

# Living Arrangements and Economic Support for the Elderly in Taiwan †

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This paper aims to find out the role of living arrangements in economic support for the elderly in Taiwan. We suspect that if the structure of living arrangements for the elderly experiences a drastic change resulting from rapid structural change, it may lead to a great change in the pattern of economic support for the elderly. In other words, we believe that the effect of social economic status on economic support to the elderly is mediated through, or specified by, change in living arrangements. If this is true, it may provide a useful insight about the underlying mechanism for some of the theories developed previously in this area.

Among studies concerning the nature of voluntary transfers between the elderly and adult offspring, two fundamentally different views have been developed. One is the so called "role continuity", and the other is "role reversal". The latter suggests that intergenerational family transfers are related to the life cycle in a curvilinear fashion, with the middle aged being net providers for the young and elderly (Sussman 1965; Hill 1965; Khan 1979). The former holds a contrary view and according to this view parents are believed to continue benefiting their children even into advanced old age, except in the cases of extreme hardship (Moore 1966; Riley 1971; Kalish 1975). Although role continuity is held as a more significant sociological feature of aging (Covey 1981), a formal structural model has been proposed to reconcile the controversy (Cheal 1983). It suggests that the relative strength of obligation to transfer resources and the relative capacity to fulfill the obligation between the older and younger generation are primary determinants of the direction of intergeneration wealth flow. The theory, however, does not go further to elaborate how the two determinants are regulated.

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Although the transition theory, as proposed by Caldwell (1976), is aimed to predict fertility differentials, it offers an explanation on how the intergenerational wealth flow can be reversed because of modernity. It states that in all primitive societies and nearly all traditional societies the net flow is from child to parent. It is apparently impossible for a reversal of flow to occur before the family is largely nucleated both emotionally and economically. The import of another culture, i.e. westernization, will lead third worlds to this transition. Caldwell (1976, p.383) suggests that mass education and the mass media are the two interrelated vehicles for the mass infusion of European manners.

To explain why Taiwan and India are exceptions to the transition theory in predicting fertility differentials between nuclear and extended families, Caldwell (1976) offers three reasons. Since the reasons are centered on the relationship between family arrangements and intergenerational transfer, they deserve further elaboration. He states:

"The first is that survey or census data do not accurately measure even residential family size. .... The second is that family arrangements have little or nothing to do with the true extended family of mutual obligations, at least as long as residence outside the traditional community is not specified. .... The third is that family residential patterns are often a function of the life cycle, ...."(Caldwell 1976, pp.328-329).

Of course, the accurate measurement of residential family size heavily depends on its definition. Nevertheless, there is no consensus on the definition so far. If we limit our discussion to living arrangements for the elderly, we will find that there has been a drastic change in its pattern in Taiwan. It has been found that the change is enhanced by drastic social economic change rather than a simple function of the life cycle. It is even more surprising to note that the family nucleation in later life in Taiwan did have a strong impact on mutual obligations among the middle-aged and older generations. Although its effects, at this moment, are still concealed because of the persistence of traditional values.

In the last decade, it has been observed that living arrangements for the elderly have experienced a drastic change in Taiwan. The proportion of the elderly

who live alone or with a spouse only has increased from 8.8% in 1976 to 17.3% in 1985 (Lo 1987). According to a survey report on the elderly, it has further increased to 31.1% in 1989 (DGBAS 1990). It has been suggested that the increase reflects the influence of structural change. There were four mechanisms in charge of the drastic increase in the proportion of elderly living separate from their children (Chen and Speare 1990). They include selectivity of migration in the 1950s, selectivity of migration in the 1980s, differential mortality in terms of sex, and differential attitudes toward living arrangements. Although age has been observed to have a significant independent effect, the effect of life cycle as indicated by age is not the major reason for the drastic increase in the proportion of elderly living alone.

From the perspective of the elderly, the increase in the proportion living alone means an increase of new family nucleation, with old couples in separate households. It reflects not only the increase in proximity but also the increase in independent economic units. It has been noted that distance is an important mediator of exchanges. It is especially important for exchanges which require face-to-face interactions such as child care or the performance of household tasks. However, financial support to the elderly appears less affected by distance from kin (Lee 1980; Litwak and Kulis 1987). We nevertheless have doubts for its applicability in the Eastern societies.

In the context of Chinese society, to lead an independent economic life is a profound change to the traditional way of life for the elderly. Historically, the older generation maintained control over the family unit and resources as long as they were able to organize and direct its operation (Gallin 1966). When they passed the organization on to the younger generation, they remained the final authority over it and enjoyed support from it. In the transition to the modern economy, young offspring increasingly work outside of the family. During the early years of this change, they remained very much a part of the family and contributed substantial portions of their earnings to their parents (Gallin and Gallin 1982; Diamond 1979). As society continues to change, young people increasingly live in their own dwellings and apart from parents. In this case, they are less and less expected to contribute to the parental household (Thornton et al 1984; Coombs and Sun 1981). Still, empirical studies have found that living with children does have a positive

significant independent effect on financial support to the elderly (Lo 1988; Hermalin 1990). Another study indicated that the overwhelming majority (87%) of young people reported giving money to the husband's parents in Taiwan in 1985 (Weinstein et al. 1990). Although the amounts of money involved are not very large in most cases, they are used for regular living expense by about half of the older generation. Economic support from children is therefore very critical for the elderly. Studies in its pattern and causes of change are thus in great need.

In this paper, an evolutionary perspective is adopted. We believe that financial support to the elderly in Taiwan is in transition because of the import of Western culture. It is shifting from a situation of completely depending on adult offspring to leading a more or less independent economic life. We thus are able to observe several types of financial support to the elderly coexisting in the society. Consequently, the first objective of this paper is to find out patterns of financial support to the elderly. Secondly, we would like to know the effect of living arrangements on the patterns.

## 1. The data

The primary source of data for this study is from the December monthly labor force survey conducted by the Directorate-General of Budget, Accounting and Statistics (DGBAS) in Taiwan in 1988. The survey is intended to be representative of the noninstitutional population aged 15 and above in Taiwan and involves a two stage stratified sample design. In the first stage, village level units were selected from a list stratified according to the degree of urbanization and industrial composition, as indicated in household registration data. In the second stage, households were systematically selected within the sample Tsun and Li. In total, 515 Tsuns or Lis and about 18,600 households were selected, which is equivalent to an overall sampling fraction of 4 per thousand (DGBAS 1989).

In this survey, subjects were divided into four groups by age, i.e. 15-24, 25-49, 50-64 and 65 and above. Each group was addressed with different questions in order to provide information for policy planning in education, vocational training

and welfare for the elderly. In this study, only those aged 65 and above were selected for analysis. In total, there were 5,046 cases interviewed. Each of them was given a weight which enabled the sample population to be inflated to the total population of Taiwan. These weights were adjusted to match the population by age and sex as recorded in the household registers (DGBAS 1989). Throughout this paper, weighted results will be presented with the only exception in logit analysis.

## II. Patterns of economic support to the elderly

In this survey, respondents were questioned about their sources of living and medical costs. Each of them were requested to report at least his/her primary source of living cost, but he/she could cite their secondary and tertiary sources as well. Meanwhile only those who have had medical payments in the last three months were asked to give their primary source of medical costs. Similarly, secondary and tertiary sources of medical costs were elicited but not required. As shown in Table 1, each respondent gave their primary source of living costs and only 30% of the total respondents had medical payments in the last three months. Some forty percent out of those who gave primary sources of living costs indicated secondary sources and less than 7% gave tertiary sources.

Table 1: Distributions of Sources of Living Costs and Medical Costs

	Primary	Secondary	Tertiary
Sources of Living Costs			
Self or spouse	35%	39%	13%
Children	62%	48%	2%
Others	3%	13%	85%
Total	100%	100%	100%
N	5,045*	2,010	208
Sources of Medical Costs			
Self or spouse	32%	41%	9%
Children	64%	43%	15%
Others	4%	16%	76%
Total	100%	100%	100%
N	1,516	664	107
Index of dissimilarity	3%	5%	13%
Chi-square	3.72	4.49	18.08**

Sources: December 1988 Labor Force Survey.

\* One case is excluded due to missing data.

\*\* significant at .01 level.

It is interesting to note that both primary sources of living and medical costs have similar distributions. Some sixty percent reported that their children are the primary providers of living and medical costs. Some thirty percent list themselves or their spouses as primary sources.<sup>(1)</sup> Other sources including relatives and social welfare account for less than 4%. The index of dissimilarity for the two distributions is as small as 3% and the chi-square value is not significant at the 0.01 level.

Of secondary sources, the proportions from offspring are slightly greater than that from respondents' themselves or their spouse. So each of them has a share of about 40%. Meanwhile, other sources increased to more than 10%. Still, we find that the two distributions do not significantly differ from each other.

Since only a small proportion of respondents have given tertiary sources, we use only primary and secondary sources to derive types of economic support to the elderly. When primary and secondary sources are cross-tabulated, we find that 43.3% of respondents solely rely on their children for living costs (see Table 2)<sup>(2)</sup>. This group is thus named the "dependent" type. On the contrary, some others totally depend on themselves or their spouses. This accounts for 15.0% of total respondents and is named the "independent" type. The third group are those who primarily rely on themselves or spouses but are supplemented by their children for living costs. We name this group as the "supplementary" type. It has a share of 18.6%. The fourth group are those who mainly depend on their children but partially support themselves. This is the so called "semi-dependent" type. Still, there are five small groups involving non-familial sources. In total, they account for less than 10%. Since we are concerned with intergenerational transfer, we select only these four types of economic support to the elderly for further analysis. So only 4,625 cases are included in the following analyses.

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(1)The elderly's income includes retirement allowance and insurance, wage income, savings, rent and interest revenue, and income of stock, estate, etc..

(2)For the elderly who do not give secondary sources of living costs, their classification is solely based on their primary sources of living costs.

**Table 2: Types of Economic Support For The Elderly by Cross-tabulating Primary and Secondary sources**

**Sources of Living Costs**

primary secondary	Self/ Spouse	Children	Others
Self/Spouse	757 (15.0) Independent	746 (14.8) Semi-dependent	31 (0.6)
Children	938 (18.6) Supplementary	2,184 (43.3) Dependent	17 (0.3)
Others	64 (1.3)	184 (3.6)	124 (2.5)

**Sources of Medical Costs**

primary secondary	Self/ Spouse	Children	Others
Self/Spouse	180 (11.9) Independent	261 (17.2) Semi-dependent	13 (0.9)
Children	276 (18.2) Supplementary	655 (43.2) Dependent	9 (0.6)
Others	32 (2.1)	59 (3.9)	31 (2.0)

Source: December 1988 Labor Force Survey

In table 2, the second panel shows the typological analysis for sources of medical costs. The dependent and independent types account for 43.2% and 11.9% respectively. The supplementary and semi-dependent types each have a share of 18.2% and 17.2%, respectively. The results are rather similar to the analysis of living-cost sources. When we perform further analysis, the analytical results for living costs and medical costs are rather similar to each other. We thus decide to report only the results for living costs in order to save space.

Before we use the typology for further analyses, a reflection on its usefulness

is essential. If we rely only on information from primary sources, we know that about one-third of respondents lead an independent economic life, while about two-thirds of them depend on their children. With the inclusion of secondary sources, we can further differentiate dependent types from semidependent types and independent types from supplementary types. We thus further know that the majority (3/4) of those who depend on children for living costs solely rely on this source. Among the two independent types, only 45% of them are completely independent. The social economic characteristics of the four types should thus cast light on why there is such kind of differentiation.

Secondly, this approach offers a better way to record the transition of economic support to the elderly. If we take this study as a base line of information, the latter surveys with similar questions and analysis should tell us how the transition is occurring.

### III. The role of living arrangements

One of the foci of this paper is the role of living arrangements in types of economic support to the elderly. At the beginning of this paper we suspect that it may play either a role of an intervening or a specifying variable. According to Rosenberg (1968), an intervening variable must fulfill the following three statistical requirements.

1. All three variables-independent, intervening and dependent-must be related.
2. When the intervening variable is controlled, the relationship between the independent variable should disappear.
3. When the independent variable is controlled, the relationship between the intervening and the dependent variable should not vanish." (Rosenberg 1968, Chapter 3)

If living arrangement plays a role of specification, it provides conditions facilitating or inhibiting the relationships between the independent and dependent variables. In other words, in some types of living arrangements the relationship between independent and dependent variables will be strengthened. Whereas in other



arrangements, it will be weakened.

It has been suggested that sex, social class and health variables are primary determinants for the direction of intergenerational wealth flow (Troll 1971).<sup>(3)</sup> Parents in poor health, female and middle class parents receive more financial aid. In this study, they are thus selected to test the role of living arrangements in economic support for the elderly. We will begin with the examination of relationships between the three types of variables. Then one type of variable will be controlled to see if changes hypothesized by Rosenberg (1968) occur or not.

In Table 3, we find that living arrangements are related to sex, health status, marital status and education. The elderly who are male, single, with better education, younger, and with good health have greater proportions in living arrangements separated from children.

Table 3: Living Arrangements of The Elderly by Social Economic Characteristics

	Alone	W/ Spouse	W/ Children	W/ Others	Total	N	Chi-square
Sex							
Male	16.1	17.8	62.4	3.7	100.0	604,638	94.22**
Female	11.1	11.8	74.0	3.1	100.0	539,066	(3) <sup>a</sup>
Marital Status							
Single	69.0	--	8.0	23.0	100.0	51,402	
Married	5.4	26.2	66.7	1.7	100.0	645,752	1724.25**
Other	19.4	0.4	76.5	3.7	100.0	446,550	(6) <sup>a</sup>
Education							
Primary	12.6	12.5	71.9	3.0	100.0	948,355	186.59**
J. H. +	19.1	26.9	48.4	5.6	100.0	195,349	(3) <sup>a</sup>
Age							
65-69	13.9	18.5	64.3	3.4	100.0	497,881	36.43**
70+	13.6	12.3	70.6	3.4	100.0	645,823	(3) <sup>a</sup>
Health							
Poor <sup>b</sup>	12.2	15.2	68.1	4.5	100.0	426,716	16.66**
Good	14.7	14.8	67.7	2.8	100.0	716,988	(3) <sup>a</sup>
Total	13.7	15.0	67.9	3.4	100.0	1,143,704	

Source: December 1988 Labor Force Survey

\*\* Significant at .01 level.

a. Degree of freedom.

b. Elderly who need one or more ADL assistance.

(3) Obviously, number of living children is another important factor of intergenerational wealth flow, we regret that the information is not collected in this survey.

Next, we find that both living arrangements and socio-demographic variables are related to types of economic support. As shown in Table 4, we note that the elderly who live with children, in a poor health status, with less education, female, older, and widowed or divorced have greater proportions in dependent types. Or those elderly who live alone, and are with lower or poor status, are more inclined to depend on children for living costs.

Table 4: Types of Economic Support by Social Economic Characteristics

	Independent	Supplementary	Semi-dependent	Dependent	Total	N	Chi-square
Sex							
Male	24.6	23.8	16.7	35.0	100.0	553,651	398.40**
Female	7.7	15.9	15.6	60.8	100.0	498,545	(3)
Marital Status							
Single	83.3	6.9	1.2	8.5	100.0	33,457	
Married	19.0	26.6	17.9	36.5	100.0	617,588	983.05**
Other	7.2	11.1	14.7	67.0	100.0	401,151	(6)
Education							
Primary	11.0	19.0	17.1	52.9	100.0	869,469	539.70**
J. H. +	43.1	25.1	11.7	20.1	100.0	182,727	(3)
Health status							
Poor <sup>a</sup>	13.2	16.1	16.3	54.3	100.0	388,061	63.01**
Good	18.5	22.3	16.1	43.1	100.0	664,135	(3)
Living Arrangement							
Alone	37.6	19.9	12.2	30.4	100.0	126,314	
W/ Spouse	27.9	32.4	17.1	22.6	100.0	162,216	656.40**
W/ Children	9.4	17.6	16.8	56.2	100.0	741,908	(9)
W/ Others	55.5	12.1	10.0	22.5	100.0	21,758	
Age							
65-69	23.1	26.2	16.7	34.0	100.0	465,998	309.41**
70+	11.4	15.2	15.7	57.7	100.0	586,198	(3)
Total	16.6	20.0	16.2	47.2	100.0	1,052,196	

Source: December 1988 Labor Force Survey.

\*\* Significant at .01 level.

a Elderly who need one or more ADL assistance.

In brief, we find that the three types of variables are related. Therefore, we must proceed to do a control test. We begin with examining the role of living arrangements between health and economic support to the elderly. Table 5 shows the relationship between health and types of economic support, while living arrangements is a control variable. It indicates that the differences in percentage distribution between the elderly with poor and good health status for the four types

of economic support have mostly disappeared. The Chi-Square values for the elderly living with spouse or with others are not significant even at the 0.05 level. For those living alone, the differences between poor and good health status are significant at the 0.05 level instead of the 0.01 level. Moreover, we find that the relationship between living arrangements and types of economic support is basically unchanged when health status is controlled (see Table 6). Consequently, the three statistical requirements for an intervening variable as hypothesized by Rosenberg are basically fulfilled. We thus are inclined to conclude that living arrangements is an intervening variable between health status and economic support for the elderly.

Table 5: Types of Economic Support by Living Arrangements and Health Status

	Independent	Supplementary	Semi-dependent	Dependent	Total	N	Chi-square
Health Status							
Living Alone							
Poor <sup>a</sup>	37.4	13.9	15.9	32.8	100.0	39,969	8.64*
Good	37.6	22.7	10.5	29.2	100.0	86,345	(3)
Living with Spouse							
Poor <sup>a</sup>	26.2	28.3	17.6	27.9	100.0	60,906	6.04
Good	28.9	34.8	16.9	19.4	100.0	101,310	(3)
Living with Children							
Poor <sup>a</sup>	5.4	14.1	16.3	64.1	100.0	277,938	57.58**
Good	11.8	19.7	17.1	51.5	100.0	463,970	(3)
Living with Others							
Poor <sup>a</sup>	56.6	5.7	10.3	27.5	100.0	9,248	3.20
Good	54.6	16.8	9.7	18.9	100.0	12,510	(3)
Total							
Poor <sup>a</sup>	13.2	16.1	16.3	54.3	100.0	388,061	63.01**
Good	18.5	22.3	16.1	43.1	100.0	664,135	(3)

Source: December 1988 Labor Force Survey.

\*\* Significant at .01 level.

\* Significant at .05 level.

a Elderly who need one or more ADL assistance.

Table 6: Types of Economic Support by Living Arrangements and Health Status

	Independent	Supplementary	Semi-dependent	Dependent	Total	N	Chi-square
Good Health Status							
Living alone	37.6	22.7	10.5	29.2	100.0	86,345	
Living w/ spouse	28.9	34.8	16.9	19.4	100.0	101,310	362.99**
Living w/ children	11.8	19.7	17.1	51.5	100.0	463,970	(9)
Living w/ others	54.6	16.8	9.7	18.9	100.0	12,510	
Poor Health Status <sup>a</sup>							
Living alone	37.4	13.9	15.9	32.8	100.0	39,969	
Living w/ spouse	26.2	28.3	17.6	27.9	100.0	60,906	314.58**
Living w/ children	5.4	14.1	16.3	64.1	100.0	277,938	(9)
Living w/ others	56.6	5.7	10.3	27.5	100.0	9,248	

Source: 1988 December Labor Force Survey.

\*\* Significant at .01 level.

<sup>a</sup> Elderly who need one or more ADL assistance.

When we proceed to test the effect of living arrangements on the relationship between types of economic support and sex, marital status, and education, we find that it plays a role as a specifying variable. At first, we note that the differences in percentage distribution are all significant (with only one exception), when living arrangements is controlled (see Table 7). Moreover, we find that the elderly living with children turn out to be more dependent on children than the elderly as a whole. On the other hand, a drastic increase in the proportion of the independent type is observed for the elderly not living with children. The increase is most dramatic for the elderly living with others, followed by those living alone and then by those living with a spouse. The gap in the percentage of the independent type between subgroups is the greatest for those living with others. We thus consider that living arrangements takes only a role of specification for the relationship between types of economic support and the three socio-economic variables.

Table 7-1: Types of Economic Support by Living Arrangements and SES

	Independent	Supplementary	Semi-dependent	Dependent	Total	N	Chi-square
<u>Sex</u>							
<u>Living Alone</u>							
Male	51.9	19.4	9.2	19.4	100.0	75,336	82.76**
Female	16.3	20.5	16.6	46.6	100.0	50,978	(3)
<u>Living with Spouse</u>							
Male	30.9	32.0	15.9	21.2	100.0	102,137	6.96
Female	22.8	32.9	19.2	25.0	100.0	60,079	(3)
<u>Living with Children</u>							
Male	15.2	22.9	18.7	43.2	100.0	361,677	255.35**
Female	3.9	12.6	15.0	68.6	100.0	380,231	(3)
<u>Living with Others</u>							
Male	71.4	10.7	9.8	8.1	100.0	14,501	21.94**
Female	23.5	14.7	10.3	51.4	100.0	7,257	(3)
<u>Total</u>							
Male	24.6	23.8	16.7	35.0	100.0	553,651	398.40**
Female	7.7	15.9	15.6	60.8	100.0	498,545	(3)
<u>Marital Status</u>							
<u>Living Alone</u>							
Single	93.5	2.8	--	3.6	100.0	23,806	
Married	25.0	34.3	12.0	28.6	100.0	33,009	193.85**
Other	24.3	18.9	16.5	40.4	100.0	69,499	(6)
<u>Living with Spouse</u>							
Single	--	--	--	--	--	--	
Married	28.1	32.5	17.3	22.0	100.0	160,225	9.93*
Other	8.9	23.1	--	68.0	100.0	1,991	(3)
<u>Living with Children</u>							
Single	5.6	33.4	10.6	50.4	100.0	3,943	
Married	14.4	23.9	18.6	43.1	100.0	415,611	349.52**
Other	3.0	9.3	14.5	73.2	100.0	322,354	(6)
<u>Living with Others</u>							
Single	94.3	5.7	--	--	100.0	5,708	
Married	50.5	14.2	17.8	17.4	100.0	8,743	34.98**
Other	31.0	14.4	8.3	46.3	100.0	7,307	(6)
<u>Total</u>							
Single	83.3	6.9	1.2	8.5	100.0	33,457	
Married	19.8	26.6	17.9	36.5	100.0	617,588	983.05**
Other	7.2	11.1	14.7	67.0	100.0	401,151	(6)

Table 7-2: Types of Economic Support by Living Arrangements and SES

	Independent	Supplementary	Semi-dependent	Dependent	Total	N	Chi-square
<u>Education</u>							
<u>Living Alone</u>							
Primary	31.5	21.6	12.3	34.6	100.0	94,216	27.54**
J. H. +	55.3	14.8	12.0	18.0	100.0	32,098	(3)
<u>Living with Spouse</u>							
Primary	19.0	32.0	21.6	27.4	100.0	111,470	68.38**
J. H. +	47.4	33.2	7.2	12.1	100.0	50,746	(3)
<u>Living with Children</u>							
Primary	6.0	16.5	17.1	60.4	100.0	650,361	336.07**
J. H. +	33.2	25.5	14.6	26.7	100.0	91,547	(3)
<u>Living with Others</u>							
Primary	40.9	12.6	12.1	34.4	100.0	13,422	14.27**
J. H. +	79.0	11.1	6.5	3.4	100.0	8,336	(3)
<u>Total</u>							
Primary	11.0	19.0	17.1	52.9	100.0	869,469	539.70**
J. H. +	43.1	25.1	11.7	20.1	100.0	182,727	(3)

Source: December 1988 Labor Force Survey.

\*\* Significant at .01 level.

Finally, we take age as an indicator of life cycle. This is treated separately and shown in Table 8. Again, we find that living arrangements plays only a role of specification on the relationship between types of economic support and age. The differences between age groups are significant for every type of living arrangement. Moreover, a specification effect is observed. On the one hand, those elderly who live with children are more dependent on their children regardless of age. On the other hand, for those elderly not living with children, the proportion of the independent type increases, with the most extreme case occurring to those living with others.

Table 8: Types of Economic Support by Living Arrangements and Age

	Independent	Supplementary	Semi-dependent	Dependent	Total	N	Chi-square
<hr/>							
<u>Age</u>							
Living Alone							
65-69	44.0	21.9	10.0	24.0	100.0	58,049	21.03**
70+	32.0	18.2	14.0	35.8	100.0	68,265	(3)
Living with Spouse							
65-69	30.0	37.7	15.2	17.1	100.0	86,566	19.02**
70+	25.5	26.3	19.3	28.8	100.0	75,650	(3)
Living with Children							
65-69	15.9	24.0	18.5	41.6	100.0	311,312	261.72**
70+	4.7	13.0	15.6	66.7	100.0	430,596	(3)
Living with Others							
65-69	64.9	18.8	14.0	2.4	100.0	10,071	20.37**
70+	47.4	6.3	6.5	39.9	100.0	11,687	(3)
Total							
65-69	23.1	26.2	16.7	34.0	100.0	465,998	309.41**
70+	11.4	15.2	15.7	57.7	100.0	586,198	(3)

Source: December 1988 Labor Force Survey.

\*\* Significant at .01 level.

#### IV. The determinants of types of economic support

The analysis in the previous sections suggests that living arrangements basically play a role of specification in the relationship between types of economic support and socio-economic variables. It implies that there are interaction effects between the SES variables and living arrangements. Furthermore, we would like to know if each of them have an independent effect. A polytomous logit analysis is thus performed. In the analysis, we assign code 1 to the elderly who are married, with junior high or above education, living with children, are male, with good health and aged 65-69.

The analytical results shown in Table 9 indicate the existence of the main effects. The elderly who are male, younger, married, better educated, in good health and not living with children have greater probabilities to be independent than dependent. We have also noted that the coefficient for living arrangements rank fourth, which is after marital status, education and age. In fact, living arrangements has the largest coefficient followed by age and education, when interaction terms are not included in the model. It thus suggests that interaction effects are solely derived from the variable of living arrangements.

Table 9: The Results of Polytomous Logit Analysis of Types of Economic Support For The Elderly

	Independent	Supplementary	Semi-dependent
	Dependent	Dependent	Dependent
Constant	0.71 ( 18.78)**	-0.19 ( -4.12)**	-0.14 ( -3.14)**
Marital Status	0.30 ( 12.14)**	0.06 ( 1.70)	-0.31 ( -9.09)**
Education	0.29 ( 8.15)**	-0.46 (-12.80)**	0.01 ( 0.14)
Living Arrangement	-0.23 (- 6.22)**	0.47 ( 10.34)**	-0.01 ( -0.21)
Sex	0.20 ( 7.60)**	-0.31 ( -7.97)**	0.00 ( 0.13)
Age	0.29 ( 11.02)**	-0.27 ( -7.79)**	-0.09 ( -3.03)**
Health Status	0.12 ( 4.37)**	-0.10 ( -2.76)**	-0.06 ( -1.94)
LA x Sex	-0.06 ( -2.31)*	0.02 ( 0.40)	0.03 ( 0.78)
LA x Degree	-0.06 ( -1.69)	0.09 ( 2.59)**	-0.03 ( -0.78)
LA x Age	-0.08 ( -3.02)**	0.11 ( 3.30)**	-0.05 ( -1.56)
LA x Health	-0.01 ( -0.24)	0.07 ( 1.91)	-0.06 ( -1.99)*
Chi-square		255.13	
D. F.		159	
P		0.0001	
N		5,046	

1. Source: December 1988 Labor Force Survey.
2. Code 1 is assigned to the elderly who are married, with junior high and above education, living with children, male, with good health and aged 65-69.
3. Figures in parenthesis are Z scores.



On the other hand, the effect of the variables on probability being supplementary rather than dependent are reversed with only one exception. Of the elderly who are living with children, are female, older, in poor health, with less education and not married have greater probabilities to be supplementary rather than dependent. Moreover, a similar pattern is also observed for their effects on the probability of being semi-dependent rather than dependent, although only marital status and age reach the 0.01 significant level. It thus suggests that the elderly who are in relatively poor status are more inclined to be supplementary or semi-dependent rather than dependent.

The interaction effects as shown in Table 9, render support for our previous finding that living arrangements play a role of specification. We have found that the direction of interaction effects is similar to that of living arrangements in the same column. It is also noted that the coefficients of interaction variables are much smaller than that of the main effects. This reflects that the interaction variables have the function of enhancing the effect of living arrangements.

Generally speaking, we feel that society is in transition from depending on offspring in old age, to more or less independent from children. The better-off elderly in fact have a greater probability being independent than dependent. Even those elderly who are in relatively poor status try to be supplementary or semi-dependent types.

## V. Summary and Discussion

In the literature concerning support for the elderly, the question commonly addressed is whether the offspring give money to parents, or there is a reciprocity in intergenerational wealth flow. These questions are mostly discussed in the context where there is a pension system. The elderly are thus primarily supported by an institute other than family. In other contexts, the elderly must derive their support solely from family members. If the societies experience a rapid socio-economic change, what may happen to the direction of intergenerational flow deserves our attention.

In this paper, primary and secondary sources of living costs are used to derive

four types of economic support for the elderly. They are independent, supplementary, semi-dependent and dependent types. We are surprised to note that only 43.3% of the elderly are solely dependent on their children. Another 14.8% belong to the semi-dependent type. On the other hand, there are 15.0% of the elderly who are totally independent. Meanwhile, 18.6% are supplemented by children. Among these four types, there are 84% of the elderly who have received money from children. This figure is similar to the result of the 1985 study (Weinstein 1990). We, nevertheless, have a better idea about how important the money is to the elderly.

In addition, we have found that the elderly in Taiwan in 1988 have the intention to be economically independent. The better-off elderly, in fact, have greater probabilities to be independent rather than dependent. Even those elderly who have a relatively poor status have greater chances to be supplementary or semi-dependent rather than dependent.

We wonder if the intention to be economically independent is completely the result of value changes. We know at least it has something to do with contextual change. Our analytical results suggest that living arrangements play a role of specification. The elderly who are not living with children have substantially greater proportions of the independent type than those living with children. This result has two important implications. At first, we have noted that distance barrier may block the continuity of certain traditional value. Traditionally, Chinese offsprings are obliged to financially support their parents. This is especially true for those adult children who live apart from their parents. Nevertheless, the study result suggests that the value is fading away. Secondly, it is time to discuss the feasibility of a universal pension system. Since there is a trend toward the increase of living apart from children, we may foresee that there are more and more elderly who must be economically independent. Family may gradually lose its function in supporting the elderly. Facing such kinds of change, we must ponder about the role that society or the government may play to meet the change.

## REFERENCES

Caldwell, J.C.

- 1976 "Toward A Restatement of Demographic Transition Theory." Population and Development Review 2:321-66.

Cheal, D.J.

- 1983 "Intergenerational Family Transfers." Journal of Marriage and the Family 45 (November): 805-813.

Chen, C. and Alden Spear, Jr.

- 1990 "The Impact of the Process of Modernization on Elderly's Living Arrangements - The Case of Taiwan." Pp. 535-551 in Proceedings of the Conference on Population Change and Socio-economic Development, Taipei, ROC May 8-9, 1990 (in Chinese).

Coombs, L.C. and T.H. Sun

- 1981 "Familial Values in a Developing Society: A Decade of Change in Taiwan." Social Forces 59(4): 1229-1255.

Covey, H.

- 1981 "A Reconceptualization of Continuity Theory." Gerontology 21 (December) :628-633.

DGBAS

- 1989 Report on the Youth and the Old Survey in Taiwan Area, Republic of China, Directorate-General of Budget, Accounting and Statistics, Executive Yuan, ROC, September 1989.
- 1990 Report on the Old Status Survey Taiwan Area, Rep. of China, Directorate-General of Budget, Accounting and Statistics, Executive Yuan, and MOI, ROC, October.

Diamond, Norma

- 1979 "Women and Industry in Taiwan." Modern China 5(3): 317-340.

Gallin, Bernard

- 1966 Hsin Hsing, Taiwan: A Chinese Village in Change. Berkeley: Univ. of California Press.

Gallin B. and R. S. Gallin

- 1982 "Socioeconomic Life in Rural Taiwan." Modern China 8(2): 205-246.

Hermalin, A. I. M. C. Chang, H. S. Lin, M. L. Lee and M. B. Ofstedal

- 1990 "Patterns of Support Among the Elderly in Taiwan and Their Policy Implication." Paper Prepared for the 1990 PAA Annual Meeting, Toronto, Canada, May 3-5.

Hill, R.

- 1965 "Decision Making and the Family Life Cycle," Pp. 113-139 in E. Shanas and G. Streib (eds.) Social Structure and the Family. Englewood Cliffs, N.J. Prentice-Hall.

Kalish, R.

- 1975 Late Adulthood. Monterey, CA: Brooks/ Cole.

Khan, R.

- 1979 "Ageing and Social Support." Pp. 77-91, in M. White Riley (ed.) Ageing from Birth to Death. Boulder, Co: Westview.

Lee, G.R.

- 1980 "Kinship in the Seventies: A Decade Review of Research and Theory." Journal of Marriage and the Family 42: 923-934.

Litwak, E. and S. Kulis

- 1987 "Technology, Proximity, and Measures of Kin Support." Journal of Marriage and the Family 49: 649-661.

Lo, Joan

- 1987 "Changes of Elderly's Household Structure in Taiwan: 1976-1985." Taiwan Economic Forecast 18(2): 83-108. (in Chinese)
- 1988 "The Flow and Determination of the Financial Transfers between Aged Parents and Adult Children - The Case of Taipei Metropolitan Area." Academia Economic Papers 16(2): 103-136. (in Chinese)

Moore, W.

- 1966 "Ageing and Social System." Pp. P23-41 in J. Mckinney and F. De Vyver (Eds.) Ageing and Social Policy. New York: Appleton-Century-Crofts.

Riley, M.W.

- 1971 "Social Gerontology and the Age Stratification of Society." Gerontologist 11 (Spring, part 1): 79-87.

Rosenberg, M.

1968 The Logic of Survey Analysis, Basic Books, Inc. Publishers, New York, London.

Sussman, M.

1965 "Relationships of Adult Children with Their Parents in the United States." Pp. 62-92 in E. Shanas and G. Streib (Eds.) Social Structure and the Family. Englewood Cliffs, NJ: Prentice-Hall.

Thornton, A., M.C. Chang, and T.H. Sun

1984 "Social and Economic Change, Intergenerational Relationships, and Family Formation in Taiwan." Demography 21(4): 475-499.

Troll, L.

1971 "The Family of Later Life." Journal of the Marriage and the Family 33 (May): 263-290.

Weinstein, M. T. H. Sun, M. C. Chang and R. Freedman

1990 "Household Composition, Extended Kinship, and Reproduction in Taiwan, 1965-1985." Population Studies 44 (1990): 217-239.

# Living Arrangements and Economic Support for the Elderly in Taiwan †

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## (ABSTRACT)

This study is based on a survey of 5,046 elderly citizens residing in Taiwan in 1988. It is aimed to find out if living arrangements play a role of intervening or specification variable. To fulfill this goal, primary and secondary sources of living costs are used to derive four types of economic support for the elderly. They are independent, supplementary, semi-dependent and dependent types. We are surprised to note that only 43.3% of the elderly are solely dependent on their children. The semidependent type, supplementary type and independent type account for 14.8%, 18.6% and 15.0% respectively. Our analytical results suggest that living arrangements play a role of specification. Of the elderly who are not living with children, these have substantially greater proportions of the independent type than those living with children.

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# 台灣地區老人之居住安排 與經濟奉養\*

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## (中文摘要)

本文採用行政院主計處所舉辦之1988台灣地區青少年及老年狀況調查，以其中5,046位老人資料進行分析，其目的在探討居住安排是否扮演一種中介或特化變數的角色。為達成此項目的，我們採用老人生活費主要及次要來源兩個變數導出老人經濟奉養之四種類型——獨立型、輔助型、準依賴型及依賴型。我們發現祇有43.3%老人純粹依賴子女提供生活費，而準依賴型、輔助型及獨立型分別為14.8%、18.6%及15.0%。進一步的分析顯示居住安排是扮演特化變數的角色。不與子女同住的老人中，屬於獨立型的比例遠多於與子女同住老人之該型比例。

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