

licensing. The immediate effect of these start-up costs would be to reduce initial profits of the business.

The four components of the effect of economics (Ec) on the homebased worker and her family can be expressed as a function of the total income generated through the homebased work (i), the proportion of total household income generated by the homemaker (i_p), and the perceived necessity of the generated income (i_n), and the amount of capital investment (C).

$$(5) \quad E_c = f(i, i_p, i_n, C)$$

The impact of the work environment on the homebased worker and her family may be expressed by the following model:

$$(6) \quad W_{env} = f(T, S, E_c)$$

where T = time; S = space; and Ec = economics.

The variables associated with the work environment would interact with those the nature of the work and differentially affect and moderate the quality of life and satisfactions of families whose members are engaged in homebased occupations.

SUMMARY

A review of the literature on homebased work particularly that pertaining to women revealed a paucity of scholarly works on this alternative for income generation. With the multiplicity of types of workers, the dissimilarities among homebased workers may be as great or greater than the differences between these and on-site workers.

An examination of previous research resulted in the identification of three categories for classifying variables that could be influential in determining the quality of life and satisfaction of homebased workers. These are the nature of the work, the work environment, and the worker/family characteristics.

Although current literature indicates that work in the home has a positive influence on the family and the worker, the reality of the situation has not been explored empirically. The dynamics of the work/family interactions have the potential for exerting a strong influence, not necessarily positive, on the well-being of the family.

The typology proposed can be used as a framework for investigative studies designed to examine the benefits and costs of working at home. Only following a series of empirical studies can the influence of homebased work be known. If the influence is positive, public policy initiatives might be directed to encourage homebased work through further legislative actions removing restrictions on homework. Educational programs might be designed to aid individuals interested in pursuing this type of income generation. The business community might be provided with tax incentives to encourage homebased work and unions might want to propose benefit packages for these workers. If the impact is decidedly negative for

some homebased occupations, policies might be formulated to mitigate these effects.

Homebased work has been presented by many as a panacea for women's inability to maintain employment outside the home due to family care responsibilities. As few things in life are totally without tradeoffs, it is postulated that income generation in the home environment will have some impact, not necessarily positive, on the family's quality of life. The type of work undertaken, the amount of concentration demanded, the skill requirements, and the worker's allegiance to either family or work will all touch upon the family's life. As the intervening effect of these variables on different types of workers is unknown at the present time, it is only possible to hypothesize a typology for homebased work.

The numbers of women availing themselves of homebased work opportunities is unlikely to decline in the coming years. Decisions by new entrants and by policymakers can only be enhanced with insight into the interrelationships existing among occupation, worker, and family interests.

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CHILD SUPPORT AND THE FEMINIZATION OF POVERTY

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After documenting the growth in female-headed single-parent families, this paper relates their economic and poverty status to the absence of child support payments. It then presents an overview of child support payments in the U.S., followed by a discussion and evaluation of the child support enforcement system. Finally, it considers two alternative child support systems, as well as a comprehensive program for reducing poverty among female-headed single-parent families.

INTRODUCTION

U.S. families are undergoing a major transition: they are changing in form from predominantly two-parent to single-parent families, usually headed by a woman. Female-headed single-parent families now comprise 19 percent of all families with children under 18 present, an increase of 9 percentage points since 1970 (U.S. Bureau of the Census 1984, p. 7). The consequences of this transition are of particular concern when we consider that if recent trends continue, six out of every ten children born today will spend some time living in a single-parent family (Norton and Glick 1986). For black children, this proportion approaches nine out of ten (Garfinkel and McLanahan 1986, p. 8). The female-headed single-parent family is a source of stress because such families are likely to exist at relatively low levels of economic well-being. Moreover, this type of family makes up a disproportionately large share of the population living in poverty, a fact which has led to the arrival of the expression "the feminization of poverty" (Pearce 1978). An important option for support to single-parent families are child support payments.

This paper will focus on the following topics: (1) the sources of growth in female-headed single-parent families and their economic status; (2) the situation regarding child support payments in the U.S. today, both in terms of levels and trends; (3) the child support enforcement system as it presently stands in the U.S., its problems and its potential for reducing poverty and welfare dependency; and (4) two alternative systems of child support. It will conclude by suggesting a more comprehensive system for reducing poverty.

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Female-Headed Single-Parent Families: Growth and Economic Status

The growth of the single-parent family comes from increases in divorce rates and in the rate of children born out-of-wedlock. The rate of divorce increased annually from 2.2 divorces per 1000 total population in 1962 to a peak of 5.3 per 1000 population in 1981. The rate has dropped slightly since then, but the U.S. still has the highest divorce rate in the world.³ As for illegitimacy, roughly one in five births in 1984 were to unmarried mothers, nearly triple the rate of the mid-1960s (U.S. Bureau of the Census 1986, p. 61). Of female-headed single-parent families, divorced and separated mothers form around two-thirds of the population, while never-married mothers form around one-fifth (U.S. Bureau of the Census 1984, p. 7). One should realize that many divorced and separated mothers eventually do remarry resulting in substantial improvement in their family's economic well-being. However, proposing remarriage is not exactly a suitable public policy treatment for the feminization of poverty, nor does it excuse a man from the obligation to support his children.

It has become widely recognized that the economic well-being of women and children deteriorates substantially following a divorce, while that of men tends to increase. According to popularly cited figures from a study by Lenore Weitzman (1985), after divorce, income in relation to needs decreases 73 percent for women and children, but increases 42 percent for men.⁴ Many of these women and children fall into poverty.

The incidence of poverty is far greater among single-parent families headed by women than

³Sources for these figures are table 2-1 (U.S. Department of Health and Human Services 1986, pp. 2-5) for the period 1962 to 1982, and table No. 124 (U.S. Bureau of the Census 1986, p. 81) for 1983.

⁴See figure 3 (Weitzman 1985, p. 338) for more detail. This figure is based upon a weighted sample of interviews with 228 recently divorced men and women (114 men and 114 women) in Los Angeles County, California in 1978. The sample was selected to be representative of the entire population of divorced people, stratified by length of marriage and socioeconomic status (Weitzman 1985, pp. 407-411).

among other types of families.⁵ Of the 8.8 million women with children present and father absent in 1985, 2.8 million had incomes below the poverty level.⁶ Of the 3 million who were divorced, 26 percent had incomes below the poverty level (U.S. Bureau of the Census 1987, p. 5).

Why are families headed by women so likely to fall into poverty? The reasons concern family size, the smaller earned incomes of women with respect to men, and the failure of men to contribute to the support of their children. Family size plays a role when after divorce, women typically get custody of the children. Thus, their incomes must be spread over more people than the man's.

Through 1979, women working full-time earned roughly 62 percent of what men earned. Recent statistics (second quarter 1987) show this female-to-male earnings ratio reaching a new high of 71 percent (U.S. Bureau of Labor Statistics 1987). Even at these increased levels, if the woman and her children have to rely solely on her earnings, they would be substantially worse off than the man. This is because her earnings are lower and she has more mouths to feed. Of equal concern is the question of the children and related costs. If the mother works full-time, expenses for child care reduce her income still further, placing her and the children at an even lower level of economic well-being relative to him.

Many absent fathers do not contribute to the support of their children, leaving this task instead to the woman and/or to the state.⁷ Surprisingly, many women do not even have a child support award; among those that do, a

⁵This point is discussed extensively in two recent books (McLanahan and Garfinkel 1986 and Rodgers, Jr. 1986).

⁶The poverty level is that level of income below which it is deemed that a family does not have enough money to maintain a decent level of living. The poverty level was \$11,200 for a family of 4 in 1987.

⁷It is not known to what extent absent mothers do not contribute to the support of their children. The absence of data on this situation reflects the fact that single-parent families headed by men are a relatively rare phenomenon. Moreover, they are much less likely than single-parent families headed by women to fall into poverty due to the fact that men typically earn much more than women. Thus, even if there is a problem of this nature, it does not arouse as much social concern. Nevertheless, all discussions pertaining to enforcement of child support payments can be thought of as applying to absent mothers as well as to absent fathers.

high proportion do not receive payment.⁸ According to a recent survey, although over one-third of the 3.4 million women who did not have a child support award did not want one, nearly half said they wanted but were unable to obtain one (U.S. Bureau of the Census 1987, p. 3).

The absence of child support is a significant contributing factor to the relatively low level of living of women and their children. The poverty rate in 1985 for women who did not have a child support award was 49 percent; for those who did, it was 21 percent. Among those women awarded child support, the poverty rate was 18 percent if they received payments and 27 percent if they did not (U.S. Bureau of the Census 1987, p. 11). Among women below poverty level with children from an absent father about 40 percent had a child support award, whereas among women above the poverty line, 71 percent had an award (U.S. Bureau of the Census 1987, p. 5). These figures suggest that securing more child support from absent fathers should help to alleviate poverty among single-parent families.

Child Support Payments in the U.S.

Interest in improving the nation's child support enforcement system is at an all-time high for several reasons. These include (1) alarming statistics on nonpayment rates, (2) the priority placed by the current administration on reducing the welfare rolls, and (3) current social emphasis on the role of the family. One, in 1980, the Census Bureau released alarming statistics on nonpayment rates (U.S. Bureau of the Census 1980). These statistics showed that in 1979 only 59 percent of mothers with children from an absent father had a child support award. Among those with an award and due payment in 1978, only about half received full payment. About one-quarter received partial payment, and one-quarter received no payment at all. Moreover, payments that were made were often irregular. The average annual amount of child support received among those who received some was only \$1800 for an average of almost two children (U.S. Bureau of the Census 1981, p. 5).

The situation was considerably worse than average among black mothers and never-married mothers. Only about one-third of black mothers had a child support award and among those that did, the award amount was about 18 percent lower than for nonblacks (Beller and Graham 1986). Only 11 percent of

⁸All women with children from an absent father are eligible for a child support award. Once an award is either voluntarily agreed to or court-ordered, there is still a question of whether the woman receives payment. There are two reasons why she may not: one is that she is not due payment in a particular year because, for example, the child is too old, and the other is that although she is due payment, the father doesn't pay.

never-married mothers had an award. Award amounts were less than half as much as for divorced mothers (Beller and Graham 1986).

Two, the Reagan Administration places a high priority on reducing the welfare rolls. Getting absent fathers to support their children is seen as one means of accomplishing this goal. Finally, current social emphasis on the role of the family and the place of private rather than public transfers has facilitated this becoming a nonpartisan issue.

Trends in Payments

We analyzed trends in child support through 1986 based upon three more Census surveys comparable to the one in 1979. The data on trends in award rates, recipiency rates (the proportion of women due child support who received something), and the amounts received show a mixed picture.

While the child support award rate remained reasonably constant at around 59 percent from 1979 to 1984, it rose to 61 percent in 1986 (U.S. Bureau of the Census 1985a; 1987). This suggests that the likelihood of being awarded child support increased from 1984 to 1986. Indeed, the award rate rose for all racial and all marital status groups over this period (U.S. Bureau of the Census 1985a; 1987). Interestingly, groups with the lowest award rates appear to have made the most progress over the entire period. Among blacks, the award rate increased continuously from 29 percent in 1979 to 36 percent in 1986. It also increased continuously among the never-married from 11 to 18 percent (U.S. Bureau of the Census 1981; 1985a; 1985b; 1987). In disaggregated analyses, Beller and Graham (1986) found that the trend toward a greater prevalence of child support awards had been going on throughout the 1960s and 1970s, and had always been stronger among blacks than among nonblacks.

By sharp contrast to the increase in the award rate, the recipiency rate appears to have declined between 1983 and 1985. The proportion of women who actually received payment in 1985, 74 percent, was down slightly from the 76 percent who had received payment in 1983, although it was still higher than the 72 percent who had received payment in 1978 and 1981 (U.S. Bureau of the Census 1987; 1985b; 1985a; 1981). Again, there are racial differences. The steady increase in award rates among blacks has been accompanied by a steady increase in recipiency rates; these rates rose from 63 percent in 1978 to 72 percent in 1985. Among the never-married, recipiency rates rose steadily beginning in 1981 through 1985 (U.S. Bureau of the Census 1985a; 1985b; 1987).⁹

⁹The rate, however, fell substantially between 1978 and 1981 and by 1985 had not regained the initial levels (U.S. Bureau of the Census 1981).

Along with the decline in the rate of receipt came a decline of 12 percent in the mean amount of child support received (among women who received some) in constant dollars between 1983 and 1985 (U.S. Bureau of the Census 1987, p. 4). This was viewed as disappointing because it followed a period of constancy between 1981 and 1983, and was deemed significant enough to warrant national headlines. The *New York Times* of August 23, 1987 quoted Nancy Ebb of the Children's Defense Fund as saying in reference to the decline in child support amounts, "That's certainly disheartening." The article also quoted the Census Bureau's expert on the data, Ruth Sanders, in saying that the Census Bureau did not know why the decline occurred (*The New York Times* 1987). Payments corrected for inflation had also declined by 16 percent between 1978 and 1981 (U.S. Bureau of the Census 1985b, p. 2). That earlier decline was not terribly surprising because it occurred during a period of extremely high inflation (the Consumer Price Index rose about 40 percent), but inflation was much lower between 1983 and 1985, only about 7 percent. [During a period of high inflation, the value of child support awards made in earlier years declines because they typically do not have automatic adjustment clauses in them (Krause 1981). What is surprising is that the real value of new child support awards also decreased between 1978 and 1981 even more than the value of old awards (Beller and Graham 1986, p. 241).]

One possible explanation for the recent decline in child support received is a change in the composition of the population of men with child support obligations. Since the award rate increased between 1983 and 1985, men with smaller incomes may have been added to the population owing child support. Their corresponding smaller payments would tend to reduce the average amount received. However, the award rate increased among both whites and blacks, while real child support payments fell only among whites (U.S. Bureau of the Census 1987, p. 4). Thus, no simple explanation appears evident. Further research on the reasons for the real decline in child support is needed; the work by Beller and Graham (in press) is a start in this direction.

Aside from the obvious, what benefits can be expected from the receipt of child support; in other words, why the concern about increasing its receipt? First, there is the possibility of a reduction in poverty and welfare dependency for the family. Second, according to one study, fathers who pay child support have more contact with their children (Chambers 1979, pp. 127-128). Increased parental contact is associated with greater educational attainment in children (see, for example, Krein and Beller in press). Third, women who receive child support income tend to have higher incomes from other sources as well. Such women are more likely to be in the labor force and work longer hours than women

who do not receive child support, although causality in this relationship has not been fully untangled.¹⁰ Thus, considerable economic and social benefits may be gained by increased receipt of child support. Benefits are likely to accrue not only to mothers and children but also to the federal and state governments in the form of savings from Aid to Families with Dependent Children (AFDC) and other welfare programs.

Child Support Enforcement

What is the nature of our system for enforcing child support obligations? It is basically a state system, whereby each state has its own set of laws stipulating various techniques to enforce child support obligations. Federal initiatives to establish a national enforcement program began in 1975 with the passage of Title IV-D of the Social Security Act. Prior to that date, it was believed that states were not doing an effective job of enforcing child-support obligations (Katz 1983). Title IV-D established the Office of Child Support Enforcement to administer the nationwide child support enforcement (CSE) program and a federal Parent Locator Service. It required each state to develop a CSE program to assist in establishing paternity, locating absent parents, establishing obligations for child support, and enforcing such obligations. Since 1975, many states have enacted new child support laws.

As we have seen, many women do not receive the child support to which they are entitled. In our opinion, this is due in part to several problems with our child support enforcement system. First, the whole burden of obtaining and enforcing an award rests on the woman. Child support is not viewed as her right, but rather as something for which she must fight. In the past, if the man did not pay, the woman had to go back to court. This means she had to take time off from work in addition to paying an attorney unless (after 1975) she used the state IV-D office. Second, there are a number of ways that absent fathers can escape their obligations. In the past, moving to another state, especially one with weak laws, was an effective means of escaping one's obligation. Now, it is less foolproof, but enforcing interstate obligations is still difficult. One way to escape a large award is by hiding income in self-employment. Additionally, unemployed men and men who change jobs frequently pose a particular problem for collection officials. Third, our system is anything but uniform, with individual judges making their own decisions on a case-by-case basis. Awards tend to be very small in proportion to men's income, an average of 13 percent in 1978-1983 (U.S. Bureau of the Census 1985b, p. 2), and the proportion tends to decrease as income rises (Weitzman 1985, p. 266). Fourth, if a woman

is on welfare (or on the borderline) she has no incentive whatsoever to try to track down the man or get him to pay. This is because any income she receives (including child support) is taxed dollar for dollar by the welfare system. In other words, for each dollar of child support a woman receives, she loses a dollar of welfare, so she and her children are no better off. If the man is being helpful in nonpecuniary ways or even providing income-in-kind such as groceries or taking the kid to the baseball game, we question why the woman would want to pursue him with the law and perhaps even get him thrown in jail.

To strengthen the nation's CSE system, in August 1984, Congress passed and President Reagan signed into law the Child Support Enforcement Amendments of 1984, which came into effect in 1985 and 1986. They require all states to (1) withhold wages automatically when support payments are overdue; (2) use expedited legal processes, such as administrative procedures, for obtaining and enforcing support orders; (3) provide for the collection of overdue support by intercepting state income tax refunds; (4) initiate a process for imposing liens against real and personal property; (5) maintain procedures for requiring security, bond or other guarantee of payment; and (6) establish statewide advisory guidelines for child support award amounts. In addition, incentives are created to foster interstate enforcement.

The 1984 amendments should help to alleviate some, but not all, of the problems with the current system. First, automatic wage withholding begins if payment falls behind by one month, eliminating the need for the woman to return to court. Second, expedited legal processes allow child support awards to be established and enforced without going in front of a judge.

How effective can we expect these new state laws to be? One way to determine this is to evaluate the effectiveness of similar laws already on the books. In a study of the effects of 1981 state laws, Beller and Graham (1987) found that liens and administrative procedures were effective at increasing child support receipts. Laws for the mandatory and automatic withholding of wages in effect for at least three years were also found effective, but only moderately so. The authors have concluded that federal officials need to realize that the passage of state laws alone does not guarantee their effective enforcement. Although these amendments are certainly promising, on the basis of past experience we are not optimistic that they will revolutionize child support in America.

What is the potential of this present system for reducing welfare dependency? In a study which simulates its effects on welfare dependency, Robins (1986) found the present system's potential for reducing welfare

¹⁰For an attempt to untangle cause and effect, see Graham and Beller (1986).

dependency (i.e., the AFDC participation rate) and the poverty rate to be minimal:

Part of the reason for such a relatively small impact of child support enforcement . . . is probably low child support award amounts, particularly among AFDC recipients. . . . Higher award amounts and/or other sources of income (principally greater earnings) are necessary (Robins 1986, p. 786).

However, Robins did find that child support policies could reduce AFDC costs significantly. By providing "the full range of services to all AFDC families," child support agencies could recover 15 to 16 percent of AFDC costs. If, in addition, child support obligations were established for all AFDC mothers and all obligations were fully enforced (i.e., full payment received), nearly 50 percent of AFDC benefits now paid could be recovered. According to Robins (1986, p. 786), "These findings suggest that a successful system of mandatory withholding coupled with greater efforts to establish obligations could recover somewhere between 15 and 20 percent of AFDC benefits." However, he concluded, ". . . even with higher award amounts, it does not appear likely that child support enforcement would have a dramatic effect on reducing the economic insecurity facing many single-parent families" (Robins 1986, p. 786).

Alternative Systems of Child Support

If the current system has minimal potential for reducing poverty, are there any other alternatives? Two we would like to mention are: the system currently being tested in the State of Wisconsin, and the system in effect in Hungary, which the first author learned about in discussions with a colleague on a visit there last summer (Kamarás 1987).¹¹

The child support assurance system, presently being demonstrated and evaluated in Wisconsin, is based upon a model developed by Garfinkel of the Institute for Research on Poverty at the University of Wisconsin. That system provides payments to all women with children from an absent father. A woman is guaranteed a minimum payment even if her absent counterpart does not pay in that amount. The state collects the child support from absent fathers by withholding it from wages and other sources of income. Obligations are determined by a simple legislated formula: 17 percent of the noncustodial parents' gross income for one child; 25 percent, 29 percent, 31 percent, and 34 percent, respectively, for two, three, four, and five or more children (Garfinkel and McLanahan 1986, p. 176).

It was surprising to find that Hungary had a very structured and apparently effective system of child support in place. The woman can request wage withholding at divorce or at a later date, if the man does not pay. The proportion of the man's income that goes to child support is legislated and is quite high by U.S. standards: 20 percent of his income for one child, 40 percent for two children and 50 percent for three or more children. The woman also gets the dwelling, and dwellings are very hard to come by in Hungary. (One hears that there is a 15-year wait.) According to Mr. Kamarás, sometimes the man must go back and live with his parents, and often he cannot afford to remarry. When Mr. Kamarás was asked why women appeared to do so well relative to men after a divorce, he said that the most important consideration in Hungary had been the interest of the child. What does that say about us? Where do we place the interest of the child? When it was explained to Mr. Kamarás that in the U.S., men have found various ways to escape their child support obligations, including moving to another state, both he and the (female) interpreter expressed surprise. He said, "But don't you have to register with the police when you move to another state?" Perhaps we should try such a system!

While the Hungarian system is apparently very effective for women and children, it appears to cause some not inconsiderable hardship among men. Moreover, when a marriage market is regulated, it can cause certain distortions. For example, remarriage rates are low in Hungary. Men are probably hesitant about marrying in the first place and are probably more likely to use birth control methods.

In all probability, the Hungarian system would not be acceptable here, but it should certainly be viewed as a model of one that appears to work, at least for the women and children.

Only time will tell how successful the Wisconsin system is. How that system appears to be effective is through eliminating the uncertainty associated with late and irregular payments and removing the burden of tracking down an unresponsive father from the woman. But, it is unlikely that such a system would be able to transfer enough money to women who head families in all parts of our country to bring them out of poverty and keep them from needing welfare. Garfinkel and McLanahan (1986, p. 176) estimate "that such a program could reduce the poverty gap among American families potentially eligible for child support nearly 40 percent and would reduce AFDC caseloads by nearly 50 percent."

Garfinkel and McLanahan's speculations and Robins' estimates lead to the inevitable conclusion that eliminating, or even substantially reducing, the feminization of poverty requires that we do more than just improve the child support system. We must

¹¹Mr. Kamarás is Deputy Chief, Population Statistics Section, Hungarian Central Statistical Office, Budapest, Hungary.

continue our efforts to increase women's earnings, to help women make the transition from working in the home to working for pay in the market, and to implement a better system of quality child care at affordable prices.

In her new book, The Economic Emergence of Women, Barbara Bergmann (1986) proposes such a comprehensive system. Her proposal includes the method for overhauling the child support system proposed by Garfinkel, combined with a system of unemployment insurance for single-parents. Such insurance would allow them a period of support while looking for their first job to help facilitate their transition from home to market. Bergmann also emphasizes the importance of improving women's earnings for which she advocates pay equity. "In recognition of the special burdens of single parents," she also recommends, "a system of excellent, highly subsidized child care, and a system of free medical care. . ." for the children (Bergmann 1986, p. 253).

CONCLUSION

In conclusion, we have determined that while, at present, child support is limited by not enough awards being made and infrequent payments, getting all existing obligations fully paid and establishing awards for women without them will not eliminate the feminization of poverty, largely because award amounts are low. It can, however, reduce the costs of AFDC by a substantial amount. Only a complete overhaul of the present system could substantially reduce the economic insecurity facing many female-headed single-parent families. Rather, we must proceed on a number of fronts. Of utmost priority is to continue our efforts to increase women's earnings. One way of doing this is by continuing to open job opportunities in the traditionally male-dominated occupations. In addition, we must provide a decent system of child care at affordable prices. Related to this goal, parental leave on the birth of a new child would also be helpful. A bill proposing such leave (S.249) is presently before Congress. As we can see, no single program can solve the entire problem of the feminization of poverty. Multiple program efforts must be pursued.

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Time As A Direct Source of Utility:
The Case of Price Information Search

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A 'joint production' model of price information search that combines aspects of both household production and the economics of information is formulated. Enjoyment of search time is incorporated into the model. Findings indicate that enjoyment is a major factor in explaining variations in time spent in price information search in dual earner households.

Dual earner households face an increase in the price of their time due to labor market activity. These households might choose not to engage in time intensive household activities such as price information search. Evidence indicates, however, that working wives do use price information search strategies (Kaitz 1978; Hacklander 1978). In order to explain the variation in time spent in price information search by dual earner households, a model is formulated that integrates household production theory, the economics of information, and the assertion that time may yield utility directly. The resulting 'joint production' model of price information search is not so much a replacement of either the traditional household production or search models as it is an extension which provides more information and insight into the search behavior of dual earners.

The possibility that consumers consider search time a form of leisure has been suggested in the literature, but has never been formally modelled (Wilkie & Dickson 1980; Juster & Dow 1980). Economic studies that examined the demand for search time, but did not consider the utility value of time, found that increases in the price of a woman's time may increase or decrease time spent in search. These studies, however, have provided insight into taste and productivity shifters, and family size factors that affect the amount of time spent in search. These include education, age, and presence of children (Doti & Sharir 1981; Carlson & Geiseke 1983). In addition, presence of time saving durables have been found to affect time allocation in households (Strober & Weinberg 1980).

A JOINT PRODUCTION MODEL OF
PRICE INFORMATION SEARCH

Two frameworks are useful when examining the relationships among increases in dual earner households, enjoyment of search time and time spent in searching for lower prices. Household production theory, which has its roots in Becker's, "A Theory of the Allocation of Time" (1965), identifies three uses of the time

resource. Time can be spent in leisure, in household production, or in market work. When time is combined with purchased inputs to produce commodities, satisfaction is increased. Satisfaction is highest when the greatest number of commodities possible are produced using available time and purchased inputs.

In George Stigler's (1961) seminal article on the economics of information, consumers search for lower prices by utilizing time and purchased inputs, such as food advertisements in newspapers, to locate lower food prices. This results in increased purchasing power that is equivalent to an increase in money income. Time is a major input into producing price information and its effectiveness may vary across households with differential costs of time.

A 'joint production' model that uses a household production framework and includes search time as a direct source of utility can be illustrated using by imposing weak separability on a utility function and focusing on two home produced goods: meals and price information². The following Lagrangian function is used to maximize such a utility function.

$$(1) \quad L = U(G_0(X_{01}, H_0; k), H_s; P) + \lambda(w(H^* - H_0 - H_s) + v^* - \sum_{i=1}^N P_{0i}(X_s, H_s; PD)X_{0i} - P_s X_s)$$

where

- U = Total utility
- G₀ = Meals produced with goods and time
- X_{0i} = Direct inputs to produce G₀, i=1,2,...,N
- H₀ = Time inputs used producing G₀
- k = A vector of environmental variables
- H_s = Time spent in price search
- P = A vector of preference shifters
- w = The market wage rate of the shopper
- H* = H - H_p
- H = Total available time
- H_p = Pre-allocated household production time
- v* = v - P_pX_p
- v = Total non-wage income
- P_pX_p = Pre-allocated expenditures
- P_{0i} = Price of the ith direct input used in meal production
- X_s = Purchased inputs used in price information search
- PD = price dispersion
- P_s = Price of purchased inputs used in price information search

²Assuming a consumer's preferences provide a natural structuring for choice allows a sub-utility function for meals to be written within a utility function that defines all commodities.

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The joint production model of price information search differs from the traditional household production and price information search models in two ways. First, time spent in price information search is a direct source of utility for consumers. Thus, time spent in search is found in a consumer's utility function. Second, if consumers search for price information, the price they pay for direct inputs used in meal production depends on how much they search. These prices are a function of the information produced. And, because information is produced using time and direct inputs, given the market price distribution, it can be considered a home produced good. The price function for direct inputs used in meal production is written

$$(2) \quad P_{o_i} = P_{o_i}(X_s, H_s; P_D); \quad i=1, 2, \dots, N$$

The prices paid for purchased inputs into meal production decrease at a decreasing rate as time or purchased inputs used to produce information increase.

Search is a relatively time intensive activity. For every purchase of inputs such as a newspaper or the cost of transportation necessary to comparison shop, a consumer must also spend time interpreting what is written and must take the time to travel to stores in order to obtain savings. Without time spent processing written information or actually locating a lower price, the purchase of direct inputs are virtually useless. Since intensity of input use in a production activity is determined by the relative productivity of the respective inputs, it follows that the absolute value of the marginal price reductions from increasing time inputs by one unit are greater than the marginal price reduction from increasing purchased inputs by an additional unit.

The second derivatives of the price function with respect to both time and purchased inputs must also be negative. If not, savings could increase infinitely and a consumer would use all resources to obtain price reductions.

If an equilibrium is to be reached, the marginal benefits obtained from search time must equal the marginal costs of obtaining the benefits. Examination of the first order condition for search time, calculated by taking the first derivative of the Lagrangian function with respect to search time gives

$$(3) \quad \frac{\partial U}{\partial H_s} - X_{o_i} \frac{\partial P_{o_i}}{\partial H_s} = w; \quad i=1, 2, \dots, N$$

The additional term to consider is the marginal utility obtained directly from time spent in price information search³. The term from which

³Alternatively, (3) can be expressed

$$w + X_{o_i} \frac{\partial P_{o_i}}{\partial H_s} = \frac{\partial U}{\partial H_s} \lambda_i$$

marginal savings are subtracted in equation (3) can be expressed

$$(4) \quad \frac{\Delta \text{utils}}{\Delta \text{dollars}} \quad \text{or} \quad \frac{\Delta \text{ in hours of search}}{\Delta \text{utils}} \quad \text{or} \quad \Delta \$ / \Delta H_s$$

where \$ = dollars.

This is interpreted as the value of the marginal utility of search time when search time yields utility directly. Literally, it is the change in the value of utility obtained when a consumer engages in an additional unit of search time. Equation (4) illustrates that the marginal utility obtained from search time depends on the marginal utility obtained from money.

The following hypotheses can be formulated based on maximization of the joint production model of price information search and previous empirical findings:

- H1. Increases in enjoyment of time spent in price information search will increase time spent in search.
- H2. An increase in the own price of search time will decrease the demand for search time and will depend on both the wage rate and total marginal savings available from search.
- H3. Search time and home production time are substitutes.

DATA

The model is tested using convenience food grocery expenditure data⁴. There is little doubt that substantial savings on groceries may be obtained through price information search. First, imperfections in consumer knowledge can support a distribution of prices in a market (Stigler 1961; Telser 1973; Gastworth 1976; Salop & Stiglitz 1977; Maynes & Assum 1982). Second, food suppliers have responded to continuing increases in female labor supply by increasing the number and price ranges of food products offered for sale and offering discounts on products through use of promotional campaigns (Bellizzi et al. 1981; Gallo 1982). Third, price dispersion can exist because the structure of the food industry can not be described as perfectly competitive (Collins & Preston 1968; Greig 1976; Conner et al. 1985).

The data were collected from a random sample drawn from Onondaga County, New York during June through September, 1986. To be eligible to take part in the survey, two criteria were necessary: that the household contacted have

⁴Convenience foods consist of frozen and canned fruits and vegetables, dry mixes, prepared soups and sauces, cold and instant cereals, bakery products, boned, skinned, canned, or cooked meats, and frozen entrees. This definition was adapted from those used in previous research (Traub & Odland 1978; Pepper 1980).

two adults employed in the labor market and that the respondent be the major grocery shopper in the household. Considered a population in itself, inferences can be made about this particular market segment. A combination telephone and mail survey yielded 95 complete responses for a response rate of 30 percent.

A comparison of the latest statistics available on dual earner households in the United States and the Onondaga County data identified biases which may result if an analysis is performed using an unrepresentative sample (U.S. Bureau of the Census 1986). Results indicated that the Onondaga County sample slightly under-represents traditionally blue collar occupations and is slightly more educated than the national average for dual earner households. When broken down into individual earnings categories, the sample is slightly upscale with regard to experience and education. The distribution of children by occupation and age category is comparable to the national average. The sample as a whole revealed no significant difference in mean earnings for dual earner households. The limitations of using an upscale sample must be taken into consideration when generalizing the results to a larger population.

VARIABLE MEASUREMENT

Variables were selected for use in the empirical estimation based on the theoretical framework and on the availability of data. Summary statistics are presented in Table 1.

TABLE 1.
CHOICE AND MEASUREMENT OF VARIABLES

| THEORETICAL CONSTRUCT | VARIABLE | MEAN | STANDARD DEVIATION |
|--|---------------------|-------|-----------------------|
| Time input, Hs | SRCHTIME | 2.33 | 4.19 |
| Total marginal savings, $-Xo_i(\partial Po_i/\partial Hs)$ | MARSAVE | 5.40 | 4.72 |
| Non-wage income, v-PpXp | NWINC ^A | 23942 | 11742 |
| Price of time, w | WAGESHOP | 9.11 | 4.18 |
| Experience, k_i | COLL ^B | .44 | |
| Experience, K_i | AGES | 37.74 | 9.47 |
| Technology, k_i | MICRO1 ^B | .56 | |
| Productivity shifter, k_i | OLDKIDS | .64 | .93 |
| Productivity shifter, k_i | YNGKIDS | .73 | .92 |
| Preference shifter, P_j | ENJOY | .00 | .14 |

N = 95

^ATotal household non-wage income is used as a proxy for non-wage income spent only on food.

^BFor variables measured as dummy variables, the proportion is presented instead of the mean.

Time spent in search was obtained by asking the major shopper how many minutes per week they spent clipping coupons, reading the food ads, and shopping for groceries in each store shopped at. To calculate SRCHTIME, minutes spent clipping coupons and time spent reading the food ads were added together. Next, an individual's time spent shopping in their major grocery store were subtracted from the aggregate sample's average number of minutes spent in the major store. Consumers who spent more than the aggregate's average in a food store were assumed to be engaging in price comparison. This measure is a proxy for time spent in comparison shopping and attempts to differentiate comparison shopping within a store from total shopping time. Next, minutes spent in other stores were added to the difference from the average time spent in the store where major expenditures are made. Finally, all search time components were summed and divided by sixty to obtain hours spent in price search per week.

The price of a shopper's time (WAGESHOP) is the hourly wage rate received in the labor market. The wage rate is also a component of the price of search time.

Because savings on convenience and non-convenience foods are a function of search time, it is not possible to include an explicit measure of savings in the estimated equations. Savings consumers perceive they obtain due to price information search is used as a proxy variable for total marginal savings. This measure was tested by regressing perceived savings and search time on the total value of savings consumers actually obtain. Perceived savings were significant at the one percent level, indicating use of this variable may be appropriate.

Effects of changes in non-wage income (NWINC) on the demand for search time is measured as all income in a household not earned by the major shopper.

A dummy variable representing education was measured as a one if the respondent completed college or above (COLL). The null condition was satisfied if respondents did not completed college. Since college graduates are expected to have a different set of occupational options open to them compared with non-college graduates, this dichotomous variable captures the effect of these differences.

Use of a microwave oven is used as a proxy variable for the level of technology in a household. As a time saving durable, microwaves can free time used in meal preparation to be used in other activities, including price information search.

Identification of variables which influence productivity in and tastes for price information search is not straightforward. There is some theoretical background, but little empirical work that identifies the characteristics of "efficient" shoppers or

variables associated with a "taste" for search (Doti & Sharir 1981; Douglas 1976; Dow & Juster 1980; Tauber 1972). Therefore, a descriptive analysis was performed on two additional categories of consumers identified from the data. For pairs within the categories of "efficient" shoppers and shoppers who enjoy time spent in search, hypothesis tests were performed to ascertain whether consumers within these two categories had any characteristics which distinguished them from one other.

A variable, EFICIENT, was computed by dividing the total value of coupons used for food groceries by time spent in search. This yielded a measure of savings per hour of search, which may be considered one measure of the efficiency of time spent in price information search.

More "efficient" consumers come from larger families and have more older children living in the household. This finding indicates that it is appropriate to use the number of children under age twelve (YNGKIDS) and age twelve and over (OLDKIDS) as productivity shifters in the equation used to estimate the demand for search time. It was felt that inclusion of these variables instead of total family size would better capture differential effects due to different family members.

A descriptive analysis was also performed on consumers stating that they enjoy time spent in price information search versus those who do not. Data on enjoyment was obtained by asking respondents whether they regard time spent clipping coupons, time spent reading the food ads, or time spent grocery shopping as work, enjoyment, or a combination of both. Those consumers stating that any one of the activities was regarded as enjoyment were separated from those indicating all categories were regarded as work or as both work and enjoyment. An analysis analogous to that done on more versus less efficient consumers was performed.

Differences between consumers who enjoy search and those who believe that search is work are associated with the number of stores shopped at, reason for choosing a store, a proxy for shopping when stores are crowded, and the demographic variables age and profession of the major shopper.

Lack of many significant demographic differences between shoppers who enjoy versus do not enjoy search time is not surprising. Enjoyment of an activity is a psychological construct and is not expected to be associated with any specific demographics. These results also indicate that enjoyment of an activity measures something other than productivity or tastes differences captured by variables already included in the analysis and forms the rationale for including a measure of enjoyment.

Use of the above results and principal components analysis allowed an index to be computed that could be used as a proxy for the total utility gained from spending time in

search. This approach was selected because often a consumer's statement about his feelings are not accurate. By including a battery of behavioral and demographic factors that are associated with enjoyment of search time in an index, a more valid measure of total utility is formed. Included in the analysis were number of stores shopped at, reason for choosing a store, shopping when lines are long, age of major shopper, profession of major shopper and a variable indicating whether or not a consumer enjoyed searching for information⁶. The Eigen value associated with the first factor accounted for 26 percent of the total variation in the exogenous variables. This factor is assumed to capture the effects of the characteristics of individuals who enjoy spending time in price information search. A composite index calculated for each consumer is interpreted as a measure of the total utility obtained by a shopper who enjoys spending time in price information search.

ANALYSIS AND RESULTS

The demand for time spent in price information search can be written as a function of total marginal savings on purchased inputs ($X_{0i}[\partial P_{0i}/\partial H_s]$), the wage rate (w), non-wage income (v), and productivity and preference shifters (k and P).

All respondents in the sample engaged in some price information search. Therefore, Ordinary Least Squares was the appropriate statistical method to use in the estimation of the demand for search time. The equation estimated to be estimated is:

$$(5) \text{SRCHTIME} = \beta_0 + \beta_1 \text{WAGESHOP} + \beta_2 \text{MARSAVE} \\ + \beta_3 \text{NWINC} + \beta_4 \text{COLL} + \beta_5 \text{AGES} + \beta_6 \text{ENJOY} \\ + \beta_7 \text{MICROL} + \beta_8 \text{OLDKIDS} + \beta_9 \text{YNGKIDS} + e$$

The results of the regression analysis are presented in Table 2. The results are robust for many of the independent variables included.

The effect of enjoyment of search time on the demand for time spent in search is significant and positive. For every one unit increase in enjoyment of search time, time spent in weekly price information search will increase by 1.53 hours. Unfortunately the use of principal components analysis to derive an index for enjoyment of search time makes it extremely difficult to formulate an interpretation of a unit of enjoyment. Hypothesis H1 can not be rejected.

⁶ Respondents were asked whether they enjoyed shopping, time spent clipping coupons, or time spent reading food ads. If they enjoyed any one of these activities, the preliminary enjoyment measure received the value of one. If shoppers did not enjoy any of the activities then the measure of enjoyment received a zero.

To analyze the effect of the price of search time on demand for time spent in search, the wage rate coefficient is the appropriate parameter to examine. A simple calculation using the coefficients on the wage rate and on total marginal savings can also isolate the effect of a change in the price of other uses of time from the effects of a change in the price of search time⁷. This calculation is necessary because the wage rate is the price of non-search time use and the wage rate minus total marginal savings is the price of search time.

The own price effect of a change in the price of search time on the demand for search time is insignificant, though negative, as predicted by theory. When the coefficient on total marginal savings is subtracted from the coefficient on the wage rate, the cross price effect of a change in the price of other uses of time on the demand for search time can be isolated. This calculated cross price effect is positive, indicating that search time and other uses of time are substitutes, as is predicted by economic theory when only two uses of time are considered. Given the insignificance of the coefficient on the wage rate alone, it appears that the price of search time does not have an effect on time spent in search in dual earner households. Given the significance of the effect of total marginal savings, it appears that search time and other uses of time may be substitutes. Therefore, hypotheses H2 and H3 are plausible, but are not fully supported.

⁷The estimated equation is written

$$z = \sum_{k=1}^K x_k \alpha_k + e$$

where z is the dependent variable, search time, x_k is a vector of exogenous variables and e is the error term. To examine the coefficients (α) on the price of search time and the price of other time uses, the relevant part of the above equation should read

$$\begin{aligned} & \alpha_1 [Ps] + \alpha_2 [w] \\ = & \alpha_1 [w + X_{o_i} (\partial Po_i / \partial X_s)] + \alpha_2 [w] \\ = & [\alpha_1 + \alpha_2] w + \alpha_1 [X_{o_i} (\partial Po_i / \partial X_s)] \end{aligned}$$

where Ps is the price of search time, w is the price of other time uses, and $X_{o_i} (\partial Po_i / \partial X_s)$ are total marginal savings on goods searched for. However, the coefficients actually estimated are δ_1 and δ_2 as in

$$\delta_1 [X_{o_i} (\partial Po_i / \partial X_s)] + \delta_2 w.$$

Therefore, the coefficient on the wage rate in the equation estimated really measures the effect of a change in the price of search time on search time demand because δ_2 is the sum of α_1 and α_2 . To isolate the effect of a change in the price of other time uses, δ_1 must be subtracted from δ_2 .

TABLE 2. Results of Regression Analysis

| VARIABLE | PARAMETER ESTIMATE | STANDARD ERROR |
|-----------|--|----------------|
| INTERCEPT | 8.424*** | 2.34 |
| WAGESHOP | Hourly wage of major shopper. -.047 | .09 |
| MARSAVE | Total marginal savings on convenience foods. -.386*** | .14 |
| NWINC | Non-wage income. .00006** | .00003 |
| COLL | Dummy variable that equals one if the major shopper completed college. -.322 | .77 |
| AGES | Age of the major shopper. -.125** | .04 |
| MICRO1 | Dummy variable that equals one if a microwave oven is used daily. .145 | .79 |
| YNGKIDS | Number of children under age 12. .449 | .38 |
| OLDKIDS | Number of children age 12 and over. .161 | .34 |
| ENJOY | Index of enjoyment of search time. 1.53*** | .34 |

ADJ R² = .22

** Significant at the .05 level

*** Significant at the .01 level

The coefficient on non-wage income is positive and significant. Indications are that search time is a normal good. As non-wage income increases, the amount of time spent in price information search increases.

The effect of age of the major shopper is significantly negative. Results indicate that for every year older a consumer is, search time will be decreased by about seven minutes per week. Age appears to be working as a variable which measures experience of an individual. As experience in search increases, time spent in search decreases.

DISCUSSION

This research formulated and tested a model in which a traditionally non-economic variable was included in a household production model of price information search. Given the insignificance of the price of search time and the highly significant, positive effect of enjoyment of search time on demand for time spent in price information search, it appears that including this psychological construct is appropriate. It is not the price of time that predicts time spent in searching for lower grocery prices, but whether or not enjoyment of an activity is important.

The finding that search is a normal good substantiates this finding in previous research that included both working and non-working wives (Carlson & Geiseke 1983), but is counter intuitive to what one would expect of higher income persons. Perhaps these consumers spend more on convenience grocery items and thus have more to save⁸.

The negative effect of age is at odds with previous findings (Carlson & Geiseke 1983). It appears that in dual earner households, ages affects search time differently than in a sample which includes both earners and non-earners.

Theoretically, the model used appears to be a viable alternative to other models that attempt to explain consumer search behavior. Pragmatically, it appears that high income dual earner households are concerned with the price of groceries and that they do take advantage of savings, especially if the major shopper enjoys search time. This finding has implications for marketers who target high priced convenience items at dual earner households who face increased demands on their time. Marketers can use promotional techniques such as sales and coupons to gain market share among these households. By taking advantage of available savings, dual earner households can free income for other uses.

⁸Coupons are available more often for manufactured foods and branded items (Gallo 1982).

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COMMENTS ABOUT THE SESSION
ON FAMILY ECONOMICS
ACCI 34TH ANNUAL CONFERENCE
by Horacio Soberon Ferrer¹

The papers presented in this session do not seem to share the topical matter, the approach, nor the intention. The paper by Kolodinsky introduces an important theoretical development and proceeds to its empirical application to a very concrete and contemporary family situation. The paper by Beller and Chung, on the other hand does not introduce new theoretical developments nor presents an empirical application. Theirs seems more as a policy position paper, the subject matter though presents us with a very concrete and contemporary family situation. Finally the paper by Carsky, Dolan and McCabe, presents neither a theoretical construct nor does it represent a policy analysis, it does however open avenues for directions of new research on a very concrete and contemporary family situation - home based work.

The papers in this session do indeed represent an assortment of very concrete and contemporary family situations. With these common thread established I shall proceed to the discussion of the papers.

A TYPOLOGY TO MEASURE THE IMPACT OF
HOMEBASED WORK ON QUALITY OF FAMILY
LIFE.

A typology is defined as either a systematic classification or as a theory or doctrine. This paper represents both. Their classification of homebased workers not only makes good sense but reflects the fact that a new host of home occupations have been created by availability of inexpensive telecommunications - a recent phenomenon. Their propositions present attractive challenges for empirical research.

There are a couple of points that perturb one though. One of them deals with the use of term Economics as it is used to describe one of the variable associated to the work environment. Economics the paper says refers to the financial gain from working in the home. The term pecuniary concerns might have been more appropriate. In fact the Economics of homebased work is something that is missing from the paper. A proposition that might have been derived had Economics been emphasized would have

pointed that if homebased work is voluntarily contracted a perceived net positive influence (net of opportunity costs) on the family unit must exist. The second point deals with the policy implications of proposed empirical research. The paper says on the assessed influence of homebased work, "If ... the influence is positive, public policy initiatives might be directed to encourage homebased work through further legislative actions removing restrictions on homework... If the impact is decidedly negative for some homebased occupations, policies might be formulated to mitigate these effects." But no clear definition is given on how these judgments can be made at the aggregate level. In the context of society as a whole "positive" or "negative" has a clearly normative flavor. In the context of the family unit the issue I believed is resolved by the individual making a decision, as to whether to engage itself or not in the occupation.

Child Support and the Feminization of
Poverty

The paper does an excellent job in presenting the dismal picture of the child support system in the U.S. and how it impacts on the financial well being of the female headed household. The case is made quite convincingly that the addressing of this issue is of vital importance for the present and future well being of society at large.

Even though figures are given to illustrate the growth and sources of the problem, the underlying causes for it are not mentioned. The paper points out that since the middle 60's there have been an increase in the rate of divorce and in the birth of children out of wedlock (the sources of growth), but the reasons as to why this happens are not addressed. The addressing of such issues seems to be critical, especially since it is the middle sixties the point that marks the widespread availability of contraceptive methods which should have reduced the out of wedlock birth rate, as well as the birthrate of unstable marriages, Ceteris paribus. Also the middle sixties mark the passage of legislation introducing equal opportunity for women and a change in social mores concerning women employment outside the household. It is obvious that Ceteris paribus did not hold and thus such natality reductions did not take place nor has economic equality been achieved. What were those changes to ceteris paribus? I will venture that it has to do with the changes in the perceived cost of

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single parenthood and divorce. These costs take two forms:

1. pecuniary - the advent of the "great society" safety net (AFDC, Food Stamps, etc.) would reduce the costs of single parenting, divorce, and joblessness.
2. Non-pecuniary - the change in social attitudes towards divorce and single parenting made it easier than it had previously been for people facing these situations to cope.

These cost reductions would act as incentives to shift the responsibility from the parent to society. An individual being confronted with a situation will act according to the balance of perceived costs and benefits. A reduction in perceived costs will thus serve as an incentive to irresponsible parenthood and family abandonment.

What lesson can we learn from Hungary? In Hungary parenting becomes an expensive and inescapable proposition, thus the Hungarians act accordingly. I am not sure that as the authors point out: "We ... must provide a decent system of child care at affordable prices" or that "parental leave on the birth of a new child would also be helpful." At least until a we is defined together with how much are we going to pay and how much are we going to benefit. I mean, would not these proposed policies further reduce the responsibility of parenting for the individual thus inducing a yet more socially irresponsible behavior.

Time as a Direct Source of Utility: The Case of Price Information Search

This paper incorporates the enjoyment of search time (i.e. "shopping") in a formal model of household production. But the paper goes further than glorifying "The Joy of Shopping" in a lagrangian function, it extends to the empirical realm such common sense approach to economic rationalization such as those proposed by Becker and by Stigler.

Ms. Kolodinky's methodology is most appropriate to the analysis of the implications of an observed behavioral pattern. I think his conclusions are just as appropriate. Of the three work hypothesis put forth as a result of his theoretical construct one is proven to be true. While the other two cannot be proven true by the empirical tests. I think that the reason for the failing of the empirical proof of these two propositions, namely:

H₂: An increase in the own price of search time will decrease the demand for search time and will depend on both the wage rate and total marginal savings available from search.

and:

H₃: Search time and home production time are substitutes.

Has to do with the selection of the wage rate as the opportunity cost of time. The wage is the opportunity cost of that time which we can devote to work and for which we can find placement. Only if we are working all the hours we want at wage W , and we have the opportunity to work even more hours at such rate, will W be the opportunity cost of time. Conceivably one would be willing to work time beyond the normal contractual commitment at the regular wage but cannot find a bidder for such work. i.e. We would like to work 45 paid hours a week, but cannot get paid more than 40. Thus time devoted for shopping is not necessarily in competition for work time at the going regular wage but of our own reservation wage rate. We can conceivably moonlight on whatever, but possibly not at W . It is not true thus that the cost of leisure or any other activity is necessarily W . It is true however that a upper limit value for this time will be W . Thus the opportunity cost of search time is $W^* < W$. Furthermore to the extent that number of hours worked can be more flexible for some occupations than for others independently of income, it can not be assumed that W can serve as an indicator that has a good correlation with the opportunity cost of time devoted to search.

I think that a better indicator of opportunity cost of shopping time could have improved in the shown results. I acknowledge however that the above is easier said than done.

ADMINISTRATIVE ATTITUDES TOWARD COLLEGE PROGRAMS IN FINANCIAL PLANNING:
IMPLICATIONS FOR CONSUMERS

Gwendolyn M. Reichbach, Eastern Michigan University ¹

This paper describes the findings of a study of chief academic officers of U.S. colleges and universities about their attitudes toward educational programs in financial planning "in general" and "in their own institution," and plans to develop such a program. Multiple Classification Analysis was used to test a causal model of plans to develop a program in financial planning. The independent variables were type of institution, public/private, region, and attitude toward programs in financial planning.

INTRODUCTION

Financial planning was almost nonexistent fifteen years ago, and today thousands of additional people are calling themselves financial planners annually. Indicative of this growth is the increasing membership of the International Association for Financial Planning (IAFP). In early 1983, there were about 10,000 members and by 1987 there were over 25,000. This development is an outgrowth of the "Mutual Fund Era" and the inflationary "Consumer Decade of the 1970s"².

Such phenomenal growth has resulted from many factors, including periods of high inflation, dual-earner couples, and technological advances increase consumer interest. Estimates are that "Americans spend up to 400 billion dollars per year on checking account fees, tax advice, estate planning and a vast assortment of other financial services"³. Additionally, surveys indicate that a strong majority of consumers need and want assistance in financial planning and are willing to buy such services⁴. However, many consumers know little about the financial planning process.

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² Bohn, Robert. *Financial Planning and Services: An Historical Update*, A paper presented at the Association for Financial Counseling and Planning Education, Anaheim, California (September 30, 1985).

³ Scherschel, Patricia. *The Battle Heats Up for Investors' Dollars*, *U. S. News and World Report*, Vol. 95 (December 26, 1983 and January 2, 1984), pp. 102-104.

⁴ Mandell, Lewis. *Technological Development and Its Impact on Financial Planning*, in *Proceedings of the Financial Counseling and Planning Consortium*, Ames, Iowa: Iowa State University (October 11-13, 1984), p. 108.

Ulivi, Ricardo. *How Consumers View Their Financial Planning Needs*, *The Financial Planner*, Vol. 10, No. 3 (March, 1981), pp. 22, 24-26, 28.

use there are no state or federal licensing, certification or education requirements to be a financial planner, anyone can hang out a shingle and "practice" financial planning. Financial planners generally come from one of the older areas of the financial services industry, such as insurance, banking or securities. While some of these practitioners are highly competent, others do not take an overall view of a person's financial situation, needs and goals. Many so-called planners who say they carry out the financial planning process actually only sell a product. These issues create dilemmas for consumers seeking professional, comprehensive financial planning services.

The "professionalization" of the field has been advocated by various groups and individuals. Goldsmith⁵ challenged financial planners that their business will either become professional or it will not survive as an entity. A profession has minimum standards of training and experience and emphasis on the length, place and technical nature of specialized education. It usually requires a college degree. Several organizations sponsor certification programs, but none offers an associate or baccalaureate degree in financial planning. Should traditional higher education become involved in moving the field toward professionalism by developing curricular options in financial planning? What are the attitudes of chief academic officers of accredited colleges and universities which do not offer programs in financial planning toward such programs? Which institutions plan to develop programs? Should academic offerings be non-credit designation or degree programs? Higher education's current and future involvement and attitudes toward financial planning education may strongly influence financial planning's movement toward professionalism. This study addresses these research issues. The objectives are to:

1) analyze attitudes of chief academic officers at colleges and universities not offering programs in financial planning toward such programs "in general" and "in their own institutions;"

2) analyze institutional plans to develop programs in financial planning;

3) analyze the findings in relation to the interest of the financial planning field to move toward a profession.

⁵ Goldsmith, Marilyn P. *Observations and Opinions*, *National Tax Shelter Digest* (December, 1981), p. 38.

⁶ Reichbach, Gwendolyn M. *College-Based Educational Programs for Financial Planners*, Doctoral Dissertation, Ann Arbor: University of Michigan (December, 1986).

PROCEDURES

Attitudes toward educational programs in financial planning were studied through data collected on a mail questionnaire. It was sent to the chief academic officers of 2,661 accredited doctoral-granting, comprehensive, liberal arts and community and junior college institutions in the United States. They were deans and vice presidents of academic affairs or instruction. The questionnaire asked whether their institution offered a program in financial planning. Of the 1,504 respondents (57 percent return rate), 1,399 reported their institution did not offer a program in financial planning. Administrators at institutions not offering this program were asked several attitudinal questions about the appropriateness of such programs and their plans to develop one. All institutional characteristics were well represented relative to the number of each type of institution in the United States. Administrators at institutions offering programs in financial planning were sent a second questionnaire requesting information about their program. These findings are reported in other papers.

The attitudinal data provided by chief academic officers at institutions not offering a program in financial planning were described by frequencies and marginal percentages. Then the data were merged with three stratification variables, type of institution, public/private and census region; and two types of analyses were performed. The chi-square test was used to analyze bivariate relationships. However, it cannot account for more than one independent variable. Multiple Classification Analysis (MCA) was used to simultaneously test all the predictors of an institution's plans to develop a program.

MCA had several advantages for this study over other multiple regression techniques. Higher education research problems, such as the one being studied here, often have correlated predictors, and this situation makes MCA an appropriate method of analysis. It is a regression technique designed to deal with nominally scaled predictors and the dependent variable measurable on an interval scale. It is possible to use MCA when the scale measuring the dependent variable is a two-point nominal one, such as yes and no. "In effect, one is using a 'proportion' scale in the

sense that a mean of .65 for a group would indicate '65 percent yes' and the output statistics are equivalent to a two-group discriminant function analysis"⁷. MCA was applied to the causal model in Figure 1.

The independent variables in MCA were the type of institution, public or private, census region, appropriateness of programs in financial planning in colleges and universities "in general" and appropriateness of programs in financial planning "in their own institution." The dependent variable was a plan to develop a program in financial planning at their institution. Since MCA is an additive model, it was used to analyze the additive effects of each successive variable, such as the impact of type, public/private and census on administrator attitudes about the appropriateness of programs in financial planning.

RESULTS AND DISCUSSION

The results of the Multiple Classification Analysis tests will be discussed and supplemented by the chi-square and descriptive findings. The latter help us understand the former.

Appropriateness "in General"

The MCA presentations include two sets of figures for each of the predictors. The Eta values represent "the ability of the predictor to explain the variation in the dependent variable" without controlling for the effects of the other predictors. The Beta values "are directly analogous to the Eta statistics, but are based on the adjusted means rather than the raw means"⁷. They adjust for the effects of all other predictors. The results of the MCA of the appropriateness of programs in financial planning "in general" are presented in Table 1.

The findings of the Multiple Classification Analysis test supported the first part of the model. The impact of type of institution was only slightly reduced by controlling for the other

⁷ Andrews, Frank, James Morgan, and John Sonquist. Multiple Classification Analysis, Ann Arbor, Michigan: Survey Research Center, Institute for Social Research (May, 1967).

FIGURE 1. Multiple Classification Analysis: Causal Model

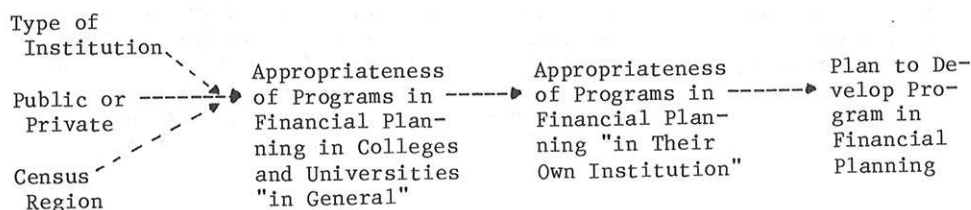


TABLE 1. Multiple Classification Analysis of Predictors of the Appropriateness of Programs in Financial Planning "in General"

| | <u>Eta</u> | <u>Beta</u> |
|---------------------|------------|-------------|
| Type of Institution | 0.148 | 0.137 |
| Public or Private | 0.123 | 0.136 |
| Census Region | 0.029 | 0.046 |

Multiple R-Squared = 0.030

predictors of general appropriateness. The relationships of public or private and census region were not reduced by controlling for the other two predictors. The findings suggest that these predictors operate independently on administrative attitudes about the appropriateness of programs in financial planning "in general."

Descriptive analysis indicated that 73 percent (975) of the respondents from institutions of all types believed programs in financial planning were appropriate "in general" in colleges and universities. Type of institution was significantly related to appropriateness and was the institutional variable having the strongest relationship with the dependent variable, appropriateness. Administrators considered programs increasingly more appropriate as one moved from doctorate (57 percent) through comprehensive (64.8 percent), liberal arts (68.4 percent) and community college (81 percent) institutions. The approval rate among liberal arts college administrators was surprising given this type of institution's traditional emphasis on liberal arts education.

It is often hypothesized that public/private influences work through or are related to the type of institution. Assumptions are also often made that public and private institution administrators will feel differently based on their differing philosophy and mission. The MCA tests indicated that public/private difference is not just a reflection of type of institution. Public/private is a real difference. This variable independently influences administrative attitude toward programs in financial planning "in general." Bivariate tests indicated a significant relationship between public/private and appropriateness of programs in financial planning "in general." A majority of respondents in both public (77.8 percent) and private (66.8 percent) institutions believed programs in financial planning "in general" were appropriate. A substantial proportion of both public (17 percent) and private institution administrators (26 percent) had no opinion about appropriateness of programs in financial planning "in general" which could have substantial influence on the level of support.

In order to further clarify these strongly positive attitudes, the questionnaire asked respondents who said programs in financial planning were appropriate to identify which academic level(s) they believed were appropriate. Fifty-seven percent (535) felt non-credit designation programs and fifty-six percent (526) felt baccalaureate degree programs were appropriate. Considered less appropriate were associate (37 percent) or graduate degree (33 percent) programs. In comparing these attitudes of administrators in institutions not offering programs in financial planning to the types of programs actually in existence, the administrators more strongly approved of all types of programs than were operating in colleges and universities.

Only associate degree programs in financial planning were significantly related to type of institution. Attitudes toward the appropriateness of associate and graduate degree programs were significantly related to public/private. This finding would be unexpected based on the close public/private distribution of the respondents. Less than 40 percent of both public and private institution administrators believed either of these levels of programs was appropriate.

Why Programs in Financial Planning Are or Are Not Appropriate "in General"

Respondents' attitudes were further studied through an open-ended question asking why they believed programs in financial planning were or were not appropriate in colleges and universities. Four and one-half times more respondents stated reasons why programs in financial planning were appropriate than indicated why they were not appropriate. Also the reasons for the former were more varied than for the latter.

The "need for well prepared financial planners" (34 percent) was by far the most frequent reason for programs being appropriate. Chief academic officers from doctoral and comprehensive institutions were less likely to offer this as a reason than those from liberal arts and community colleges. The most often stated reason for programs not being appropriate was "should be part of a broader academic program; offer courses but not a program" (10 percent).

This latter reason and "People need help with financial matters" were significantly related to type of institution. The proportion of administrators stating "people need help with financial matters" as a reason for offering academic programs in financial planning rose gradually from doctorate to community college institutions. Conversely, community college administrators were much less likely to consider programs in financial planning "too narrow to be a program" than chief academic officers from doctorate universities. These responses likely indicate a reaction

to recurring articles in the popular press about consumer lack of financial planning and warnings about unethical and uneducated financial planners seeking consumer business. They may also indicate at least a general knowledge of financial planning which could enhance the development of cooperative efforts between the field and higher education.

Appropriateness "in Their Own Institution"

What people think is appropriate "in general" in colleges and universities, they may not consider similarly for themselves. To test this idea, the chief academic officers were asked about the appropriateness of programs in financial planning "in their own institution." The causal model then hypothesized that appropriateness "in general," incorporating the impact of the three institutional variables, influenced how appropriate respondents considered programs in financial planning "in their own institutions." To study whether the institutional characteristics operated independently or through appropriateness "in general" to influence appropriateness "in their own institution," two Multiple Classification Analyses were conducted. The first (Table 2) considered the influence of the three institutional characteristics on appropriateness "in their own institution" without appropriateness "in general," and the second (Table 3) analyzed the influence of appropriateness "in general" in addition to the three institutional variables.

TABLE 2. Multiple Classification Analysis of Institutional Variables as Predictors of the Appropriateness of Programs in Financial Planning "in Their Own Institution"

| | <u>Eta</u> | <u>Beta</u> |
|---------------------|------------|-------------|
| Type of Institution | 0.129 | 0.078 |
| Public or Private | 0.180 | 0.183 |
| Census Region | 0.044 | 0.042 |

Multiple R-Squared = 0.035

This analysis indicated that the impact of type of institution on appropriateness of programs in financial planning "in their own institution" was considerably reduced by controlling for the other two variables. The impact of type of institution on appropriateness "in their own institution" was substantially more decreased by controlling for the other variables than the impact of these same characteristics on programs in financial planning "in general." This suggests that type of institution functions more independently when influencing appropriateness "in general," and that public/private is an independent influence on attitudes about the appropriateness of programs in financial planning "in their own institution" as well as appropriateness "in general."

TABLE 3. Multiple Classification Analysis of Institutional Variables and Appropriateness "in General" as Predictors of the Appropriateness of Programs in Financial Planning "in Their Own Institution"

| | <u>Eta</u> | <u>Beta</u> |
|------------------------------|------------|-------------|
| Type of Institution | 0.127 | 0.020 |
| Public or Private | 0.178 | 0.109 |
| Census Region | 0.045 | 0.030 |
| Appropriateness "in General" | 0.517 | 0.501 |

Multiple R-Squared = 0.277

The results of the MCA analysis were quite different after adding appropriateness "in general" to the three institutional characteristics. Although its impact was slightly decreased by controlling for the other variables, appropriateness "in general" had much more effect on appropriateness of programs in financial planning "in their own institution" than any other predictor. This finding suggests that type of institution, public/private and region may all operate through appropriateness "in general" in affecting appropriately the case because appropriateness "in general" was so powerful it caused misleading changes in the other predictors.

These findings suggest that in predicting whether administrators consider programs in financial planning appropriate "in their own institution," it is considerably more important to know their attitude about such programs "in general" than to know institutional characteristics. One cannot predict administrators' attitudes related to their institution simply by knowing the three institutional variables. Thus, colleges and universities considering the development of a program in financial planning cannot assume the attitude of their chief academic officer by knowing the institutional variables.

Descriptive and chi-square analyses supplement the MCA findings for this section of the causal model. Forty-four percent (561, 562) of the respondents each indicated a program in financial planning was and was not appropriate "in their own institution." Considerably more chief academic officers believed programs in financial planning were appropriate "in general" (72.5 percent), and conversely, fewer respondents considered such programs inappropriate "in general" (6.2 percent) than "in their own institution" (43.8 percent).

There was a steady decline in the percentage and number of administrators who indicated that programs in financial planning "in their own institution" were appropriate at each level from non-credit designation (66 percent) through associate

(40 percent), baccalaureate (30 percent) to graduate degree programs (9 percent). These findings somewhat support the division of programs in financial planning in colleges and universities where the highest percentage were non-credit designation College for financial Planning Affiliate Programs (37 percent) and the next largest group was baccalaureate degree programs (31 percent). Administrators in all types of institutions which offer baccalaureate degree programs felt baccalaureate programs in financial planning were the most appropriate "in their own institution."

The respondents favored certain types of programs more "in general" than when applied to "their own institution." Non-credit designation programs were most favored and graduate programs least supported both "in general" and "in their own institution." However, the former type was more strongly favored "in their own institution" while the latter type was more highly supported "in general." Two factors may contribute to the popularity of non-credit designation programs. All types of institutions can appropriately offer these programs, and administrators and faculty members who consider financial planning "too trade or vocationally oriented" can probably justify a non-credit program. Many administrators and some accrediting agencies who believe graduate programs should be fairly broad with narrower areas, such as financial planning, incorporated as concentrations or specializations can probably support non-credit programs. These findings support the widely held attitude that many more people will support an idea in the abstract than will support it when specifically applied to them or directly affects them. They also suggest researchers cannot study programs in financial planning "in general" and then assume colleges and universities and administrators will function similarly "in their own institution."

Administrative attitudes about the appropriateness of programs in financial planning "in their own institution" were significantly related to the type of institution in which they worked. Community college administrators were most likely to consider these programs appropriate (51 percent) while those in liberal arts colleges most likely considered them not appropriate "in their own institution" (60 percent). These attitudes can be compared to the actual programs in financial planning identified in this study. Nine percent of the programs were in liberal arts colleges, 20 percent in community colleges, 32 percent in doctorate universities and 37 percent in comprehensive institutions. A much higher percentage of community college chief academic officers believed programs were appropriate "in their own institution" than there were programs in this type of institution.

Administrative attitudes about the appropriateness of programs in financial planning "in their own institution" was also significantly related to public/private. Public institution respondents were more positive than private institution

respondents, 56 to 32 percent. The decrease in appropriateness from "in general" to "in their own institution" was considerably greater for private schools than for public institutions: from 78 to 56 percent for public and from 67 to 31 percent for private institution administrators. This conforms to the pattern of distribution of already existing programs between public (68 percent) and private (32 percent) institutions.

A majority of both public (69 percent) and private (60 percent) institution administrators felt non-credit designation programs were appropriate "in their own institution" while both groups felt strongly that graduate degree programs were inappropriate. This finding has strong implications for professionalization of the financial planning field. It suggests that the most likely type of program to be developed in colleges and universities is non-credit designation. Non-credit programs, however, will not contribute to the efforts working for professionalism in the field. Many professions require at least baccalaureate and often graduate degrees. Lack of development of these types of programs in financial planning may hinder the field's efforts toward professionalism.

Administrative attitudes about baccalaureate degree programs were also related to the chief academic officers being in public or private institutions. A considerably higher percentage of private (45 percent) than public (22 percent) institution administrators believed baccalaureate degree programs in financial planning were appropriate "in their own institutions." The fact that almost all liberal arts colleges are private could have influenced this finding.

Plans to Develop a Program in Financial Planning

The financial planning field is growing rapidly, but will academic institutions be prepared to provide educational preparation for planners? The chief academic officers were asked if their institution planned to introduce a program in financial planning. The last step in the causal model considers this issue. It proposes that appropriateness of programs in financial planning "in their own institution" influences plans to develop such a program. The MCA considered all the predictors in the model. Table 4 presents the findings of this analysis.

TABLE 4. Multiple Classification Analysis of Predictors of Plan to Develop a Program in Financial Planning

| | <u>Eta</u> | <u>Beta</u> |
|--|------------|-------------|
| Type of Institution | 0.082 | 0.082 |
| Public or Private | 0.006 | 0.039 |
| Census Region | 0.065 | 0.062 |
| Appropriateness "in General" | 0.028 | 0.027 |
| Appropriateness "in Their Own Institution" | 0.154 | 0.162 |

Multiple R-Squared = 0.027

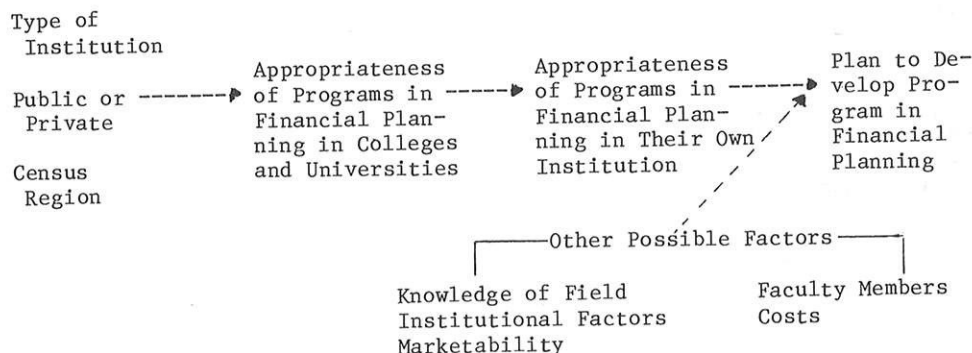
Appropriateness "in their own institution" was the only variable substantially influencing the dependent variable, but probably was insufficient to predict whether an institution would develop a program in financial planning. The influence of any of the predictors was not significantly reduced by controlling for the other predictors in the model.

Descriptive and chi-square analysis collaborate these findings. Sixty-three chief academic officers indicated their institution plans to develop a program in financial planning. This finding is somewhat surprising when compared to the 44 percent (561) of the respondents who felt programs in financial planning were appropriate "in their own institution." One might expect more institutions were planning to develop such a program. It may indicate an unwillingness to act on their positive perceptions or other institutional or economic factors working against development of a program in financial planning.

Plans to develop a program in financial planning were analyzed according to the three institutional characteristics. Plans to develop a program and type of institution were significantly related. Almost half of the institutions planning to develop a program in financial planning were community colleges, and considerably more were in public than private institutions. If the institutions actually did develop programs in proportions similar to those indicated by their answers, much of the new activity would be at the community college level, in the South and North Central regions and more frequently in public than private institutions. This was supported by the finding that non-credit designation and associate degree programs were considered more appropriate by administrators "in their own institution" than baccalaureate or graduate degree programs.

The Multiple Classification Analysis findings suggest that type of institution, public/private, census region, and appropriateness "in general" did not really operate and appropriateness "in their own institution" only somewhat influenced actual plans to develop a program in financial planning. Chi-square tests indicated that while the institutional characteristics are related to feelings of appropriateness, they do not translate into actual plans. Thus, positive attitudes toward programs in financial planning "in general" and "in their own institution" were insufficient impetuses to develop a program. Other factors, such as marketability of the program and graduates, securing qualified faculty members, knowledge about the field, costs of establishing and running a program, and other institutional factors, may be equally influential on plans to develop a program in financial planning than appropriateness. Based on the findings of this research, the causal model was revised to include these factors (Figure 2).

FIGURE 2. Revised Multiple Classification Analysis Causal Model



SUMMARY AND IMPLICATIONS

Consumers are seeking assistance with their financial needs and the financial planning field is growing rapidly, but will higher education be prepared to provide educational preparation for the planners? This study of chief academic officers in institutions not having a program in financial planning increases our knowledge to answer this question in several important ways. It distinguishes between administrators' attitudes about the appropriateness of selected types of programs in financial planning "in general" and how appropriate they feel each type of program is "in their own institution." A strong majority of chief academic officers at institutions not having programs in financial planning believe such programs are appropriate for colleges and universities to offer. It was also determined, however, that these same administrators are less likely to consider these programs as appropriate "in their own institution." In other words, programs in financial planning are fine in general, but in my own institution it is another story.

Another general finding is that only about five percent of the administrators answering this survey were planning to develop a program in financial planning in their institution. While the institutional characteristics were related to feelings of appropriateness, they did not translate into actual plans. At the same time, the professional and popular literature and this research strongly advocate the need for well prepared, professional financial planners. These contradictory developments portend potentially serious problems for financial planners who want to move toward professionalism and American consumers who want to work with professionals. If the field continues to grow as it has in the last decade, there will probably be insufficient college and university programs to prepare the financial planners of the next century.

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