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RESEARCH ARTICLE

**Family Resource Allocation in Taiwan:
Does Family Structure Matter?**

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Family Resource Allocation in Taiwan: Does Family Structure Matter?

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Abstract

This paper empirically examines the effects of family income and family structure on family resource allocation behavior. The results indicate that, with everything else held constant, families with higher income allocate a greater share of their resources to normal goods than do low-income families. With family income held constant, single-parent families allocate more of their expenditure to medical services and inferior goods, and allocate much less of their resources to normal goods. This expenditure behavior suggests that single-parent families have an economically disadvantaged status compared to two-parent families. On the other hand, these single-parent families have different preferences as well. Single-father families allocate more of their resources to adult goods such as drinking and tobacco while single-mother families devote more resources to family- and/or child-oriented goods such as education. This study makes a unique contribution not only by assessing the effects of family income on resource allocation behavior but also by providing a picture of how single-parent families and two-parent families allocate their resources in Taiwan. The significance of our findings is underlined by recognizing the importance of family structure to resource allocation within the family.

Family Resource Allocation in Taiwan: Does Family Structure Matter?

I. Introduction

Children raised in single-parent families have more than their share of problems. They are more likely to score lower on standardized tests and have more behavior problems in elementary school. When they grow up, they are more likely to have lower educational achievements, to have an out-of-wedlock birth, and to be "idle" -- out of school and out of work (McLanahan and Sandefur, 1994; Duncan and Brooks-Gunn, 1997; Han, Huang, and Garfinkel, 1999). Lack of economic resources appears to be an important reason for these disadvantages. Family income has been shown to be positively related to educational achievement and physical health, and negatively associated with behavior problems (Axinn, Duncan, and Thornton, 1997; Hanson, McLanahan, and Thomson, 1997; Haveman, Wolfe, and Wilson, 1997; Korenman and Miller, 1997). Higher family income also enables parents to choose high quality child care, which is associated with positive developmental consequences for children (Lee, Brooks-Gunn, Schnur, and Liaw, 1990; Ramey and Campbell, 1991; The NICHD Early Child Care Research Network, 1997). Family income has indirect effects on children's well-being as well. Economic hardship may increase parents' depressive symptoms and thus diminish their ability to provide high quality parenting and, thereby, influence children's well-being (Conger, Conger, and Elder, 1997; Jackson, Brooks-Gunn, Huang, and Glassman, in press).

However, the relationship between family income and children's outcomes is more complicated than it appears. In most cases, additional income does raise children's chances for success, but giving single parents more cash will not make their children just

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like the children in two-parent families in all respects. Among all the explanatory factors, resource allocation has been used as one hypothesis to understand the difference between family types on children's welfare (Casterline, Cooksey, and Ismail, 1989; Desai, 1992; Kennedy and Peters, 1992; Handa, 1996). Basically, the model of resource allocation applies the classic economic utility maximization model to hypothesize that a family is assumed to maximize its welfare by allocating its resource to meet the different needs of family members, such as child, adult, or family goods. One crucial question is, then, how parents allocate their resources to maximize their welfare and whether there is a difference between parents in single- and two-parent families. Research findings to date have been consistent in demonstrating that women show more child- and/or family-oriented expenditure behavior than men do. The purpose of this paper, thus, is to apply the resource allocation model to understand the effects of family structure on expenditure behavior in Taiwan while controlling for other family characteristics, particularly family income. Whether family structure directly affects resource allocation (which, in turn, may affect children's chances for success) or is simply a proxy for economic disadvantage is the main question we want to answer in this paper. Family structure is considered to be an important contributing factor if, after income is taken into account, single-parent families allocate more resources to adult goods rather than to child and/or family goods. In the next section, the relevant literature is reviewed. Data and methodology used in this paper are described in Section III. After that, the major findings are presented. In the final section the implications for future research are discussed.

II. Previous Research

The number of single-parent families has significantly increased in Taiwan since the end of the 1980s (Huang and Hsueh, 1998; Huang, forthcoming), and this trend has led to public and academic concern, largely due to the poor socioeconomic status of single-parent families and its negative impact on children's well-being (Shu and Zhang, 1987; Xie and Ma, 1989; Wang, 1991; Lin and Qin, 1992; Tong 1992; Hong, 1993; Zhang and Hsueh, 1995). Although many studies have tried to examine the causes and consequences of the existence of/ the growth of single-parent families in Taiwan, none have used the resource allocation model to understand the difference between single- and two-parent families. This is largely due to the limitations of the data. Only two studies have partially analyzed resource allocation in single- and two-parent families in Taiwan (Han, 1999; Han, Huang, and Garfinkel, 1999).

Han (1999) focused on child care expenditure and indicated that families' economic resources have a strong impact on choices about the use of any non-parental child care and about child care expenditure in general. Single mothers are more responsive to price-related factors, probably because they need to purchase more hours of paid care to cover the hours they work than do married mothers, who can often rely on husbands for at least some hours of unpaid care.

Han, Huang, and Garfinkel (1999) analyzed educational expenditure and the determinants of college attendance rates among families with children. They found that single-parent families spend less on education, and children in single-parent families have lower college attendance rates than children in two-parent families. But once family background is taken into account, single-mother families are not significantly different from two-parent families on the outcome variables. Single-father families, however, are

estimated to have significantly lower educational expenditure and college attendance rates.

In contrast, a large body of research in the United States has shown the effects of family income and family structure on family resource allocation. Specifically, Espenshade (1984) conducted a comprehensive investigation into children costs and concluded that family income is positively associated with expenditures on children, but high-income families spend a smaller share of their total expenditures on food than do low-income families,[1] although the actual dollar amount spent on food is higher in high-income families. He also found that families with more children spend a higher proportion of income on food than do families with no or fewer children, suggesting that families with more children might have lower standards of living. Studies have also shown that family income is positively and significantly associated with the share of resources spent on family and/or child oriented goods such as nutrient intake, and therefore provides children with better health and education outcomes (Casterline, Cooksey, and Ismail, 1989; Thomas, 1990; Kennedy and Peters, 1992; Handa, 1996; Axinn, Duncan, and Thornton, 1997; Hanson, McLanahan, and Thomson, 1997; Haveman, Wolfe, and Wilson, 1997). Family structure is an important determinant of resource allocation as well. One of the reasons that children from female-headed families do not necessarily appear to do worse than children from male-headed families in health and educational outcomes is because female decision makers are more child-oriented in their expenditure patterns; thus despite the lower income found in female-headed

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[1] Family's expenditure on food has been used as a measure for standard of living (see Engel, 1895). Basically, if a family spends more on food than on any other items (e.g., clothes, leisure activities), it is considered that this family has lower standard of living than other families who spend less on food than on any other items.

families, more resources tend to be allocated to child and family goods (Thomas, 1990; Desai, 1992; Kennedy and Peters, 1992; Handa, 1996).

In addition to family income and family structure variables, previous empirical studies have consistently shown that family socioeconomic characteristics have important effects on resource allocation (Rosenzweig and Schultz, 1982; Ram, 1984; Casterline, Cooksey, and Ismail, 1989; Thomas, 1990; Desai, 1992; Kennedy and Peters, 1992; Handa, 1996). These characteristics include parent's age, education, and occupation, family demographic composition, and gender of children. Specifically, parents with higher education tend to allocate more resources to child-oriented goods (e.g., Desai, 1992; Handa, 1996). The gender of a child matters as well. Apparently, families allocate more resources to boys, and that leads to a higher survival rate for male children (Rosenzweig and Schultz, 1982; Ram, 1984).

In short, most of the empirical evidence shows that both family structure and income matter. However, so far no research has specifically addressed the differences in resource allocation between single- and two-parent families in Taiwan. It is thus of great interest to examine the expenditure behavior of families with children in Taiwan, given the previous evidence that family's expenditure behavior has an important effect on children's welfare (e.g., Thomas, 1990; Desai, 1992; Kennedy and Peters, 1992; Handa, 1996). This paper aims not only to examine the effects of family income on resource allocation in Taiwan, but also to provide a picture of how single- and two-parent families allocate their resources in response to their needs. Given that 40 percent of single-parent families are headed by fathers in Taiwan, it is of great interest to investigate whether single fathers differ from single mothers.

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III. Data and Methodology

Data

The Survey of Family Income and Expenditures (SFIE) is used to examine the differences in resource allocation among family types. The SFIE is a nationally representative sample, and it investigates detailed expenditure information as well as other socioeconomic characteristics of the family in Taiwan. Our sample is targeted at families with children under 18. Ideally, each form of single- and two-parent families should be included in the analysis, such as nuclear and extended families. In the FIES, however, only the relationship between household head and each family member, rather than relationships among family members, can be identified; therefore, subfamilies in this case can not be precisely identified. Thus, only families with children in which the father or the mother is the household head are included in the analysis here. This constraint limits the generalizability of findings from this study. To obtain a large enough sample of families with children to conduct separate analyses for single-parent families, seven years of data (1991-97) are pooled.

Measures

Expenditure Pattern: The SFIE contains rich information on family expenditures, a fact which allows us to examine expenditure behavior among family types. Specifically, information from the SFIE includes expenditures on food, child care, education, clothing, medical services, drinking and tobacco, mortgage, furniture, transportation, leisure, tax, and rent and utilities. Twelve variables were constructed to represent the percentage of total family expenditure spent on each item as indicated above. Specifically, food is considered as goods for basic needs; child care and education

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are considered as child-oriented goods; drinking and tobacco are considered as adult-oriented goods; and clothing, medical services, mortgage, furniture, transportation, leisure, tax, and rent and utility are treated as family-oriented goods.

Parent(s)' socioeconomic characteristics: Studies have shown that parent(s)' socioeconomic characteristics affect available resources such as family income, which also may affect decisions about resource allocation. It is thus important to take parent(s)' socioeconomic characteristics into account in order to identify the net effect of income and family structure. The age, educational attainments, and occupational characteristics of the family heads are used as parent's socioeconomic characteristics. In order to account for possible non-linear effects, educational attainment is categorized into four dummy variables corresponding to 1) elementary or below (years of education $<=6$), 2) junior high school ($>=7$ & $<=9$), 3) senior high school ($>=10$ & $<=12$), and 4) college and up ($>=13$). Occupational characteristics are categorized into five dummy variables corresponding to 1) professionals and executive managers (including legislators, executive directors, managers, professionals, and technicians and professional assistants), 2) administrative and service support, including clerical, sales persons, and members of the armed forces, 3) farmers, and other related agricultural occupations, 4) fishers, hunters, operators, fabricators, and laborers, and 5) not-working. Table 1 reports means and standard deviations for these socioeconomic characteristics.

Family's socioeconomic characteristics: In addition to parent(s)' own socioeconomic characteristics, studies have also shown that family socioeconomic characteristics are important factors affecting resources available in the family. Family structure, size, composition, and income all show strong effects on the availability of

resources in previous studies. Because single-father families account for a relatively large proportion of single-parent families in Taiwan, we examine the differences in resource allocation between single-father, single-mother, and two-parent families.

In addition to the number of adults age >= 18 at home, it is important to see the effects of the age composition of the children on resource allocation, because different age group of children may have different needs (such as child care or education). Five variables are created to correspond to each age group: number of children age < 2, >=2 and < 4, >= 4 and < 7, >= 7 and < 13, and >=13 and <18. The reason for using the number of children instead of the presence of children is based on previous evidence which shows that a family with more children is more likely to allocate resources to child- and/or family-oriented goods (see Espenshade, 1984). The percentage of male children in the family is also added into the model in order to test the son-preference hypothesis, given previous findings on the importance of son-preference to family resource allocation (Rosenzweig and Schultz, 1982; Ram, 1984). Finally, family region of residence (represented by three dummy variables corresponding to city, county, and rural as defined by the Directorate General of Budget, Accounting and Statistics (hereafter DGBAS)) is also included in the analysis to account for the differences in the demographic and economic structure across regions. The means and standard deviations of family socioeconomic characteristics are reported in Table 1.

Model

We aim to assess the sensitivity of family resource allocation to family income and family structure. The dependent variable of interest is the percentage of expenditure spent on each item (e.g. food, child care, education, drinking and tobacco, clothing,

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medical services, mortgage, furniture, transportation, leisure, tax, and rent and utilities).

The objective is to quantify the impact of the explanatory variables on family resource allocation. OLS regression was performed on twelve budget categories as identified above that could be interpreted as either basic needs, child, adult, or family goods. The means and standard deviations of the share of each expenditure item are displayed in Table 2.

IV. Empirical Findings

Descriptive Results

Table 1 presents descriptive statistics for the explanatory variables. The sample contains observations of 60,198 families with at least one child age under 18. For family head's characteristics, the summary statistics suggest that single mothers have lower human capital than do single fathers and heads of two-parent families. Single mothers have significantly lower educational attainment and are more likely to be unemployed and to work in administrative and service sectors than are their counterparts. Probably due to these lower human capital characteristics and lower working status, single mothers also have significantly lower income than do the family heads in two-parent and single-father families. In addition, single mothers have significantly fewer adults at home than do their counterparts. Interestingly, single mothers have a significantly lower percentage of male children than do single fathers, despite the fact that both of them have the same number of children. These statistics suggest that son-preference probably plays a role in custody decisions (see Huang, Garfinkel, and Han, 1999). In terms of the region of residence, as Table 1 shows, single mothers are more likely to live in the city than are other types of families. This result may indicate that, in addition to offering greater

economic opportunities, cities may also see a loosening of kinship connections compared to rural areas. Furthermore, changes in culture -- especially in attitudes towards single mothers -- are likely to occur in urban areas.

Table 2 presents the distribution of expenditure allocation conditional on family structure. The first notable difference between family types is that single-mother families spent 89 percent of their income, significantly more than single-father and two-parent families (they are 81% and 83%, respectively). This shows that, given that single-mother families have the lowest family income, such families will have very limited resources left to use after spending their income on immediate needs. This shortage may increase economic insecurity and impede human capital investment in single-mother families.

With regards to the expenditure on each item, as Table 2 shows, single-parent families generally spent a higher proportion of income than two-parent families on food. This significant difference between single- and two-parent families is consistent with previous studies, and indicates that two-parent families have better standards of living than do single-parent families.

Turning to other purchases/expenses, if we use family, child, and adult goods as the categories to distinguish each expenditure item, we can see that basically two-parent and single-mother families are more likely to spend money on either family- and/or child-oriented goods. Specifically, two-parent families spent more on clothing, on mortgage, on child care, on transportation, and on leisure than did single-father families. Similarly, single-mother families spent more on clothing, on rent and utility, and on education than did single-father families. In contrast, single-father families spent significantly more on drinking and tobacco and significantly less on furniture and household equipment. While

two-parent families spent significantly less on medical costs, single-mother families spent significantly less on tax, insurance, and charity (probably due to the fact that single mothers have lower family income). The fact that two-parent families spent less on medical services might be due to their greater likelihood of having access to medical insurance or might be due to a lower incidence of sickness requiring medical services among members of two-parent families. If the latter is the case, then the health status of and medical services for members in single-parent families should be of great concern for future research. It is worth noting that single mothers spent the highest proportion of their income on education among all family types, and this may explain why children in single-mother families do not necessarily fare worse than children in two-parent families in educational outcomes (Han, Huang, Garfinkel, 1999).

Overall, two-parent families have better socioeconomic characteristics and higher standards of living than do single-parent families. Despite the fact that single mothers have lower human capital and family income than single fathers, single mothers allocate more resources to child- and/or family-centered goods than their male counterparts do, while single-father families are more likely to spend their resources on adult needs. Given these significant differences between single- and two-parent families, and even among single-parent families themselves, it is important to understand the determinants of these expenditure behaviors among family types. In particular, we are interested in knowing whether the family income/other socioeconomic characteristics can explain these differences, whether family structure is the crucial factor, or if both elements are involved. The following analyses provide the answers.

Determinants of Resource Allocation

Table 3 presents the OLS coefficients of the regression model to assess the sensitivity of resource allocation to features of socioeconomic characteristics in the family. Basically, the regression results are consistent with what we found in the descriptive statistics. Specifically, column 1 of table 3 displays the results for family's expenditure behavior on food, and here we consider food to be a basic needs good. As expected, the higher the family income, the lower the share of expenditure on food. In addition, single-parent families significantly spend more share of their budget than two-parent families on food. The point estimates suggest that single-father and single-mother families increase the budget share of food by 1.87 and 1.35 percentage points, respectively. Since the mean budget share of food is 0.2283, this implies an increase of about 8.2 and 5.9 percent in the budget share of food in single-father and single-mother families, respectively. These results demonstrate that, with family income held constant, single-parent families have a lower standard of living compared to two-parent families given the Engel's rule.

Next, we turn to the expenditure on child-oriented goods, such as child care and education. In terms of expenditure on child care, we can see that family income has a significant positive effect on family child care costs, while family income has a significant negative effect on family educational costs. The former is consistent with prior studies which show that families with high income are more likely to purchase child care services and to pay more for child care to obtain a higher quality of child care (see Han, 1999). The latter result seems to suggest that education is not a normal good in Taiwan, since if it were, then the demand for education should increase as income increases. In fact, the existence of free and mandatory education up to junior high school

in Taiwan has transformed education into a public good. Thus, we do not observe a positive effect of family income on educational costs. Another reason that family income is negatively related to educational costs is probably because families with higher income are more likely to have children go to more prestigious senior high schools, and these schools are also more likely to be public schools with cheaper tuition than private schools (see Han, Huang, and Garfinkel, 1999). Looking at the effects of family structure variables on these two expenditures, we found that family structure variables have no significant effects on family child care costs, but do have significant effects on family educational expenditure. In particular, single-father families spend a significantly portion of their budget than two-parent families on education, while single-mother families spend significantly more. If we transform the point estimates into the change of percent in the share of budget given the change in family structure, we can expect a decrease of about 18 percent in the income share of education in single-father families, and an increase of about 24 percent in the income share of education in single-mother families. This result is consonant with the findings in Han, Huang, and Garfinkel's 1999 paper, in which they found that single-father families spend significantly less on education, with the result that their children have lower college attendance rates than children in two-parent families. In contrast, single-mother families spend significantly more on education with the result that their children have similar college attendance rates as children in two-parent families. These results once again show that single-mother families need to input more resources than do two-parent families on education in order to allow their children to have similar educational outcomes as those in two-parent families.

With regards to adult-oriented goods (drinking and tobacco), the results indicate that high-income families significantly spend a smaller percentage of their income on this item than do low-income families. After controlling for family income, we see that single-father families purchase more alcohol and tobacco than do two-parent families, while single-mother families are the opposite. The percent of change in the income share of drinking and tobacco is quite striking. Specifically, given the point estimates in column 4 of Table 3, we can expect an increase of about 40 percent in the income share of drinking and tobacco in single-father families, while the corresponding estimate is a 54 percent decrease in single-mother families. This result might indicate that single fathers are more adult-centered, despite the needs of their children.

With regards to family-oriented goods (including clothing, mortgage, rent and utility, furniture, medical costs, transportation, leisure, and tax), the results show that family income has a significant positive effect on family purchases of clothing, with everything else held constant. This result indicates that clothing is a normal good in Taiwanese society. With family income held constant, we see that single-father families devote a significantly smaller proportion of their total expenditures to clothing, while single-mother families spend significantly than do two-parent families. Whether single mothers are more prone to purchase clothing for their children than are single fathers or whether clothing is a more feminine-oriented good (e.g., Handa, 1996) is a question we cannot answer using this dataset. Next, looking at family expenditures on medical costs, we found that the higher the family income, the lower the expenditure on medical services. This result is similar to the case of education, as mentioned above. Medical services are usually considered to be a normal good. However, this is not the case in

Taiwan due to Taiwan's health insurance system (around 70% of people in Taiwan had insurance coverage before the enactment of national health insurance in 1995, and since then, more than 95% are covered). Thus, once again, medical services have been transformed to become public goods and thus we do not observe the positive effect of income on it. Hence, the negative effect associated with family income on medical services demonstrates that families in Taiwan are paying similar costs to get medical services due to the prevalence of medical insurance (i.e., A family with a $50,000 monthly income would pay exactly the same amount as a family with $100,000 monthly income, for example, $50 as a co-payment for seeing the doctor). In terms of family structure variables, they are significant and positive for the share of the family budget spent on medical services. This result raises great concerns in the sense that, after controlling for family income, single-parent families are still paying a greater share of their budget for medical costs. Whether this is due to their poor access to medical insurance (because their jobs do not provide it) or to the fact that their family members are more likely to have health problems is a question requiring further investigation, and one which we cannot answer using this dataset. With regards to other items of family-oriented goods, we found that family income generally has a significant positive effect on mortgage, furniture, transportation, leisure, and tax, while it has a significant negative effect on rent and utilities. In contrast, with family income held constant, single-parent families have significant negative effects on mortgage, furniture, transportation, leisure, and tax, while the effects are positive on rent and utilities.

V. Discussion/Conclusion

The empirical results in this study indicate that both family income and structure have significant effects on family resource allocation, although they exert different effects on different expenditure items. Family income is consistently estimated to have a significant positive effect on normal goods (e.g., clothing, mortgage, furniture, child care, transportation, leisure, and tax) and negative effects on inferior goods (e.g., food, drinking and tobacco, rent and utilities). Two exceptions are the education and medical services due to their transformation into public goods in Taiwanese society. In contrast, family structure variables seem not only to demonstrate the effects associated with their economic status, but also to show more preference-oriented effects on family resource allocation, with everything else held constant. In particular, single-parent families significantly allocate more of their resources to inferior goods (such as food and rent and utilities) and medical costs, and they allocate much less of their resources to normal goods (such as mortgage, furniture, etc.). This expenditure behavior suggests that they have an economically disadvantaged status compared to two-parent families. On the other hand, these single-parent families have different preferences as well. Single-father families allocate more of their resources to adult goods such as drinking and tobacco while single-mother families devote more resources to family- and child-oriented goods such as education.

This paper has tried to disentangle the effects of family income from family structure variables on resource allocation behavior in Taiwan. With the data sets currently available in Taiwan, however, this study has its limitations. First of all, the reason that single-parent families spend more than two-parent families on medical

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services, with everything else held constant, warrants further investigation. In particular, future research should pay great attention to whether it is because of poor access on the part of single-parent families to medical insurance or is because of the health status of family members in single-parent families, since these two explanations will call for different policies and services (e.g., reducing their economic burden in the former case or improving their health status in the latter case) for these single-parent families.

Additionally, we cannot be sure about the reason that single-father families spend a significantly greater share of their budget on drinking and tobacco compared to their counterparts. Although it is plausible to assume that single fathers might be more adult-centered than parents in two-parent or single-mother families, single-fathers' child-rearing attitudes and the home environment they provide for their children warrants further investigation.

Furthermore, due to the data limitations, we cannot be sure about the reason that single mothers spent more of their budget on clothing than did parents in other family types. Purchasing more children's or more adults' clothing reflects two totally different expenditure behaviors based on different motivations; in particular, the former aims to improve children's welfare. Thus, to distinguish adults' clothing from children's clothing purchases in future's data collection will be of great importance in identifying the motivation behind the expenditure behavior of parents.

The empirical results found in this study demonstrate that different family types have different behaviors and needs. It might be the case that single-father families do not need economic support, since they apparently have higher income than single-mother families, and an increase in their family income will not make them devote more of their

resources to child-oriented goods. Thus, for the welfare of these children in single-father families, we might need to put more emphasis on issues of their sociological and psychological well-being, such as how these single fathers behave towards their children and what home environment these single fathers are providing for their children. The importance of child-rearing attitudes (or parenting) and home environment is underlined by recognizing the fact that they are important contributing factors to children's later success. For single-mother families, an increase in their economic security might be the appropriate policy, since these single mothers devote significantly more of their resources to family- and/or child-oriented goods with the result that their children have similar academic achievements as children in two-parent families.

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Table 1: The Descriptive Statistics of the Explanatory Variables

Variables	All Sample	Two-Parent	Single-Mother	Single-Father	F-Test
Head's Characteristics					
Age	39.20 (7.10)	39.19 (7.09)	38.40 (6.01)	40.58 (8.58)	51.6 ***
Years of Schooling	10.56 (3.57)	10.67 (3.55)	8.97 (3.58)	9.50 (3.44)	362.7 ***
Elementary and Under (%)	25.09	24.03	41.32	34.59	479.0 ***
Junior High School (%)	20.01	19.89	20.13	23.52	15.0 ***
High School (%)	30.53	30.80	27.37	26.77	26.4 ***
College and Above (%)	24.36	25.27	11.19	15.11	351.5 ***
Occupation for Main Job					
Executive and Professional (%)	28.57	29.51	16.03	17.46	333.5 ***
Administrative and Service (%)	22.60	21.92	40.33	18.84	486.0 ***
Mechanic and Laborer (%)	42.55	42.68	32.14	52.90	195.3 ***
Agricultural (%)	5.11	5.09	3.82	7.18	25.4 ***
Not Working (%)	1.16	0.79	7.68	3.62	1104 ***
Family's Characteristics					
Family Income (thousand)	1,018 (549)	1,043 (551)	640 (373)	794 (463)	833.0 ***
Number of Adult Age >18 at Home	2.68 (1.22)	2.74 (1.20)	1.61 (0.93)	2.24 (1.36)	1727 ***
Number of Children < 18	2.07 (0.88)	2.10 (0.87)	1.73 (0.86)	1.73 (0.85)	360.7 ***
Number of Children Age < 2	0.16 (0.39)	0.17 (0.40)	0.04 (0.19)	0.06 (0.25)	197.0 ***
Number of Children Age >= 2 & <4	0.19 (0.42)	0.20 (0.42)	0.07 (0.25)	0.09 (0.30)	172.6 ***
Number of Children Age >= 4 & <7	0.31 (0.55)	0.32 (0.55)	0.16 (0.40)	0.20 (0.45)	141.2 ***
Number of Children Age >= 7 & <13	0.74 (0.87)	0.75 (0.87)	0.63 (0.79)	0.66 (0.80)	32.9 ***
Number of Children Age >= 13 & <18	0.66 (0.87)	0.65 (0.87)	0.83 (0.84)	0.71 (0.84)	52.6 ***
Percent of Male Children (%)	52.95	53.00	50.41	54.99	9.69 ***
Region of Residence					
City (%)	59.81	59.97	62.78	51.04	70.1 ***
County (%)	28.17	28.22	26.19	29.75	7.3 *
N	60198	55780	2539	1879	

Note: Numbers in parentheses are standard errors.

    * p < .05, ** p < .01, *** p < .001.

Table 2: The Distribution of Resource Allocation by Family Structure

Variables	All Sample	Two-Parent	Single-Mother	Single-Father	F-Test
Family Total Income (thousand)	1018 (549)	1043 (551)	640 (373)	794 (463)	833.0 ***
Total Expenditures (thousand)	803 (409)	822 (408)	547 (312)	606 (354)	640.9 ***
Total Expenditures / Family Income	0.8270 (0.2897)	0.8250 (0.2676)	0.8856 (0.2408)	0.8080 (0.6921)	57.5 ***
Percentage of Expenditure spend on					
Food	0.2283 (0.0795)	0.2268 (0.0786)	0.2434 (0.0889)	0.2524 (0.0857)	141.8 ***
Child care	0.0070 (0.0327)	0.0072 (0.0326)	0.0052 (0.0328)	0.0051 (0.0343)	8.1 ***
Education	0.0460 (0.0520)	0.0455 (0.0514)	0.0613 (0.0618)	0.0416 (0.0514)	119.8 ***
Drinking and Tobacco	0.0174 (0.0152)	0.0175 (0.0149)	0.0089 (0.0101)	0.0261 (0.0208)	721.9 ***
Clothing	0.0430 (0.0216)	0.0431 (0.0215)	0.0432 (0.0232)	0.0378 (0.0201)	56.3 ***
Medical costs	0.0620 (0.0527)	0.0615 (0.0513)	0.0669 (0.0649)	0.0702 (0.0704)	36.5 ***
Mortgage	0.0376 (0.0720)	0.0383 (0.0720)	0.0306 (0.0744)	0.0274 (0.0677)	33.0 ***
Furniture and Household Equipment	0.0179 (0.0242)	0.0181 (0.0242)	0.0168 (0.0261)	0.0139 (0.0191)	30.4 ***
Transportation	0.0709 (0.0681)	0.0718 (0.0687)	0.0561 (0.0577)	0.0659 (0.0592)	69.2 ***
Leisure	0.0609 (0.0470)	0.0615 (0.0470)	0.0550 (0.0476)	0.0515 (0.0434)	61.8 ***
Tax, insurance, and charity	0.1515 (0.0662)	0.1535 (0.0657)	0.1110 (0.0576)	0.1467 (0.0748)	511.4 ***
Rent and Utility	0.1994 (0.0780)	0.1972 (0.0763)	0.2403 (0.0931)	0.2089 (0.0876)	390.1 ***
Other	0.0574 (0.0336)	0.0575 (0.0331)	0.0606 (0.0415)	0.0575 (0.0331)	36.5 ***
N	60198	55780	2539	1879	

Note: Numbers in parentheses are standard errors.
  * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3: The OLS Coefficients of Resource Allocation

Variables	Food	Child care	Education	Drinking and Tobacco	Clothing	Medical costs
Head's Characteristics						
Age	0.02 (0.01) ***	-0.01 (0.00) ***	0.14 (0.00) ***	-0.01 (0.00) ***	-0.003 (0.002) *	0.00 (0.00)
Junior High School (%)	-1.01 (0.08) ***	-0.29 (0.04) ***	0.38 (0.05) ***	-0.12 (0.02) ***	-0.01 (0.02)	-0.12 (0.06) *
High School (%)	-1.94 (0.75) ***	-0.22 (0.04) ***	0.57 (0.05) ***	-0.35 (0.02) ***	-0.02 (0.02)	-0.25 (0.06) ***
College and Above (%)	-2.49 (0.09) ***	0.21 (0.05) ***	0.45 (0.06) ***	-0.67 (0.02) ***	-0.01 (0.03)	-0.10 (0.07)
Holding Administrative and Service Job	0.96 (0.07) ***	-0.01 (0.04)	-0.05 (0.05)	0.11 (0.02) ***	-0.03 (0.02)	0.29 (0.06) ***
Holding Mechanic and Laborer Job	2.05 (0.07) ***	-0.17 (0.04) ***	-0.38 (0.05) ***	0.27 (0.02) ***	-0.17 (0.03) ***	0.59 (0.06) ***
Holding Agricultural Job	2.54 (0.13) ***	-0.11 (0.07)	-0.68 (0.09) ***	0.51 (0.03) ***	-0.29 (0.04) ***	1.76 (0.11) ***
Not Working	1.97 (0.24) ***	-0.41 (0.12) ***	-1.09 (0.16) ***	0.12 (0.06) *	-0.29 (0.08) ***	2.26 (0.19) ***
Family's Characteristics						
Family Income (divided by 1,000,000)	-5.34 (0.05) ***	0.64 (0.03) ***	-0.55 (0.04) ***	-0.20 (0.01) ***	0.10 (0.02) ***	-1.27 (0.04) ***
Single-Father Families	1.87 (0.14) ***	0.07 (0.07)	-0.83 (0.10) ***	0.70 (0.03) ***	-0.34 (0.04) ***	0.86 (0.11) ***
Single-Mother Families	1.35 (0.12) ***	-0.04 (0.06)	1.12 (0.08) ***	-0.95 (0.02) ***	0.28 (0.04) ***	1.04 (0.10) ***
Number of Children Age < 2	1.11 (0.08) ***	1.43 (0.04) ***	-1.43 (0.05) ***	-0.07 (0.02) ***	0.10 (0.03) ***	2.26 (0.06) ***
Number of Children Age >= 2 & <4	1.47 (0.07) ***	1.00 (0.03) ***	-1.26 (0.04) ***	-0.01 (0.02)	0.05 (0.02) **	0.55 (0.05) ***
Number of Children Age >= 4 & <7	1.50 (0.05) ***	-0.23 (0.03) ***	-0.87 (0.03) ***	-0.02 (0.01) *	0.04 (0.02) **	0.33 (0.04) ***
Number of Children Age >= 7 & <13	1.88 (0.03) ***	-0.34 (0.02) ***	0.19 (0.02) ***	0.00 (0.01)	0.12 (0.01) ***	0.28 (0.03) ***
Number of Children Age >= 13 & <18	1.58 (0.04) ***	-0.27 (0.02) ***	2.19 (0.03) ***	-0.07 (0.01) ***	0.07 (0.01) ***	-0.03 (0.03)
Percent of Male Children	0.30 (0.07) ***	-0.06 (0.03)	-0.31 (0.04) ***	0.09 (0.02) ***	-0.01 (0.02)	0.12 (0.06) *
Number of Adult Age >18 at Home	1.50 (0.02) ***	-0.36 (0.01) ***	0.37 (0.02) ***	0.08 (0.01) ***	0.16 (0.01) ***	0.65 (0.02) ***
Region of Residence						
City	-1.15 (0.08) ***	0.06 (0.04)	0.73 (0.06) ***	-0.61 (0.02) ***	-0.02 (0.03)	-1.72 (0.07) ***
County	-1.40 (0.08) ***	0.15 (0.04) ***	0.31 (0.06) ***	-0.43 (0.02) ***	0.14 (0.03) ***	-1.19 (0.07) ***
Constant	23.57 (0.26) ***	1.99 (0.13) ***	3.00 (0.17) ***	3.14 (0.06) ***	4.61 (0.08) ***	3.50 (0.21) ***
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
R Square	42.05	12.70	38.64	16.32	12.17	18.98
N	60198	60198	60198	60198	60198	60198

Note: * p < .05, ** p < .01, *** p < .001.

Table 3a: The OLS Coefficients of Resource Allocation (continued)

Variables	Mortgage	Furniture	Transportation	Leisure	Tax	Rent and Utility
Head's Characteristics						
Age	-0.05 (0.01) ***	-0.01 (0.00) ***	-0.06 (0.01) ***	0.00 (0.00)	-0.02 (0.01) ***	0.03 (0.01) ***
Junior High School (%)	-0.01 (0.09)	0.03 (0.03)	0.18 (0.08) *	0.38 (0.05) ***	0.36 (0.07) ***	0.29 (0.09) **
High School (%)	-0.09 (0.08)	0.07 (0.03) *	0.63 (0.08) ***	0.74 (0.05) ***	0.87 (0.07) ***	0.10 (0.09)
College and Above (%)	-0.19 (0.10)	0.16 (0.04) ***	0.30 (0.10) **	1.34 (0.06) ***	1.49 (0.09) ***	-0.28 (0.11) *
Holding Administrative and Service Job	0.20 (0.09) *	0.00 (0.03)	-0.52 (0.08) ***	-0.48 (0.05) ***	-1.14 (0.07) ***	0.68 (0.09) ***
Holding Mechanic and Laborer Job	-0.14 (0.08)	0.00 (0.03)	-0.71 (0.08) ***	-0.83 (0.05) ***	-0.06 (0.07)	-0.13 (0.09)
Holding Agricultural Job	-0.87 (0.15) ***	0.00 (0.05)	-0.71 (0.15) ***	-0.74 (0.09) ***	-0.35 (0.13) **	-1.01 (0.16) ***
Not Working	-0.58 (0.28) *	0.13 (0.09)	-1.13 (0.27) ***	-0.03 (0.17)	-4.38 (0.23) ***	2.96 (0.29) ***
Family's Characteristics						
Family Income (divided by 1000)	1.59 (0.06) ***	0.49 (0.02) ***	1.02 (0.06) ***	1.66 (0.04) ***	2.96 (0.05) ***	-2.19 (0.07) ***
Single-Father Families	-1.01 (0.16) ***	-0.35 (0.05) ***	-0.48 (0.16) **	-0.39 (0.10) ***	-0.29 (0.14) *	0.54 (0.17) **
Single-Mother Families	-1.18 (0.15) ***	-0.08 (0.05)	-1.40 (0.14) ***	-0.03 (0.09)	-2.84 (0.12) ***	2.16 (0.15) ***
Number of Children Age < 2	-0.38 (0.09) ***	0.27 (0.03) ***	-0.58 (0.09) ***	-1.16 (0.05) ***	-0.91 (0.07) ***	-0.95 (0.09) ***
Number of Children Age >= 2 & <4	-0.22 (0.08) ***	-0.09 (0.03) ***	-0.45 (0.07) ***	-0.02 (0.05)	-0.56 (0.06) ***	-0.42 (0.08) ***
Number of Children Age >= 4 & <7	-0.24 (0.06) ***	-0.15 (0.02) ***	-0.37 (0.06) ***	1.80 (0.04) ***	-0.78 (0.05) ***	-0.69 (0.06) ***
Number of Children Age >= 7 & <13	-0.28 (0.04) ***	-0.09 (0.01) ***	-0.38 (0.04) ***	-0.27 (0.02) ***	-0.55 (0.03) ***	-0.42 (0.04) ***
Number of Children Age >= 13 & <18	-0.40 (0.04) ***	-0.17 (0.02) ***	-0.14 (0.04) ***	-0.43 (0.03) ***	-1.04 (0.04) ***	-0.98 (0.05) ***
Percent of Male Children	0.03 (0.08)	-0.03 (0.03)	-0.08 (0.08)	-0.04 (0.05)	0.00 (0.06)	0.04 (0.08)
Number of Adult Age >18 at Home	-0.75 (0.02) ***	-0.16 (0.01) ***	-0.15 (0.03) ***	-0.39 (0.02) ***	-0.29 (0.02) ***	-0.56 (0.03) ***
Region of Residence						
City	0.91 (0.09) ***	-0.18 (0.03) ***	-1.46 (0.10) ***	0.40 (0.06) ***	-2.54 (0.08) ***	5.91 (0.10) ***
County	1.02 (0.10) ***	-0.05 (0.03)	-0.41 (0.10) ***	0.17 (0.06) **	-1.03 (0.08) ***	3.09 (0.10) ***
Constant	5.14 (0.30) ***	2.62 (0.10) ***	10.76 (0.29) ***	5.63 (0.18) ***	15.92 (0.25) ***	19.80 (0.31) ***
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
R Square	5.67	3.00	2.30	18.10	19.88	14.53
N	60198	60198	60198	60198	60198	60198

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

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