research, University of Michigan, 1980, p. 39.

A-2.--Hours and Value[2] of Household Work in 1976

	Total for all adults				Average per Adult		
	Annual Hours		Annual Value		Weekly Hours	Annual Hours	Annual Value
	Billions	Percent	Billion Dollars	Percent			Dollars
Adults:							
All work	188.8	100.0	752.4	100.0	25.0	1,300	5,180
Women:							
All work	135.1	100.0	515.0	100.0	33.8	1,756	6,694
Maintenance work[3]	83.3	61.8	305.8	59.4	20.9	1,084	3,975
Household Production[4]	51.8	38.4	209.2	40.6	12.9	673	2,719
Home repair and hobbies	2.8	2.1	17.5	3.4	0.7	37	227
Child care and instruction	16.3	12.1	40.8	7.9	4.1	211	531
Shopping and other	32.7	24.2	150.9	29.3	8.1	425	1,961
Men:							
All work	53.7	100.0	237.4	100.0	15.1	786	3,475
Maintenance work[3]	20.4	37.9	76.5	32.2	5.8	299	1,120
Household Production[4]	33.3	62.0	160.8	67.7	9.4	488	2,356
Home repair and hobbies	9.9	18.4	60.6	25.5	2.8	145	888
Child care and instruction	3.9	7.3	10.0	4.2	1.1	58	146
Shopping and other	19.5	36.3	90.2	38.0	5.5	285	1,322

[1]Taken from Peskin, Janice. Measuring Household Production for the GNP. In Family Economics Review, 1982(3), p. 20.
[2]Valued by specialist cost
[3]Includes meal preparation, meal cleanup, cleaning, gardening, and laundry
[4]Includes home repair and hobbies, child care and instruction, shopping and other

A-3.--Average value of woman's household work in 1976 by various characteristics

Characteristic	Number in Sample	Weekly Hours of Household Work	Annual Value of Household Work in Dollars					
						Specific Household Production		
			Total	Maintenance Tasks[3]	Household Production[4]	Home Repair/ Hobbies	Child care/ Instruction	Shopping Other
All women	793	33.8	6694	3975	2719	227	531	1961
Employment status:								
Not employed	367	42.6	8405	5139	3266	282	695	2289
Employed part-time	245	31.4	6243	3537	2706	234	520	1952
Employed full-time	181	20.1	4040	2338	1702	113	235	1354
Number of earners:								
None	42	40.0	8010	5434	2576	307	276	1993
One	250	46.9	9157	5441	3716	308	904	2504
Two	284	30.7	6036	3602	2434	158	507	1769
Number of children:								
None	401	29.5	6078	3703	2376	274	155	1947
One	134	33.2	6423	3578	2844	182	748	1904
Two	120	41.4	7748	4745	3003	140	1194	1669
Three or more	138	43.7	8354	4746	3608	176	1113	2319
Age of youngest child:								
No children	400	29.5	6079	3710	2370	270	155	1945
1-4 years	161	43.5	7969	4307	3663	134	1598	1931
5-12 years	170	36.8	7209	4205	3005	253	720	2032
13-17 years	62	35.2	6981	4584	2901	560	375	1966
Age:								
18-24 years	110	24.7	4897	2514	2383	246	526	1611
25-29 years	116	37.1	7043	3837	3206	171	1097	1938
30-39 years	181	36.5	7030	4009	3020	183	886	1951
40-49 years	112	34.4	6845	4203	2641	165	434	2042
50-59 years	110	35.1	7121	4381	2739	295	341	2103
60-64 years	49	33.6	6825	4297	2528	232	230	2066
65 years +	114	35.4	7280	4791	2488	294	89	2105

A-3.--Continued

Characteristic	Number in Sample	Weekly Hours of Household Work	Annual Value of Household Work in Dollars					
						Specific Household Production		
			Total	Maintenance Tasks[3]	Household Production[4]	Home Repair/ Hobbies	Child Care/ Instruction	Shopping Other
Own earnings:								
None, negative	36	18.7	3697	2486	1212	47	181	984
$1-4,999	33	21.0	4255	2274	1981	68	246	1667
$5,000-9,999	66	21.1	4244	2349	1897	137	298	1462
$10,000+	46	19.2	3912	2237	1674	165	191	1318

[1]Taken from Peskin, Janice. Measuring Household Production for the GNP, In Family Economics Review, 1982(3), p. 22.
[2]Valued at specialist cost
[3]Includes meal preparation, meal cleanup, cleaning, gardening, and laundry
[4]Includes home repair and hobbies, child care and instruction, shopping and other
[5]Data are only for women employed full time

APPENDIX B

B-1.--Demographic Characteristics of Areas in Which Sampling Occurred.

Total Population[a]	4,695	4,344	6,678	4,279
Race[a]				
White	2,992	3,032	6,446	4,200
Black	1,436	1,041	104	21
American Indian	28	39	22	5
Asian	40	16	57	33
Other	197	216	49	20
Persons of Spanish origin included above	312	307	99	19
Number of Families[a]	1,214	1,123	1,529	400
Number of Children[a] (within specific age range)				
6	87	8	98	24
7-9	312	284	291	90
10-13	437	346	394	120
Income[b]				
Median Income	19,400	14,800	18,400	17,900
Percent Unemployment[c]	12.5%		12.6%	12.6%

[a]1980 U.S. Census Data, Ingham County, Michigan.
[b]1980 Estimated Median Household Income. Tri-County Planning Commission, October 1981
[c]Michigan Employment Security Commission, May 1980, revised.

B-2.--Training Meeting
1 May 1980

1. Introduction (hand out plastic I.D.'s)

2. Explanation of study (use proposal); police have been notified

3. Locating families:

   a. blocks have been randomly selected (apt. building was considered a block)

   b. starting points in each area

   c. use skip pattern

4. Initial contact, screening:

   a. knock on door.

   b. introduce self: who you are working for--MSU--College of Human Ecology.

   c. doing study of 2 spouse families with elementary age children about stretching dollars to help beat inflation. Do you and your spouse have a child between 6-12 years of age.

   d. fill in household composition form.

   e. if household meets criteria explain study, indicate there will be a small token of appreciation ($5) if all 3 questionnaires are filled out.

   f. are you willing to participate?

   g. if yes--ask open end question.
   Give them envelope; go over format of 2 types of questions (interviewers fill in; time).

   h. leave envelopes; arrange for pickup--have them sign form--explain they can help kids; point out phone number.

   g. tell family they will be mailed check after insert form and questionnaires have been checked for completeness.

MICHIGAN STATE UNIVERSITY

COLLEGE OF HUMAN ECOLOGY · DEPARTMENT OF FAMILY ECOLOGY EAST LANSING · MICHIGAN · 48824

Spring 1980

This is to introduce our interviewer from

This interviewer is asking your participation in a study of household production by Michigan families. The research project and questionnaire have been developed by the Department of Family Ecology and the Family Living Education, Cooperative Extension Service, College of Human Ecology at Michigan State University. The project has been funded by the Michigan Agricultural Experiment Station.

The cooperation of your family in granting a short interview and in completing the self-administered questionnaires will be sincerely appreciated. Your names will in no way be linked to your responses.

Sincerely,

Beatrice Paolucci,
Professor
Family Ecology

Mary Andrews,
Evaluation Specialist
Family Living Education

Irene Hathaway,
Instructor
Family Ecology and
Resource Management
Specialist

B-4.--Consent Form

MICHIGAN STATE UNIVERSITY

College of Human Ecology East Lansing, Michigan
May, 1980

CONSENT FORM

We, the undersigned, freely consent to participate in a scientific and educational study conducted by the College of Human Ecology and The Cooperative Extension Service of Michigan State University under the supervision of Beatrice Paolucci, Irene Hathaway, and Mary Andrews.

The purposes of the project have been explained to us and we understand the explanation that has been given as well as what our participation will involve.

We understand that we are free to discontinue participation in the study at any time without penalty, or that we may withdraw the participation of our child.

We understand that the results of the study will be treated in strict confidence and that we will remain anonymous. Final results of the study will be made available to us at our request.

We understand that we may have an opportunity to participate in an educational program to increase our income-producing skills if we so desire. It is hoped that participation in these educational activities will be beneficial to us; however, we understand there is no guarantee of beneficial results.

We desire to participate in this research and consent and agree. We, as legal parents/guardians of the below named child, give our permission for the child to participate in the study to the degree to which the child desires.

Please sign your first and last names.

_____ _____
Adult Female Signature Date

_____ _____
Adult Male Signature Date

_____ _____
Child's Signature Date

_____
Address City, Town, State Zip

_____
Telephone

B-5.--Classification of Attempted Placement of Questionnaire by Location

Location	Number	Percent
Urban Town	309	44.1
Small Town	192	27.4
Rural Area	200	28.5
Total	701	100.0

B-6.--Classification of Attempted Placement of Questionnaires by Eligibility of Family.

Eligibility	Number	Percent
Eligible and Placement	139	19.8
Eligible and Refused	18	2.6
Not Eligible	268	38.2
Single Parent	22	3.1
Refused before eligibility determined	5	0.7
Other	22	3.1
No answer	198	28.2
Missing data	29	4.1
Total	701	100.0

B-7.--Questionnaire

ACTIVITIES AT HOME

This section contains a list of many activities that YOU may do around your home for yourself and your family.

CIRCLE THE NUMBER corresponding to the category which most accurately estimates how the following activities get done. For example, circle "1" if you usually hire this job done, and circle "6" if this activity has never needed to be done or because you rent you can't make changes.

We are interested in the home care, repair and redecorating that YOU do for yourself and the persons living in your household.

2. How do you do the:	Usually hire it done or buy it	Usually do it myself	Usually do it together with other family members	Usually done by another family member or friend	Let it go	Doesn't apply
2.1 Painting of the inside?	1	2	3	4	5	6
2.2 Painting or staining of the outside?	1	2	3	4	5	6
2.3 Repairing of major appliances (refrigerator, TV, washer, dryer)?	1	2	3	4	5	6
2.4 Repairing small appliances (iron, toaster, lamp)?	1	2	3	4	5	6
2.5 Plumbing repairs?	1	2	3	4	5	6
2.6 Electrical repairs?	1	2	3	4	5	6
2.7 Repairs to the heating and/or air conditioning system?	1	2	3	4	5	6
2.8 Putting up of paneling, drywall or ceiling tile?	1	2	3	4	5	6
2.9 Laying of carpet or flooring?	1	2	3	4	5	6
2.10 Refinishing hardwood floors?	1	2	3	4	5	6
2.11 Carpentry repairs?	1	2	3	4	5	6
2.12 Roofing repairs or reroofing?	1	2	3	4	5	6
2.13 Gutter and downspout repairs?	1	2	3	4	5	6
2.14 Shampooing of carpets or rugs?	1	2	3	4	5	6
2.15 Repairing screens?	1	2	3	4	5	6

	Usually hire it done or buy it	Usually do it myself	Usually do it together with other family members	Usually family member or friend	Usually done by another	Let it go	Doesn't apply
2.16 Replacing of broken window glass?	1	2	3	4	5	6	
2.17 Weatherstripping storm doors and windows?	1	2	3	4	5	6	
2.18 Insulating the attic, basement or crawl space?	1	2	3	4	5	6	
2.19 Insulating the hot water heater, hot water pipes?	1	2	3	4	5	6	
2.20 Caulking cracks and joints inside and outside?	1	2	3	4	5	6	
2.21 Repairing of sidewalks or driveways?	1	2	3	4	5	6	
2.22 Other, please list _____	1	2	3	4	5	6	
3. We are interested in knowing how you <u>care for the car(s)</u> in your household. How do you do:							
3.1 Washing the car?	1	2	3	4	5	6	
3.2 Cleaning the inside of the car(s)?	1	2	3	4	5	6	
3.3 Putting in gas?	1	2	3	4	5	6	
3.4 Changing the oil and lubricating the car(s)?	1	2	3	4	5	6	
3.5 Changing or rotating the tires?	1	2	3	4	5	6	
3.6 Winterizing the car (changing the antifreeze, etc.)?	1	2	3	4	5	6	
3.7 Tuning the engine?	1	2	3	4	5	6	
3.8 Major repair work such as brake work, transmission repair, etc?	1	2	3	4	5	6	
3.9 Repairs to the car's body?	1	2	3	4	5	6	
3.10 Other, please list _____	1	2	3	4	5	6	

We are interested in knowing the personal care activities that YOU do for yourself and the persons living in your household.

	Usually hire it done or buy it	Usually do it myself	Usually do it together with other family members	Usually done by another family member or friend	Let it go	Doesn't apply
4. Do you:						
4.1 Cut or trim hair?	1	2	3	4	5	6
4.2 Shampoo and set, blow dry or style hair?	1	2	3	4	5	6
4.3 Color hair?	1	2	3	4	5	6
4.4 Give home permanents, straightening or cornrowing?	1	2	3	4	5	6
4.5 Other, please list _____	1	2	3	4	5	6

We are interested in knowing the activities YOU do for lawn, yard or other outdoor work.

5. Do you:						
5.1 Cut the grass?	1	2	3	4	5	6
5.2 Weed the flowerbeds, lawns, etc.?	1	2	3	4	5	6
5.3 Trim and care for trees and shrubs?	1	2	3	4	5	6
5.4 Remove snow from sidewalks and driveways?	1	2	3	4	5	6
5.5 Haul trash?	1	2	3	4	5	6
5.6 Do a seasonal clean up of the yard?	1	2	3	4	5	6
5.7 Cut or split wood for your fireplace or wood burning stove?	1	2	3	4	5	6
5.8 Other, please list _____	1	2	3	4	5	6

We are interested in knowing about the kinds of sewing and craft work YOU do for yourself and the persons living in your household.

6. Do you:						
6.1 Make clothing for adults?	1	2	3	4	5	6
6.2 Make clothing for children?	1	2	3	4	5	6
6.3 Make clothing repairs or alterations?	1	2	3	4	5	6

	Usually hire it done or buy it	Usually do it myself	Usually do it together with other family members	Usually done by another family member or friend	Let it go	Doesn't apply
6.4 Make shoe, handbag or golf bag repairs?	1	2	3	4	5	6
6.5 Make draperies or curtains?	1	2	3	4	5	6
6.6 Make slip covers for furniture?	1	2	3	4	5	6
6.7 Reupholster furniture?	1	2	3	4	5	6
6.8 Make quilts, comforters?	1	2	3	4	5	6
6.9 Make Christmas decorations?	1	2	3	4	5	6
6.10 Other, please list _____	1	2	3	4	5	6

We are interested in knowing about the kinds of do-it-yourself projects which YOU have done. Circle "1" for yes and "2" for no for each activity.

7. Have you ever:	YES	NO
7.1 Constructed electronic equipment (radio, TV, computer, digital clock)?	1	2
7.2 Done woodworking (clocks, cabinets, furniture)?	1	2
7.3 Refinished or antiqued furniture?	1	2
7.4 Constructed a home, summer cottage or other building?	1	2
7.5 Added on or remodeled your home?	1	2
7.6 Finished a basement or attic?	1	2
7.7 Landscaped (seeding, sodding, planting shrubs)?	1	2
7.8 Installed a wood burning stove?	1	2
7.9 Installed light fixtures?	1	2
7.10 Hunted or fished to provide food for your family?	1	2
7.11 Constructed play equipment (swing, slide, sandbox, playhouse)?	1	2
7.12 Made or repaired toys (dolls, wagons, blocks)?	1	2
7.13 Done outdoor construction (installing a fence, building a patio or barbecue)?	1	2

7.14 Do you have a garden?

Check one.

( ) YES → 7.15 What is it's size?

( ) a. container ( ) c. medium (25'x40')

( ) b. small (11'x16') ( ) d. large (50'x80' or larger)

7.16 How often do YOU work in it during the season?

( ) a. Once a day

( ) b. About 3 to 4 times a week

( ) c. About once a week

( ) NO

How much of your family's fruit and/or vegetable requirements do you raise?

7.17 Fruit	7.18 Vegetable
( ) a. Less than 25%	( ) a. Less than 25%
( ) b. Between 25-49%	( ) b. Between 25-49%
( ) c. Between 51-99%	( ) c. Between 51-99%
( ) d. All	( ) d. All

We are interested in knowing if YOU bake, can, freeze, dry, pickle or preserve food products for your family's use? Please circle "1" for yes and "2" for no.

8. Do you:

	YES	NO
8.1 Can fruits, vegetables or meats?	1	2
8.2 Freeze fruits, vegetables or meats?	1	2
8.3 Dry fruits, vegetables or meats?	1	2
8.4 Pickle fruits, vegetables or meats?	1	2
8.5 Make jams and jellies?	1	2
8.6 Bake bread or rolls regularly?	1	2
8.7 Bake pastries, cookies, or cakes regularly?	1	2
8.8 Regularly make up extra servings of main dishes to be frozen for later use?	1	2
8.9 Regularly prepare meatless meals?	1	2
8.10 Buy food to store when it's on sale?	1	2
8.11 Keep a stock of food for emergencies?	1	2
8.12 Other, please list _____	1	2

We are interested in knowing who cares for your child?

9. How do you do:	Usually hire it done or buy it	Usually do it myself	Usually do it together with other family members	Usually done by another family member or friend	Let it go	Doesn't apply
9.1 Routine daily care?	1	2	3	4	5	6
9.2 Occasional care when parents are out?	1	2	3	4	5	6
9.3 Evenings and weekends?	1	2	3	4	5	6
9.4 After school care?	1	2	3	4	5	6

We are interested in knowing of any special care YOU currently provide for members of your household.

10. Do you provide care at home rather than in a hospital (or other facility) for:

	YES	NO	DOESN'T APPLY
10.1 A chronically ill family Member?	1	2	3
10.2 An elderly family member?	1	2	3
10.3 A handicapped family member?	1	2	3
10.4 Other, please list _____	1	2	3

We are interested in knowing about your family's transportation.

11. How many motor vehicles does your family own, lease, or have available on a regular basis? Put number on line before each item.

____Car(s) ____Truck/Van ____Motorcycle(s) ____Trail bike(s)

____Motorhome ____Moped ____Motorboat ____Snowmobile(s)

Other, please list _____

11.1 For the car(s) or truck(s) you drive most often, how many miles per gallon of gas do you get?

Car/truck #1 _____ miles per gallon

Car/truck #2 _____ miles per gallon

11.11 How far is it to the grocery store (round trip)? _____miles

11.12 How often do you go to the grocery store?

_____ Daily _____ Weekly _____ Monthly

_____ Twice a week _____ Every other week

We are interested in knowing if you recycle such things as clothing, recreation equipment, furniture, appliances, etc. and how you accomplish this.

12. Do you:	YES	NO
12.1 Have garage sales?	1	2
12.2 Take items to be sold at someone elses garage sale?	1	2
12.3 Take items to be sold at a resale shop?	1	2
12.4 Take items to a swap shop or meet?	1	2
12.5 Sell items at a flea market?	1	2
12.6 Place an ad in the newspaper or on a bulletin board to sell an item?	1	2
12.7 Give items to a church or other charitable organization for them to sell or donate?	1	2
12.8 Take bottles, cans or papers to a community recycling center?	1	2
12.9 Take crankcase oil to a community recycling center?	1	2
12.10 Pass on items of clothing, toys or equipment from an older to a younger child within your family?	1	2
12.11 Pass on items of clothing, toys or equipment from older to younger children among your friends or relatives?	1	2
12.12 Make rag rugs?	1	2
12.13 Ask for a "doggy bag" for leftover food when eating out?	1	2

12.14 Please indicate the ways you recycle different items within your own household. For example, do you make newspaper logs or use typically throw-away items for arts and crafts projects, etc.?

Please specify: _____

_____

_____

SAVING AND INVESTING

Most families save or invest some of their income to provide for things they want in the future. We are interested in how your family is saving.

13. Is your family presently saving through:	YES	NO	DON'T KNOW
13.1 Savings account/share account?	1	2	3
13.2 Christmas Club?	1	2	3
13.3 U.S. Savings Bonds?	1	2	3
13.4 Certificates of Deposit (CDs)?	1	2	3
13.5 Money Market Certificates? (6, 30 or 48 month)	1	2	3
13.6 Money Market funds?	1	2	3
13.7 Treasury notes or bonds?	1	2	3
13.8 Corporate bonds?	1	2	3
13.9 Municipal bonds?	1	2	3
13.10 Common stock?	1	2	3
13.11 Mutual funds?	1	2	3
13.12 Cash value life insurance?	1	2	3
13.13 Endowment or annuity life insurance?	1	2	3
13.14 Single premium annuities?	1	2	3
13.15 Commodities (wheat, soybean futures)?	1	2	3
13.16 Vacant or farm land?	1	2	3
13.17 Buildings for lease or rent (residential/commercial)	1	2	3
13.18 Gold, silver or diamonds?	1	2	3
13.19 Art or antiques?	1	2	3
13.20 Collections such as coins or stamps?	1	2	3
13.21 Individual Retirement Account (IRA) or Keogh Plan?	1	2	3
13.22 Profit sharing plan through your employer?	1	2	3
13.23 Tax deferred pension plan through your employer?	1	2	3
13.24 Stock option plan through your employer?	1	2	3
13.25 Other, please list _____			

People sometimes barter or swap with others outside their family to get goods and services in exchange.

32. To what extent do YOU barter any of the following services in exchange with others?	To a great extent	To some extent	To a little extent	Not at all
32.1 Babysit, take care of children after school?	1	2	3	4
32.2 Do painting, carpentry, plumbing, electrical repairs?	1	2	3	4
32.3 Do care and repair of car(s) or other vehicles?	1	2	3	4
32.4 Do personal care such as permanents?	1	2	3	4
32.5 Do sewing (repair, alterations, draperies, upholstery)?	1	2	3	4
32.6 Provide transportation?	1	2	3	4
32.7 Food such as garden produce?	1	2	3	4
32.8 Other, please list _____	1	2	3	4

We are interested in knowing about the volunteer activities in which YOU participate.

33. Do you presently:	YES	NO
33.1 Work for a church group?	1	2
33.2 Work for a charitable organization such as United Way, March of Dimes, Heart Fund, Red Cross, etc.?	1	2
33.3 Work for a political organization?	1	2
33.4 Work for a community action group such as school board, community boards, NAACP, Urban League?	1	2
33.5 Work for a youth organization such as 4-H, Boy Scouts, Girl Scouts, Big Sisters, Big Brothers?	1	2
33.6 Work for a senior citizen organization such as Meals on Wheels?	1	2
33.7 Work for a service organization such as Elks, Masons, Lions, hospital auxiliaries, Jaycees?	1	2
33.8 Work for the school such as room parent, PTA?	1	2
33.9 Other, please list _____	1	2

Cooperatives are businesses organized by people for their own use. We are interested in knowing if your family belongs to a cooperative.

34. Do you belong to any of the following cooperatives?

	YES	NO
34.1 Food?	1	2
34.2 Childcare, nursery school?	1	2
34.3 Credit Union?	1	2
34.4 Bicycle sales and services?	1	2
34.5 Auto repair services?	1	2
34.6 Optical services?	1	2
34.6 Other, please list _____	1	2

We are interested in knowing how your household shares resources with others including family, friends and neighbors.

35. Does your family share resources by:

	YES	NO
35.1 Sharing ownership of recreation equipment such as campers, snowmobile, tents?	1	2
35.2 Sharing ownership of vacation cottage or home?	1	2
35.3 Sharing ownership of equipment such as farm tractor, rototiller, kitchen equipment, chain saws, etc.?	1	2
35.4 Sharing entertaining costs through potlucks, bring your own liquor?	1	2
35.5 Renting equipment such as floor sander, rototiller, rug shampooer, gardening equipment, motor home or sports equipment?	1	2
35.6 Using the laundromat or self-service dry cleaning?	1	2
35.7 Sharing books, magazines or newspapers?	1	2
35.8 Other, please list _____	1	2

COMMUNITY SERVICES

We are interested in knowing about the kinds of community recreation activities that you use that are available to you without cost or with very minimal cost.

36. Did you (within the past year):	YES	NO
36.1 Use the public library?	1	2
36.2 Go to city, county or state parks?	1	2
36.3 Go to a community festival or parade?	1	2
36.4 Attend/participate in community ball games?	1	2
36.5 Go to a museum, planetarium, art gallery, zoo?	1	2
36.6 Use publicly supported bike trails, nature walks or cross-country trails?	1	2
36.7 Use facilities of the public schools such as swimming pools, tennis courts, ball diamonds?	1	2
36.8 Attend free concerts or performances in parks or shopping malls?	1	2
36.9 Attend church sponsored recreational activities such as ice cream socials, musical performances, camps, dinners?	1	2
36.10 Other, please list _____	1	2

There are some community medical services available without cost or a minimal cost.

37. Have you used these services within the past year?	YES	NO
37.1 Blood pressure checks?	1	2
37.2 Immunizations for yourself or any members of your family?	1	2
37.3 Eyes or hearing tested for yourself or any members of your family?	1	2
37.4 Expectant parents classes?	1	2
37.5 Special health clinics such as pregnancy testing, veneral disease testing, substance abuse?	1	2
37.6 Telephone services such as dialing a hospital for medical tips, poison control center?	1	2
37.7 Community counseling services such as Listening Ear, Community Mental Health Centers, Family and Child Services?	1	2
37.8 Other, please list _____	1	2

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There are many sources of free information throughout the community.

38. Within the past year have you used:	YES	NO
38.1 Cooperative Extension Service, MSU?	1	2
38.2 Michigan Consumers Council?	1	2
38.3 "Help" column in the newspaper?	1	2
38.4 Internal Revenue Service?	1	2
38.5 Legal Aid?	1	2
38.6 Credit Counseling Centers?	1	2
38.7 Social Security Office?	1	2
38.8 Planned Parenthood?	1	2
38.9 Pamphlets or catalogs from businesses?	1	2
38.10 PIRGIM (Public Information Research Group in Michigan)?	1	2
38.11 Michigan Congressman or Senator?	1	2
38.12 U.S. Congressman or Senator?	1	2
38.13 Michigan Attorney General's Office?	1	2
38.14 A bureau or department of city, county or state government?	1	2
38.15 Other, please list _____	1	2

There are ways to shop in a community that are less expensive.

39. Do you use:	YES	NO
39.1 Resale clothing or furniture shops such as the Cedar Chest, Saint Vincent de Paul, church rummage sales, Salvation Army?	1	2
39.2 Flea markets, garage sales?	1	2
39.3 Pick your own fruits or vegetables?	1	2
39.4 Farmer's markets, road side stands?	1	2
39.5 Cooperatives for food, furniture, clothing, recreational equipment?	1	2
39.6 Auctions?	1	2
39.7 Factory outlets?	1	2
39.8 Sample outlets for shoes or clothing?	1	2
39.9 Special sales such as white sales, appliance sales?	1	2
39.10 Coupons or refund offers?	1	2
39.11 Other, please list _____	1	2

VALUE OF HOME ACTIVITIES

Many of the activities that we have asked you about have a money gain to your family either in actual dollars or money saved. Circle the number that best estimates how much these activities add to your income annually. Circle "1" if it adds less than $50, circle "3" if it adds between $100 and $450, and circle "5" if you don't do this activity.

	Less than $50	$51 - $100	$100 - $450	More than $450	Doesn't Apply
40. How much did the following activities that YOU did contribute to your family's annual income last year by substituting your time and skills rather than buying in marketplace?					
40.1 Home care, repair, redecoration?	1	2	3	4	5
40.2 Car Care?	1	2	3	4	5
40.3 Personal hair care?	1	2	3	4	5
40.4 Yard care?	1	2	3	4	5
40.5 Sewing, craft projects?	1	2	3	4	5
40.6 Do-it-yourself projects (building, remodeling)?	1	2	3	4	5
40.7 Gardening?	1	2	3	4	5
40.8 Hunting, fishing?	1	2	3	4	5
40.9 Canning, freezing, pickling, baking?	1	2	3	4	5
40.10 Caring for children?	1	2	3	4	5
40.11 Caring for family members such as chronically ill, elderly, handicapped in your home?	1	2	3	4	5
40.12 Car/van pooling, walking or riding a bicycle?	1	2	3	4	5
41. How much additional money income did your family receive this year by saving and investing some of your income in:					
41.1 Savings accounts, CD;s, U.S. Savings Bonds, Money Market Certificates, etc.?	1	2	3	4	5
41.2 Stocks, bonds, mutual funds?	1	2	3	4	5
41.3 Leasing or renting land or buildings?	1	2	3	4	5
41.4 Profit sharing plan through your employer?	1	2	3	4	5

B-8.--Example of Scoring

Individual Score

1. Example on a "yes" or "no" response question (7-8, 12-13, 32, 34-39): Question 8.1, Do you can fruits, vegetables or meats?

   a. Wife responds "yes" and the husband responds "no." Response is recorded as Wife only.

   b. Wife and husband both respond "yes." Response is recorded as Together.

   c. No conflicting scores for "yes" or "no" questions.

2. Example on a question with multiple responses (2-7, 9): Question 2.1, Painting of the inside (of the house)?

   Usually do it myself = yes
   Usually do it together with other family members = together
   Usually done by another family member or friend = together
   Usually hire it done or buy it = no
   Let it go = no
   Doesn't apply = no

   a. Husband responds "do it myself" and wife responds "let it go." Response is marked Husband only.

   b. Husband responds "do it together with other family members" and wife responds "do it myself." Response is marked Together.

   c. Husband and wife both mark "do it myself." Response is marked Conflicting.

Family Score

Family score is a total of all the activities done by a family.

Example:		
	Husband only	15
	Wife only	12
	Together	25
	Conflicting	1
	Family score	53

APPENDIX C

C-1.--Participation in Household Production by Husbands and Wives[a]

Groups[b]	Husbands (n=107)		Wives (n=107)	
	(number)	(%)	(number)	(%)
In-home Activities				
*Car Care and Repair				
Changing oil, lubricating	74	69.2	11	10.2
Changing or rotating tires	70	65.4	7	6.5
Cleaning inside of the car	87	81.3	90	84.1
Major repair work	34	31.7	3	2.8
Putting in gas	48	91.6	77	72.0
Repair to car body	31	28.9	4	3.7
Tuning engine	52	48.6	5	4.7
Washing car	80	84.1	74	69.1
Winterizing car	87	81.3	10	9.3
*Care of Family Members				
Care for chronically ill	1	0.9	1	0.9
Care for the elderly	0	0.0	0	0.0
Care for the handicapped	0	0.0	2	1.9
Child after school care	49	45.7	80	74.7
Child care evenings and weekends	65	60.7	78	72.9
Daily child care	53	49.3	93	86.9
Occasional child care	12	11.2	4	2.8
Food Preservation				
Bake bread	15	14.0	31	29.0
Bake pastries, cookies	32	29.9	91	85.0
Buy food on sale	67	62.6	100	93.5
Can fruits and vegetables	34	31.8	77	72.0
Dry fruits and vegetables	8	7.5	8	7.5
Emergency food stock	50	46.7	83	77.6
Extra servings to freeze	21	19.6	49	45.8
Freeze fruits and vegetables	55	51.4	95	88.8
Garden	76	71.0	77	72.0
Hunting or fishing for food	49	45.8	24	22.4
Make jams and jellies	30	28.0	78	72.9
Pickle fruits and vegetables	23	21.5	63	58.9
Prepare meatless meals	20	18.7	34	31.8

[a] Participation measured by a "yes, I do it" response to a production activity except where noted

[b] groups and items are listed alphabetically

* groups with respondents marking "did it myself" or "did it with a family member"

C-1.--Cont'd

Groups[b]	Husbands (n=107)		Wives (n=107)	
	(number)	(%)	(number)	(%)
*Home Care and Repair				
Added on or remodeled home	70	65.4	37	34.6
Carpentry repairs	84	78.5	23	21.5
Caulking cracks and joints	85	79.4	23	21.5
Electrical repairs	70	65.4	6	5.6
Finished attic or basement	52	48.6	18	16.8
Gutter, downspout repairs	70	65.4	14	13.1
Insulating hot water heater,pipes	46	43.0	8	7.4
Installing insulation	65	60.8	17	15.9
Installing light fixtures	89	83.2	27	25.2
Installing wood burning stove	34	31.8	12	11.2
Laying of carpet or flooring	53	49.5	26	24.3
Outdoor construction	45	42.1	9	8.4
Painting inside	84	78.5	85	79.5
Painting or staining outside	84	78.5	60	56.1
Plumbing repairs	73	68.2	14	13.1
Putting up paneling, drywall or ceiling	85	79.5	36	33.6
Refinishing hardwood floors	30	28.0	19	17.8
Repairing heating or air conditioning	35	32.7	8	7.4
Repairing major appliances	36	33.6	6	5.6
Repairing small appliances	70	65.4	14	13.1
Repairing screens	65	60.8	22	20.5
Repairing sidewalk or driveway	58	54.2	11	10.2
Replacing broken window glass	70	65.4	19	17.8
Roofing repairs or reroofing	65	60.8	11	10.3
Shampooing carpets and rugs	74	69.2	94	87.9
Weatherstripping doors and window	92	86.0	30	28.1
*Personal Care				
Color hair	2	1.8	36	33.7
Cut or trim hair	14	13.1	42	39.2
Give home permanents, straightening	2	1.9	31	29.0
Shampoo, set, blow dry or style hair	67	62.6	101	94.4
Recycle (in home)				
Have garage sales	49	45.8	62	57.9
Make rag rugs	3	2.8	8	7.5
Pass on clothing to family	92	86.0	95	88.8
Pass on clothing to friends	99	92.5	101	94.4

C-1.--Cont'd

Groups[b]	Husbands (n=107)		Wives (n=107)	
	(number)	(%)	(number)	(%)
*Sewing, Hobbies, and Crafts				
Constructing electronic equipment	18	17.0	2	1.9
Constructing play equipment	85	79.4	40	37.4
Make Christmas decorations	26	24.3	78	72.9
Make clothing for adults	0	0.0	42	39.3
Make clothing for children	1	0.9	50	46.7
Make clothing repairs, alterations	10	9.3	101	94.4
Make draperies or curtains	0	0.0	41	38.3
Make or repair toys	92	86.0	81	75.7
Make quilts or comforters	2	1.9	40	37.4
Make slip covers for furniture	0	63.2	16	65.4
Repair shoes, handbags or golf bags	14	13.0	19	17.7
Reupholster furniture	8	7.5	16	14.9
Woodworking	60	56.1	25	23.6
*Yard, Lawn, and Outdoor Care				
Cut grass	98	91.5	55	51.4
Cut or split wood for fireplace/stove	48	44.8	11	10.3
Haul trash	71	66.3	37	34.6
Landscaping	91	85.0	83	77.6
Remove snow	97	90.6	60	56.1
Seasonal cleanup	98	91.6	91	85.1
Trim trees, shrubs	94	87.8	73	68.3
Weed flowerbeds, lawns	81	75.7	93	86.9
Out-home Activities				
Bartering Services				
Babysit	40	37.4	74	70.1
Care of vehicle	41	38.6	14	13.2
Food such as garden produce	35	31.9	60	56.1
Painting, carpentry, plumbing, etc.	42	39.3	28	26.1
Personal care such as permanents	7	6.5	26	24.3
Provide transportation	47	43.9	72	67.3
Sewing	5	4.6	24	22.4
Community Medical Services				
Blood pressure check	19	17.8	12	11.2
Counseling services	8	7.5	10	9.3
Expectant parent classes	3	32.8	7	45.8
Eyes or hearing tested	41	38.3	49	45.8
Immunizations	41	38.3	47	43.9
Special health clinics	4	3.7	2	1.9
Telephone services	13	13.1	34	32.1

C-1.--Cont'd

Groups[b]	Husbands (n=107)		Wives (n=107)	
	(number)	(%)	(number)	(%)
Community Recreation				
Ball games	57	53.3	57	53.3
Church recreation	48	44.9	58	54.2
Free concerts or performances	36	33.6	31	29.0
Museums	79	73.8	90	84.1
Parades	90	84.1	82	76.6
Parks	100	93.5	102	95.3
Public bike trails	48	44.9	44	41.1
Public library	54	50.5	81	75.7
School facilities	74	69.2	75	70.1
Cooperatives				
Auto repair	1	0.9	1	0.9
Bike	1	0.9	0	0.0
Child care	10	9.3	14	13.1
Credit union	58	54.2	58	54.2
Food	7	6.5	5	4.7
Optical services	7	6.5	8	7.5
Free Information				
Bureau of department of city, county, or state	38	35.8	31	29.0
Cooperative Extension Service	27	25.2	36	34.6
Credit Counseling Centers	1	0.9	3	2.8
Help column from newspaper	11	10.3	16	15.0
Internal Revenue Service	29	27.1	26	24.3
Legal Aid	3	2.8	7	6.5
Michigan Attorney General	11	10.3	11	10.3
Michigan Congressman-Senator	14	13.1	18	16.8
Michigan Consumers Council	4	3.7	4	3.7
Pamphlets or catalogs from business	43	40.2	46	43.0
Social Security	9	8.4	12	11.2
United States Congressman-Senator	10	9.3	11	10.3
Planned Parenthood	2	1.9	5	4.7
Pirgim	3	2.8	4	3.7
Recycle (outside the home)				
Ask for a doggy bag in restaurants	70	65.4	83	77.6
Flea market	2	1.9	3	2.8
Give to a church, charity for resale	76	71.0	80	74.8
Recycle oil	3	2.8	1	0.9
Resale shop	13	12.1	21	19.6
Sell items through newspaper ads	71	66.4	64	59.8
Swap shop	6	5.6	5	4.7

C-1.--Cont'd

Groups[b]	Husbands (n=107)		Wives (n=107)	
	(number)	(%)	(number)	(%)
Take items to community recycle center	50	46.7	63	58.9
Take items to other garage sales	51	47.7	60	56.1
Savings and Investments				
Art or antiques	14	13.1	17	15.9
Buildings for lease or rent	5	4.7	4	3.7
Cash value life insurance	52	48.6	54	50.5
Certificate of deposit	11	10.3	9	8.4
Christmas club	26	24.3	24	22.4
Collections: coins, stamps, etc.	19	17.8	24	22.4
Commodities	3	2.8	2	1.9
Common stock	18	16.8	17	15.9
Corporate bonds	1	0.9	0	0.0
Endowment or annuity life insurance	25	23.4	21	19.6
Gold, silver, diamonds	12	11.2	17	15.9
Ira or Keogh	12	11.2	8	7.5
Money market certificates	11	10.3	12	11.2
Money market funds	1	0.9	1	0.9
Municipal bonds	1	0.9	2	0.0
Mutual funds	5	4.7	7	6.5
Profit sharing plan through employer	10	9.3	8	7.5
Single premium annuities	3	2.8	4	3.7
Stock option plan	10	9.3	5	4.7
Tax deferred pension plan	30	28.0	18	16.8
Treasury notes or bonds	2	1.9	4	3.7
U.S. savings bonds	31	29.0	33	30.8
Vacant or farm land	10	9.3	13	12.1
Savings account	96	89.7	99	92.5
Sharing resources				
Cottage	10	9.3	11	10.3
Entertainment costs	63	58.9	78	72.9
Laundromat	10	9.3	23	21.5
Ownership of equipment	25	23.4	28	26.2
Recreational vehicles	16	15.0	15	14.0
Rent equipment	47	43.9	52	48.6
Share books	67	62.6	83	77.6
Shopping Alternatives				
Auctions	33	30.8	30	28.0
Cooperatives	11	10.3	12	11.2
Coupons-refund offers	89	78.5	102	95.3
Farmer's market	81	75.7	92	86.0
Factory outlets	43	40.2	48	45.3
Flea markets, garage sales	67	62.6	81	75.7

C-1.--Cont'd

Groups[b]	Husbands (n=107)		Wives (n=107)	
	(number)	(%)	(number)	(%)
Pick your own fruits and vegetables	71	66.4	81	75.7
Resale clothing or furniture shops	31	29.0	53	49.5
Sample outlets	27	25.2	45	42.1
Special sales	65	60.7	88	82.2

C-2.--Household Production Choices as Reported by Husbands and Wives

	Husbands				Wives			
	Do self/ family	Hire Buy	Omit	Not Apply	Do self/Hire, family	Buy	Omit	Not Apply
	(%)	(%)	(%)	(%)	(%)	(%)	(%(	
Car Care and Repair								
Changing oil, lubricating	76	37	--	--	79	27	1	--
	(71.1)	(29.0)	--	--	(73.8)	(25.2)	(0.9)	--
Changing or rotating tires	72	32	3	--	65	40	2	--
	(67.3)	(29.9)	(2.8)	--	(60.7)	(37.4)	(1.9)	--
Cleaning inside of car	102	2	3	--	107	--	--	--
	(95.3)	(1.9)	(2.8)	--	(100.0)	--	--	--
Major repair work	38	69	--	--	30	75	--	2
	(35.4)	(64.5)	--	--	(28.0)	(70.1)	--	(1.9)
Putting in gas	102	5	--	--	96	11	--	--
	(95.3)	(4.7)	--	--	(89.8)	(10.3)	--	--
Repair to car body	36	57	8	6	31	61	10	5
	(33.6)	(53.3)	(7.5)	(5.6)	(28.9)	(57.0)	(9.3)	(4.7)
Tuning engine	59	48	--	--	50	57	--	--
	(55.1)	(44.9)	--	--	(46.8)	(53.3)	--	--
Washing car	101	4	2	--	102	5	--	--
	(94.4)	(3.7)	(1.9)	--	(95.3)	(4.7)	--	--
Winterizing car	89	16	2	--	87	16	2	2
	(83.2)	(15.0)	(1.9)	--	(81.3)	(15.0)	(1.9)	(1.9)
Child and Other Care								
Child after school care	97	2	1	4	90	10	--	6
	(90.6)	(1.9)	0.9)	(3.7)	(84.0)	(9.3)	--	(5.6)
Child care evenings and weekends	82	12	--	3	92	13	--	2
	(85.9)	(11.2)	--	(2.8)	(86.0)	(12.0)	--	(1.9)
Occasional child care	47	47	1	11	47	57	--	2
	(43.9)	(43.9)	(0.9)	(10.3)	(43.9)	(53.3)	--	(1.9)
Routine daily child care	99	4	--	3	97	7	--	2
	(92.6)	(3.7)	--	(2.8)	(90.6)	(6.5)	--	(1.9)
Home Care and Repair								
Carpentry repairs	87	9	2	9	85	10	2	10
	(81.3)	(8.4)	(1.9)	(7.5)	(79.4)	(9.3)	(1.9)	(9.3)
Caulking cracks, joints	88	3	6	10	88	4	5	10
	(82.2	(2.8)	(5.6)	(9.3)	(82.2)	(3.7)	(4.7)	(9.3)
Electrical repairs	84	18	--	5	74	25	--	8
	(78.5)	(16.8)	--	(4.7)	(69.2)	(23.4)	--	(7.5)
Gutter, downspout repairs	74	13	1	19	70	13	--	24
	(69.1)	(12.1)	(0.9)	(17.8)	(65.4)	(12.1)	--	(21.5)
Insulate hot water	49	9	15	34	48	9	12	38
	(45.8)	(8.4)	(14.0)	(31.8)	(44.8)	(8.4)	11.2)	(34.6)
Installing insulation	67	15	2	23	66	13	6	22
	(62.7)	(14.0)	(1.9)	(21.5)	(61.7)	(12.1)	(5.6)	(20.6)
Laying carpet or flooring	64	41	1	11	61	43	--	13
	(50.4)	(38.3)	(0.9)	(10.3)	(47.7)	(40.2)	--	(11.2)

C-2.--Cont'd

	Husbands				Wives			
	Do self/ family	Hire Buy	Omit	Not Apply	Do self/family	Hire, Buy	Omit	Not Apply
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Painting inside	98	2	1	6	103	1	--	3
	(91.6)	(1.9)	(0.9)	(5.6)	(96.3)	(0.9)	--	(2.8)
Painting or staining outside	86	3	--	18	90	2	1	14
	(80.4)	(2.8)	--	(16.8)	(84.1)	(1.9)	(0.9)	(13.1)
Plumbing repairs	79	19	--	6	74	27	--	6
	(76.6)	(17.8)	--	(5.6)	(69.2)	(25.2)	--	(4.7)
Putting up paneling, dry wall or ceiling	87	6	--	14	85	7	1	14
	(81.4)	(5.6)	--	(13.1)	(79.4)	(6.5)	(0.9)	(13.1)
Refinish hardwood floors	32	10	2	62	36	7	2	62
	(29.9)	(9.3)	(1.9)	(57.0)	(33.7)	(6.5)	(1.9)	(57.9)
Repair heat/air condition	41	56	--	10	40	55	1	11
	(38.3)	(52.3)	--	(9.3)	(37.3)	(51.4)	(0.9)	(10.3)
Repairing major appliances	45	58	1	3	47	57	--	3
	(42.0)	(54.2)	(0.9)	(2.8)	(43.9)	(53.3)	--	(2.8)
Repairing small appliances	76	26	3	2	84	19	4	--
	(71.0)	(24.3)	(2.8)	(1.9)	(78.5)	(17.8)	(3.7)	--
Repairing screens	71	25	1	10	73	26	1	7
	(66.4)	(23.4)	(0.9)	(9.3)	(68.2)	(24.3)	(0.9)	(5.6)
Repair sidewalk or driveway	59	11	6	31	52	15	8	32
	(55.1)	(10.3)	(5.6)	(28.0)	(48.5)	(14.0)	(8.5)	(29.0)
Replace broken window glass	73	24	--	10	67	32	1	7
	(68.2)	(22.4)	--	(9.3)	(62.7)	(29.9)	(0.9)	(6.5)
Roofing repairs or reroofing	69	19	--	19	50	23	--	24
	(64.5)	(17.8)	--	(17.8)	(56.1)	(21.5)	--	(22.4)
Shampooing carpets and rugs	98	4	3	2	100	2	--	5
	(91.6)	(3.7)	(2.8)	(1.9)	(93.5)	(1.9)	--	(4.5)
Weatherstripping doors and windows	98	2	2	8	90	4	4	9
	(88.8)	(1.9)	(1.9)	(6.5)	(84.2)	(3.7)	(3.7)	(8.4)
Personal Care								
Color hair	7	2	--	1	37	4	2	63
	(6.5)	(1.9)	--	(89.7)	(34.6)	(3.7)	(1.9)	(58.9)
Cut or trim hair	44	62	--	1	58	49	--	--
	(41.4)	(57.9)	--	(0.9)	(54.2)	(45.8)	--	--
Give home permanents, straightening	13	8	1	85	45	16	2	43
	(12.2)	(7.5)	(0.9)	(79.4)	(42.1)	(15.0)	(1.9)	(40.2)
Shampoo, set, blow-dry, or style hair	78	10	1	18	104	1	--	1
	(72.9)	(9.3)	(0.9)	(16.8)	(97.2)	(0.9)	--	(0.9)
Sewing, Hobbies, and Crafts								
Make Christmas decorations	63	9	3	32	83	13	--	11
	(58.9)	(8.4)	(2.8)	(29.9)	(77.6)	(12.1)	--	(10.3)

C-2.--Cont'd

	Husbands				Wives			
	Do self/ family	Hire Buy	Omit	Not Apply	Do self/Hire, family	Buy	Omit	Not Apply
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Make clothing for adults	33 (30.8)	22 (20.6)	2 (1.9)	50 (46.7)	46 (43.0)	47 (43.9)	2 (1.9)	12 (11.2)
Make clothing for children	38 (35.5)	19 (17.8)	3 (2.8)	47 (43.9)	55 (38.3)	41 (51.4)	1 (0.9)	10 (9.3)
Make clothing repairs, alterations	62 (57.9)	5 (4.7)	1 (0.9)	39 (36.4)	103 (96.3)	2 (1.9)	1 (0.9)	1 (0.9)
Make draperies or curtains	34 (31.8)	25 (23.4)	4 (3.7)	44 (41.1)	42 (39.2)	55 (51.4)	2 (1.9)	8 (7.5)
Make quilts or comforters	32 (29.9)	14 (13.1)	3 (2.8)	58 (54.2	46 (43.0)	24 (22.4)	1 (0.9)	35 (32.7)
Make slipcovers for furniture	22 (20.6)	17 (15.9)	5 (4.7)	63 (58.9)	18 (16.9)	40 (37.4)	3 (2.8)	46 (43.0)
Repair shoes, handbags, or golf bags	19 (17.7)	37 (34.6)	7 (6.5)	44 (41.1)	24 (22.4)	54 (50.5)	4 (3.7)	25 (23.0)
Reupholster furniture	19 (17.7)	28 (26.2)	6 (5.6)	53 (49.5)	23 (21.4)	39 (36.4)	4 (3.7)	40 (37.4)
Yard, Lawn, and Outdoor Care								
Cut grass	104 (97.1)	-- --	-- --	3 (2.8)	103 (96.3)	1 (0.9)	-- --	2 (1.9)
Cut or split wood for fireplace/stove	48 (45.7)	5 (4.7)	1 (0.9)	53 (49.5)	48 (44.9)	7 (6.5)	1 (0.9)	51 (47.7)
Haul trash	84 (69.1)	24 (22.4)	-- --	9 (8.4)	70 (65.4)	23 (21.5)	-- --	14 (13.1)
Remove snow	101 (94.3)	3 (2.8)	1 (0.9)	2 (1.9)	103 (96.3)	2 (1.9)	-- --	2 (1.9)
Seasonal cleanup	101 (94.4)	- --	2 (1.9)	3 (2.8)	105 (98.2)	1 (0.9)	-- --	1 (0.9)
Trim trees, shrubs	100 (93.4)	-- --	2 (1.9)	5 (4.7)	104 (97.3)	1 (0.9)	-- --	2 (1.9)
Weed flowerbeds, lawns	101 (94.4)	1 (0.9)	2 (1.9)	3 (2.8)	104 (97.2)	2 (1.9)	-- --	1 (0.9)

C-3.--Perceived Values of Household Production by Husbands and Wives

Activity	Value Ranges: Less than $50 (%)	$51-$100 (%)	$101-450 (%)	More than $450 (%)	Does not apply (%)	Missing (%)
Husbands' Values (n=107)						
Car care and repair	17	23	43	21	3	--
	(15.9)	(21.5)	(40.2)	(19.6)	(2.8)	--
Car pool, walking	30	4	17	5	35	16
	(28.0)	(3.7)	(15.9)	(4.7)	(32.7)	(15.0)
Care for children	27	15	11	10	44	--
	(25.2)	(14.0)	(10.3)	(9.3)	(41.1)	--
Care for family members	7	1	--	--	99	--
	(6.5)	(0.9)	--	--	(92.5)	--
Do-it-yourself projects	11	11	23	36	23	3
	(10.3)	(10.3)	(21.5)	(33.6)	(21.5)	(2.8)
Food preservation	15	18	17	4	51	2
	(14.0)	(16.8)	(15.9)	(3.7)	(47.7)	(1.9)
Gardening	28	21	28	6	24	--
	(26.2)	(19.6)	(26.2)	(5.6)	(22.4)	--
Home care and repair	6	12	38	48	3	--
	(5.6)	(11.2)	(35.5)	(44.9)	(2.8)	--
Hunting and fishing	27	17	6	3	53	1
	(25.2)	(15.9)	(5.6)	(2.8)	(49.5)	(0.9)
Personal care	44	19	4	--	39	1
	(41.1)	(17.8)	(3.7)	--	(36.4)	(0.9)
Sewing, hobbies, crafts	20	6	5	1	72	3
	(18.7)	(5.6)	(4.7)	(0.9)	(67.3)	(2.8)
Yard, lawn, outdoor care	18	32	40	11	6	--
	(16.8)	(29.9)	(37.4)	(10.5)	(5.6)	--
Wives' Values (n=107)						
Car care and repair	42	14	19	8	23	1
	(39.3)	(13.1)	(17.8)	(7.5)	(21.5)	(0.9)
Car pool, walking	34	16	8	2	39	8
	(31.8)	(15.0)	(7.5)	(1.9)	(36.4)	(7.5)
Care for children	24	9	19	28	25	2
	(22.4)	(8.4)	(17.8)	(26.2)	(23.4)	(1.9)
Care for family members	5	1	1	--	98	2
	(4.7)	(0.9)	(0.9)	--	(91.6)	(1.9)
Do-it-yourself projects	19	12	16	15	43	2
	(17.8)	(11.2)	(15.0)	(14.0)	(40.2)	(1.9)
Food preservation	13	35	33	13	12	1
	(12.1)	(32.7)	(30.8)	(12.1)	(11.2)	(0.9)
Home care and repair	12	20	31	32	11	1
	(11.2)	(18.7)	(29.0)	(29.9)	(10.3)	(0.9)
Hunting and fishing	25	3	6	1	69	3
	(23.4)	(2.8)	(5.6)	(0.9)	(64.5)	(2.8)
Personal care	41	32	16	4	12	2
	(38.3)	(29.9)	(15.0)	(3.7)	(11.2)	(1.9)
Sewing, hobbies, crafts	30	28	20	12	16	1
	(28.0)	(26.2)	(18.7)	(11.2)	(15.0)	(0.9)
Yard, lawn, outdoor care	31	24	30	8	11	3
	(29.0)	(22.4)	(28.0)	(7.5)	(10.3)	(2.8)

C-4.--Perceived Value of Household Production by Demographic Variables

Variable	Mean Dollar Values		
	Husbands'	Wives'	Family Total
Total	1390	1346	2736
Location			
Urban	1350	1188	2538
Small Town	1207	1367	2574
Rural	1613	1460	3073
Significance	.0426*	.3730	.1159
Income			
Under $20,000	1599	1292	2891
$20,000-24,999	1172	1226	2393
$25,000-29,999	1423	1609	3032
$30,000 and over	1384	1276	2660
Significance	.2035	.2917	.2539
Employment			
Single-earner	1429	1368	2797
Dual-earner	1350	1351	2709
Significance	.6130	.9169	.7164
Household Size			
Three persons	1268	1018	2286
Four persons	1324	1434	2757
Five persons	1558	1384	2942
Six or more persons	1352	1305	2658
Significance	.4789	.4952	.4992

*Sign. at .05 level

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