

# Fertility Transition and Shifting Attitudes Toward Intergenerational Support – the Case of Taiwan\*

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## Abstract

Changes in household composition, extended kinships, and attitudes about the family are examined for data from Taiwan area, 1973-85. Trends in household composition, financial exchange, and attitudes toward intergenerational support are documented, against modernizing social strata, and implication for fertility transition theory discussed. The pace of change has been marked, but uneven, with the tradition of co-residence of parents with a married son lagging behind strong cultural preferences for sons and attitudes toward support from children in old age: While modification of attitudes occurred in each of educational stratum, aggregate shifts are not accounted for by concomitant changes in societal structure. The relatively low fertility is now consistent with traditional values of filiality because having one son is enough for the stem family which has always been important but is now by far the dominant form of residential extension.

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Taiwan's net reproduction rate (NRR) fell to 1.0 in 1983 and to 0.89 in 1985 and to 0.78 in 1986. In 1964, when the island-wide family planning program was promoted, the total fertility rate was 5.10 and the net reproduction rate was 2.27. The sustained fertility decline began earlier. In 1955 the total fertility rate was 6.55 and the net reproduction rate was 2.82. Taiwan has completed the fertility aspect of the demographic transition during the 20 years after the intensive family planning program was implemented.

During the process of the fertility transition, Taiwan has also experienced a rapid social and economic development. As documented in Table 1, the Taiwan's economy has been transformed from primarily agricultural to one of the world's most rapidly expanding industrial economies since World War II. The rapidity of the industrial expansion can be illustrated by the following data for the 1952-1985 period: industrial production increased by 52 times; the percentage of the labor force involved in agriculture, forestry, and fishing decreased from 56 to 18 percent; and per capita real income increased by nearly 6 times. At the same time motorcycle ownership increased from virtually zero to about one for every three people, and television ownership and access to electricity have nearly reached the saturation level. On the other hand, education levels increased substantially, with essentially all students completion primary school and going on to junior high school, 71 percent of junior high school students went on to senior high school and 82 percent of senior high school students went on to higher education. Mass media and communication measures also increased substantially as indicated by newspaper and magazine circulation and television ownership. The ratio of television sets per household passed 1.0. Other socioeconomic indicators show that essentially all households have electricity and more than 75 percent have piped water. Finally, life expectancy is very high -- at Western levels (Chang, 1988).



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Table 1. Indicators of Social and Economic Development\* ,  
Taiwan , 1952 — 1985 ( Selected Years )

	1952	1965	1970	1975	1980	1985
Economic indicators						
GNP index**	100	281	466	682	1100	1828
per capita real national income index**	100	184	267	354	516	644
Savings as percent of national income	5	16	24	25	33	31
Agricultural production index	100	190	230	245	289	306
Total industrial production index***	100	465	1104	2010	3910	5220
Percent of labor force in agriculture, fishing, and mining	56	46	37	30	20	18
Education indicators*						
Percent of primary school graduates enrolling in junior high school	34	57	80	90	97	99
Percent of senior high school graduates enrolling in schools of higher education	46	68	72	79	80	80
Communication and transportation indicators ( per 1000 population )						
Daily newspaper circulation	28	—	53	89	142	195
Automobiles	1	3	7	17	39	70
Motorcycles	0	5	48	105	223	342
Telephone sets	4	13	27	69	178	294
Television sets	—	—	371	883	1020	1055
Household amenities ( percent )						
Households served with electricity	u	86.2	96	99.6	99.7	99+
Households served with piped water	29	38.3	39	50.3	66.8	77.9
Health indicators (Both sexes)						
Life expectancy at birth (male)	58.6	64.5	66.1	67.4	68.6	70.0
Calories per person per day	2078	2410	2662	2722	2812	2874
Reproductive variables						
Total fertility rate		4825	4000	2830	2515	1885
Percent of women 30—39 currently using contraception		33	58	77	81	85

\* Sources : Council for International Co-operation and Development, Taiwan Statistical Data Book, 1987, Council for Economic Planning and Development, Executive Yuan, Republic of China, 1987; Social Welfare Indicators, 1986, Taiwan Demographic Fact Book, various years.

\*\* Adjusted for gain or loss due to changed terms of trade and at constant price for 1981.

\*\*\* Includes manufacturing, mining, electricity, gas, and water.

u=unavailable

The rapid socio-economic development accompanying with the fertility declines in Taiwan provides an ideal site for the family change and some implications for transition theory. Briefly put, the classic approach placed primary emphasis on economic and structural changes as the preconditions for fertility decline. Increased industrialization and urbanization led to changes in the functions of the family and the utility of children, diminishing their economic value and raising their cost, while at the same time increasing the likelihood of their survival. The result was a desire to limit family size and fertility decline.

The theory has recently been challenged by a number of studies. A research based on better data indicated that almost simultaneous declines in European countries in the nineteenth century differed greatly in industrialization, and urbanization (van de Walle, E., and J. Knodel 1980). Evidence from Indonesia, Thailand, and Sri Lanka indicates fertility declines in populations that are still poor and rural. (Freedman et al., 1980. Knodel and Debavalya, 1978. Fernando, 1976). Knodel suggests that legitimization of the idea of family limitation and the acceptance of contraception may have independent causality, and may occur in advance of structural changes.

These developments suggest that new insights on individual familial relationships and values during the course of socio-economic development are necessary. Indeed, family organization and change during process of modernization has not been adequately examined in specific settings. Nor has its application to a variety of family transitions and its implications for fertility transition been conclusively demonstrated (Thornton and Tricke, 1987). As such, explanations of family change that invoke abstract processes of industrialization, urbanization, economic growth, and educational expansion as the causes of family and demographic change often fail to specify mechanisms and causal links (Goode, 1970, 1982). The main reason is that most of the empirical work on the demographic transition has related changes in macro-structural characteristics to fertility changes, usually with assumptions that changed familial organization and functions led to family limitation, because data about the extent and sequence of familial changes were lacking. (

Freedman, 1979). Data gathered in Taiwan in 1973, 1980, and 1986 can document that pace and relative timing of a number of changing intergenerational relationships during a key period of socio-economic change.

A major problem posed in this paper is whether shifting intergenerational support and its related attitudes occurring during the recent period of the rapid socio-economic development are primarily a function of the changing social structure, for example, the shifts in the population in education, groups that accompany development. That is, are familial changes chiefly confined to the leading, more modernized sectors, with broadly based changes depending on growing numbers in the more educated classes? or do shifting intergenerational support and its related attitudes rapidly permeate all sectors of the population?

The above research problems will be examined by using micro data collected in Taiwan. Prior to doing the empirical analysis, the related preliminary studies and substantive hypotheses will be reviewed and stated first, and then take up a document of the changes in the intergenerational support and its related attitudes occurring in the educational strata, their relative timing and pace, and the importance of cultural factors on the varying pace of change. The relative influence of structural changes will be examined through standardization to separate the effects of the shift in societal structure from other factors.

## Preliminary Studies and Substantive Hypotheses Optimal Development of Natural Environments

The traditional Chinese family of the past has been characterized with extended living arrangements. At the early stage of demographic transition, high mortality often intervened to prevent large extended households, but the extended family was the ideal or normative pattern of the Chinese people (Hsu, 1948, Gallin, 1966; Cohen, 1976). Further more, migration due to social or economic reasons may have led to younger couples leaving their parental home, but they usually lived

with their parents, when they got married (Freedman, 1982; Chang, 1987). When parents were getting old, they expected to live with one or more of their married sons.

Unlike the pattern in many Western European societies, Chinese parents in the traditional society typically arranged for the marriages of their children before they were economically independent (Cohen, 1976; Watson, 1985). Also, children were educated and involved in the family and seldom worked, or lived with other families (Barclay, 1954). If they worked elsewhere, they usually contributed their income to their parents (Thornton et al., 1984). Because children were socialized and employed within the family, had their marriages arranged by their parents, married fairly young, and usually began married life with the husband's parents, parents shaped the lives of children well into adulthood. The strong Chinese reverence for ancestors and the emphasis upon obedience and loyalty to one's elders also enhanced parental control (Hsu, 1948; Wolf, 1975).

The traditional Chinese familial networks also supported high fertility loyalty and reverence for the elderly was related to resource flows from the younger to the older generation, with the pro-natal influence hypothesized by Caldwell (1982). The older generation's authority ensured that the younger generation conformed to their desires (Thornton et al., 1986). The strong patrilineal nature of Chinese societies also supported a preference for sons, which can lead to higher fertility (Chang et al., 1981, 1987). As a result of these factors, the total fertility rate in Taiwan was approximately six as recently as the 1950's.

As indicated previously, the rapid socio-economic development in Taiwan during the past several decades has transformed important activities previously conducted mainly within family units, such as production, consumption, education, and coresidence, to be shifted increasingly to nonfamilial institutions such as schools, factories, and dormitories. Such a transformation has implications for family structure and demographic behavior. Change in marital pattern is especially important. The marriage system in Taiwan has evolved from a parental run system to a system involving both parents and children. There is evidence that it is rapidly becoming

ing a child-run system. For example, whereas about 70 percent of the marriages of women born in the 1930s were arranged mostly by the parents, about 15 percent of women in the late 1950s were arranged mostly by the parents (Thornton et al., 1984). A rapid increase in premarital sexual activity and premarital pregnancies has accompanied this shift. Approximately 30 percent of the most recent cohorts of young women entering marriage report premarital sex, and about 20 percent report a premarital pregnancy (Thornton et al., 1984; Lin, 1987). Age at marriage has also gone up dramatically, increasing for women from approximately, age 18 around 1900 to almost 25 in 1986.

On the other hand, however, some other aspects of family relationships have changed slowly during the period of the rapid socio-economic development in Taiwan. Co-residence of a married couple with the husband's parents remains an important aspect of family life despite the increase in the prevalence of nuclear households over time in Taiwan. For example, the percentage living in a nuclear household rose among the married couples rose from 43 percent in 1973 to 56 percent in 1985. Of couples with a parent available for co-residence, about 35 percent were in nuclear family in 1973, 43 percent in 1980, and 51 percent in 1985 (Weinstein et al., 1988). Further more, for those who do not live with the husband's parents, couples are often linked to them by the exchange of visits and frequency of visiting did not change greatly. For daughter who worked before marriage, the proportion of workers giving most of their earnings to their parents has remained essentially stable (Thornton et al., 1984). At the same time, the percentage of adult Taiwanese expecting to live with or to be supported by their sons in old age has declined (Coombs and Sun, 1981; Chang, 1987).

Sociological theory suggests that industrialization and urbanization affect living arrangements and household composition after marriage (Freedman et al., 1982). Our previous work in Taiwan has shown that coresidential relationships were very common in the early stage of demographic transition. In the later stage of the demographic transition, however, as just mentioned, the prevalence of such relationships diminished between 1973 and 1985, but even in 1985 it was still true that

co-residence of a married couple with the husband's parents continues to be an important aspect of family life in Taiwan. In the similar vein, it is expected that the prevalence of intergenerational support may modify somewhat, but is still an important intergenerational relationship because of the absence of social security system for the elderly and many of them have to rely on financial support from adult children.

In contrast to the hypothesis regarding to changes in intergenerational support, the attitude toward this aspect of familial relationships may have undergone dramatic change for two reasons. The more rapid socio-economic development has taken place in the past two decades in Taiwan. The pace of change accelerated markedly in the seventies and eighties. As indicated previously, education levels increased sharply, and the network of communication and transportation widened. There also was an accompanying shift from previously agricultural to heavily nonagricultural employment, with increased emphasis on urban life. These changes have drawn increasing numbers into social and economic relationships that would modify attitudes toward intergenerational support needed in earlier traditional local and familial forms. On the other hand, the Taiwan's fertility rate has reached under replacement level. Such a low fertility level may be associated with shifting attitudes toward intergenerational support which was an important factor leading to high fertility in the traditional Chinese society.

In sum, in this paper it is hypothesized that attitude changes in intergenerational support would be faster than that of the actual changes in this aspect of familial relations. The idea is to test whether the Taiwan's fertility transition was related to changes in the flow of resources between the generations and its related attitudes. As Caldwell (1976) argues, resource flows between the generations in many pretransition society seem to be from the younger to the older generation, with built-in motivations for high fertility. Although Caldwell seems to stress the importance of intergenerational flows to older men, Cain (1982) shows that it is just as rational for women to desire children for their social security values. School enrollment simultaneously removes children from productive activity in the

family and increases the family resources spent in their upbringing. With this shift in the direction of resource flows, it is expected that attitudes toward intergenerational support would be modified dramatically.

## The Data and Relevant Variables

The present analysis is based on data from three island-wide interview surveys conducted by the Taiwan Provincial Institute of Family Planning in 1973, 1980, and 1986. Each of the three surveys was based on probability samples chosen to represent all the married women in the childbearing years in Taiwan, except for the few townships (30 out of 361) in which most of Taiwan's small aborigine population lives. Since the three surveys are strictly comparable only for women in the age groups 20-39, the present analysis is restricted to this age range. All of the interviews largely concerned fertility and fertility-related behavior, but included a broad array of background, family structure, and attitudinal variables thought to be important in understanding Taiwanese fertility. From the nature of the traditional Chinese kinship relationships as indicated previously, the study on shifting intergenerational support and its related attitudes should deal with the living arrangements of older parents, financial exchanges and visiting. However, this issue has been documented by two recent studies from Weinstein et. al., (1988), and Chang (1987). To provide the general picture of changes in the living arrangements of older parents, and financial support from married sons, they will be quoted from these two articles. With regard to attitudes toward intergenerational support, the more important variables related with fertility are those adhered to filial piety, dependence on sons for support in old age, for performance of religious rituals for parents and ancestors, and for continuation of the paternal line. To measure these attitudes, three questions were asked in the Taiwan KAP Surveys conducted in 1973, 1980, and 1986. They are listed as follows:

1. What means of financial support do you think you and your husband might

have when you get old ?

2. How important to you is it that your family have a male heir ?

3. If you had desired number, but no boys, would you try to have more ?

These traditional Chinese attitudes still prevailed at the beginning of the relatively recent and rapid modernization period, it could be reasonably expected that the attitudes underlying the strong Chinese family system would be modified as modernization introduces changes in life patterns. However, prior to doing this undertaking, the trends in living arrangements of older parents, visiting and financial exchanges will be examined first.

## Changing Intergenerational Support and its Related Attitudes

### Living Arrangements of older Parents

On an associative basis(1) , 70 percent of the husband's parents (Taiwanese) were living with a married son in 1985 -- a decrease from 83 percent in 1973 and 77 percent in 1980 (Table 2). Parental co-residence was almost entirely on the patrilineal principle. Only 12 of the husbands' parents in the entire sample were living with a married daughter. Three-quarters of the parents living alone had two or more married sons with whom they might have lived.

Despite the decrease in parental co-residence, the expectation for co-residence is still very strong. Eighty-seven percent of the respondents whose husbands' parents were living alone expected that those parents would live with them or with one of the husband's married brothers when they were older.

In Table 2 those parents of the husband who were not living with a married son are classified as "living alone." This is on the assumption that the traditional Chinese familial values of filiality make this normative living arrangement. In 1985 we determined for the first time whether such "living alone" cases were, in fact, living with a married daughter. This turned out to be the case for only 1 percent of

all the parents (4 percent of those living alone). The ratio between co-residence with a married son and a married daughter was 57-to-one on an associative basis and 51-to-one on an economic basis. Taking this into account by redefining the category as living with a married child (rather than with a married son) increases the percentages only slightly.

The 1985 survey did not ask directly whether parents not living with a married child were living with an unmarried child. However, all those respondents with husband's parents not living with a married child were asked why they were living alone. In response to a list of possible reasons, 36 percent of such respondents said that it was because the parents were living with an unmarried child. This is a minimum estimate, since for some of the parents living with an unmarried child the respondent may have given another reason, such as inadequate housing facilities.

On the basis of the two additional items of information (co-residence with a married daughter or living with an unmarried child), we estimate that 81 percent of the husband's parents were living with a child (married or unmarried) on an associative basis and 80 percent on an economic basis<sup>(2)</sup>.

Chang (1987) has shown that if both the husband's parents are alive they are less likely to live with a married son than if only one parent is alive. The older the parents, the more likely they are to be co-resident. Chang's analysis, based on the same 1985 survey we use in this article, included married respondents up through age 49, so it included more older parents than our analysis. The increasing co-residence with the age of the parents is consistent with a life-cycle pattern involving co-residence for various periods of time from the time of marriage of the married son and a return to co-residence late in life for many of the parents who lived alone for a time. Since the fathers are older and have higher mortality than the mothers, even at comparable ages, a substantial majority of the co-resident older single parents are mothers.

Fertility Transition and Shifting Attitudes  
Toward Intergenerational Support - The Case of Taiwan

Table 2. Living Arrangements of Husband's Parents and Married Sons on an Economic or Associative Basis, by Availability of Married Brothers by Whether R Lives in an Extended Unit, by Ethnicity, Taiwan, 1973, 1980, and 1985.

Parents' status	Economic basis*						Associative basis**					
	All ethnic groups			Taiwanese			All ethnic groups			Taiwanese		
	1973	1980	1985	1973	1980	1985	1973	1980	1985	1973	1980	1985
Live with R***	38.9	36.3	33.0	39.5	35.8	33.4	39.0	36.7	35.2	39.6	36.0	35.4
Bh available	20.3	20.9	20.0	20.5	21.0	20.6	19.3	20.5	21.5	19.2	20.3	22.0
Bh unavailable	18.6	15.4	13.0	19.0	14.8	12.8	19.7	16.2	13.7	20.4	15.7	13.4
Live with Bh	23.3	24.7	28.1	23.8	25.6	28.5	22.9	24.7	26.3	23.3	25.6	26.9
R in nuclear unit	21.5	22.9	26.5	21.9	23.8	27.0	20.0	22.2	24.2	20.4	23.1	24.9
R in extended unit	1.8	1.8	1.6	1.9	1.8	1.5	2.9	2.5	2.1	2.9	2.5	2.0
Live alone, Bh available	19.3	22.9	23.8	19.3	22.9	23.5	10.2	16.1	21.9	10.0	15.9	21.7
R in nuclear unit	18.2	21.5	22.3	18.4	21.8	22.2	8.6	14.1	20.0	8.6	14.3	20.0
R in extended unit	1.1	1.4	1.5	0.9	1.1	1.3	1.6	2.0	1.9	1.5	1.6	1.7
Live alone, Bh unavaila	9.8	8.8	9.5	8.5	8.2	8.7	8.7	8.0	8.8	7.2	7.4	8.0
R in nuclear unit	8.8	8.8	8.8	8.5	8.2	8.1	7.5	8.0	8.1	7.2	7.4	7.4
R in exatended unit	1.0	0.0	0.7	0.0	0.0	0.6	1.2	0.0	0.7	0.1	0.0	0.6
Live with R and Bh	8.7	7.3	5.6	8.9	7.5	5.9	19.2	14.5	7.8	19.8	15.1	8.0
Total percentage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total N	4,067	3,087	2,707	3,903	2,781	2,460	4,06	3,089	2,707	3,903	2,783	2,460

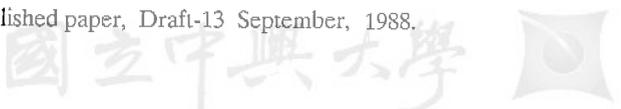
Percent of Ph*** who live with a married son in this or another household	70.9	68.3	66.8	72.1	68.9	67.8	81.1	75.9	69.3	82.7	76.7	70.2
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\* Pertinent relatives eat and live together.

\*\* Pertinent relatives eat and/or live together. All economic units are also associative.

\*\*\* R=respondent, Bh=husband's married brother(s); Ph=husband's parent(s)

Source : Maxine Weinstein, Te-hsiung Sun, Ming-cheng, Chang and Ronald Freedman, Household Composition, Extended Kinship, and Reproduction in Taiwan, unpublished paper, Draft-13 September, 1988.



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### Visiting and Financial Exchanges

Couples who do not live with the husband's parents often are linked to them by the exchange of visits or by gifts of money<sup>(3)</sup>. Not surprisingly, the frequency of visits depends on the distance between the homes of the respondent family and that of the parents. Among the 26 percent who lived in the same neighborhood, 72 percent saw each other daily, 88 percent at least several times a week, and 94 percent at least once a week. Among the 18 percent who lived elsewhere in the same city or township, 19 percent saw each other daily, 39 percent at least several times a week, and 59 percent at least once a week. Those living at greater distances from each other but within Taiwan exchanged visits much less frequently -- 16 percent once a week or more, 5 percent several times a month, and 51 percent less than once a month.

Frequency of visiting did not diminish between 1980 and 1985. Among couple living in the same township or city, 68 percent exchanged visits at least several times a week in 1985, and 64 percent in 1980. Both of these figures are less than the 80 percent reported in 1973.

The respondent couple exchanged visits with the husband's parents much more often than with the wife's. Much, but not all, of this difference was a result of living closer to the husband's parents even when not co-resident, a traditional aspect of Chinese patrilocality. Twenty-six percent of the husband's and 14 percent of the wife's parents lived in the same neighborhood as the respondent couple. A larger percentage (25 percent) of the wife's parents (but only 18 percent of the husband's) lived elsewhere in the same city or township. Fifty-six percent of the husband's and 61 percent of the wife's parents were at greater distances from the respondent couple. Much of the difference in distance from the two sets of parents arose from the fact that, among those living in the city or township, the husband's parents were more likely to be in the same neighborhood.

Overall, 44 percent of the husband's parents and 31 percent of the wife's exchanged visits at least once a week. The frequency of visits with the husband's par-

ents was greater than with the wife's in each of the three distance categories (same neighborhood, same city/township, elsewhere in Taiwan), but the visiting links to the wife's parents were not inconsiderable. For example, among those living anywhere within the same township or city, the frequency of visiting at least once a week was 80 percent for the husband's parents and 63 percent for the wife's.

In 1985, 87 percent of the respondents reported giving money to the husband's parents -- 42 percent regularly and 45 percent occasionally. These figures are close to those reported in 1980 and higher than those for 1973. Giving to the wife's parents is much less frequent: only 4 percent gave regularly and 48 percent occasionally. Only 1 percent of the respondents reported getting money regularly from the husband's parents and 8 percent occasionally. The size of such occasional gifts may be substantial in some cases, given both the prosperity of Taiwan and reports of the frequency of many familial businesses that have done very well.

While we have no data on the amount of money involved in gifts from the respondent to the husband's parents, they could not have been very large in most cases. Among the respondents reporting such gifts, only 4 percent said that the giving affected their own standard of living "very much" and 27 percent said "somewhat." The effect on the parents' standard of living was greater: 18 percent of the respondents said the effect was very much and 41 percent said that it had "some" effect. When asked about the purpose of the gifts, 46 percent said it was to help the parents with regular living expenses, 28 percent said the parents could have "extras," and 27 percent as a remembrance on special occasions.

Some of the more important financial relationships are probably not represented in these reports of regular or occasional gifts of money. Participation in the family estate at the time of familial division of property (fenchia) and participation in family businesses may be much more important.

#### Unexpectedness for Living With Sons

As just mentioned, to date, the traditional Chinese family pattern has not been greatly altered in spite of the continuing social and economic development in

recent years. The co-residence of parents with a married son is still a common type of living arrangements of older people in Taiwan. A great majority of parents are living with a married son, though there is a decline in the proportion of co-residence of parents with a married son from 83 to 70 percent during the period from 1973 to 1985. On the other hand, among those who do not live with a married son, old parents and married sons often live near each other and visit frequently, and married sons also contribute to the support of the household in which their older parents live.

Nevertheless, as economic development and modernization in Taiwan are continuing, the extent of such living arrangements of older parents may alter in the future. Chang (1987) indicated that there was a rapid increase in the proportion of married women aged 20-39 not expected to live with their sons in old age from 15 to 32 percent between 1980 and 1985 in Taiwan. In 1965, this proportion was only 6 percent. The changes in either educational composition or urban-rural residence only have small effects on these increases. Using the regression analysis, Chang (1987) and Coombs et. al. (1981) further indicated that composition shifts account for little of this attitude change that occurred the rate at which strata characteristics are translated into the change in such attitudes is more important in the later years of economic development. As such, we can anticipate more change in living arrangements of older parents in the future, although not necessarily value attached to filial obligation.

#### Expectation of Support in Old Age

Views on this aspect of traditional familial relationship have undergone similar change. In 1973, about a half of the women looked to their children as their primary support in old age; by 1985, this was reduced to less than one-fifth (Table 3). As might be anticipated, expected source of support is negatively associated with wife's educational levels (and present income). For example, in 1985, the percent expecting to be supported by sons in old age for women with no formal education was 44 percent against zero for those with college or more education.

Similar pattern was found for the earlier periods, 1973 and 1980. This seems to suggest that expected source of support is highly education dependent.

Although there have been marked changes in the expectations to be supported by sons in old age during 1973 - 1985 and that the changes took place in each educational stratum, there were different educational levels at each period. To be more specific, as the economy developed and modernized, the educational composition of marital population in Taiwan changed during the period under study. However, as we will discuss later, the effect of changes in educational composition on this attitudinal changes was very small.

Table 3. Attitude toward Son Preference, Importance of A Male Heir, and Expectations for Financial Support in Old Age by Education : Taiwan, 1973—85

Wife's education	% trying for more boys			% importance of a male heir			% expecting to be supported by sons in old age		
	197	198	198	197	198	198	1973	1980	1985
No. education	66 (1,467)	48 (547)	37 (150)	97 (1,469)	92 (547)	87 (154)	74 (1,477)	49 (548)	44 (150)
Primary	50 (3,183)	33 (2,126)	27 (1,503)	91 (3,186)	81 (2,121)	78 (1,516)	51 (3,190)	31 (2,128)	25 (1,514)
Junior high	31 (466)	24 (427)	19 (580)	76 (467)	71 (426)	65 (584)	19 (467)	18 (427)	11 (584)
Senior high	19 (298)	19 (490)	16 (731)	65 (297)	55 (489)	54 (738)	7 (298)	7 (490)	7 (738)
College or more	9 (106)	14 (227)	7 (215)	46 (106)	46 (227)	39 (216)	2 (106)	1 (227)	— (215)
Total	50 (5,520)	31 (3,817)	22 (3,179)	89 (5,525)	76 (3,810)	68 (3,208)	51 (5,538)	27 (3,820)	18 (3,202)
Standardized rate*	50	35	28	89	81	77	51	32	27

( ) = Number of cases

\* Using the 1973 educational distribution as a standard population.

### Desirability of Sons

Historically, the strong preference for sons in Taiwan has been noted in several studies (Chang et. al., 1987; Wolf, 1972). Along with declining expectations for living with sons, or of support in old age, the attitude toward son preference has been also modified. The two benchmarks indicate a gradual diminution in this preference (Table 3). The willingness of wives to exceed their desired number of children in order to get the sons wanted changed from 50 percent in 1973 to 22 percent in 1985. Similarly, the attitude regarding the importance of a male heir also was less frequent held in 1985 than 1980, the percentages dropping from 89 to 68 percent. Obviously, the former attitude has a greater reduction than that of the later one. Perhaps, this may be due to the different measurements of the cultural values underlying the preference for sons. To be, more specific, many wives may be perceived the importance of a male heir, but would not want to try for a son when they reach their desired number of children without a son because of cost of children.

The attitude toward son preference was held then mainly by those with lesser educational level. For example, in 1985 the proportion of wives who wanted to try to exceed their desired number of children in order to get the desired sons was 37 percent for those with no formal education against 7 percent for those with college or more education. A similar pattern was found for the attitude about the importance of a male heir and the earlier periods. As to be discussed the following section, changes in the educational structural only account of a small part of the overall reductions of such structural changes. In other words, the total declines in these familial attitudes are largely due to the changes in the related attitude of each educational category.

Some measure of the strength of the attitude toward sons can be obtained from its impact on fertility behavior (Chang, 1987). For example, in 1985, 50 percent of the women with two children but no sons wanted additional births; only 22 percent of those with two sons did. Another, not wholly independent indicator is found in the willingness of wives to exceed their desired number of children in or-

der to get the sons wanted. An extreme view is held by women who insist on trying for two sons, regardless of the total number of children born. This attitude was less frequent held in 1985 and in 1970. The percentage dropping from 35 percent to 2 percent.

#### Standardized Trends

As the economy developed and modernized, the structural composition of the population in Taiwan changed in the period under study. For example, in 1973 only 8 percent of the married women interviewed had attained as much as junior high school; by 1985 the percentage had almost doubled. Because many attitudes vary with educational stratum, such shifts in composition alone can produce aggregate changes in attitudes toward son preference. The issue is whether the structural changes principally account for the overall changes in familial attitudes observed. To control for this compositional changes, the attitude rates were computed for each year of study based on a standard population at the beginning of the period or in 1973. The changes in rates that would have obtained if the standard composition had prevailed are then compared to the actual rate changes to determine what proportion of the change observed can be attributed to the compositional change. These figures are presented in the last line of Table 3. In general, the changes in the attitudes about son preference have occurred quite independently of compositional changes in population. For example, in 1985 the standardized rate for the attitude about the willingness to exceed their desired rate for the attitude about the willingness to exceed their desired number of children in order to get the sons wanted was 28 percent against 22 percent for the observed rate. The difference (28 percent - 22 percent = 6 percent) is regarded as the effect of the changes in educational composition. In other words, the substantial declines in the attitudes under study during 1973-85 were mainly due to the influence from other factors.

## Conclusion and Discussion

Our findings lead to support the hypothesis under study that shifting attitudes toward intergenerational support are greater than that of the actual changes in this aspect of familial relations. Up to 1985, co-residence of a married couple with husband's parents continued to be an important aspect of family life despite Taiwan's industrialization and convergence with a Western model of consumption and despite the increase in the prevalence of nuclear households over time. Furthermore, for those who do not live with the husband's parents, couples are often linked to them by the exchange of visits and frequency of visiting did not change greatly. On the other hand, however, changes in expectations for living with sons, attitudes toward support from sons in old age, and son preference are greater than that of actual familial relationships.

The current low fertility level in Taiwan seems consistent with traditional familial values of filiality and tradition of co-residence of parents with a married son. This results from several developments. Lower mortality means that fewer children need to be born to have one surviving son. Second, given the dominant stress on vertical rather than horizontal kinship ties, at least for co-residence, it is only essential to have a son for the stem family which has always been important but is now by far the dominant form of residential extension. It is also likely that parents find lesser need for children to work in familial enterprises and greater need for investing in the costs of educating children at the increasingly higher levels deemed necessary.

Perhaps, due to increasingly higher costs of children education required for modern labor market, the willingness of wives in childbearing ages to exceed their desired number of children in order to get the sons wanted has been becoming less frequent over time under study. On the other hand, economic independence resulted from the rapid socioeconomic development seems to have an impact on the great declines in the expectations for living with sons and financial support in old

age, which in turn affect the changes in son preference. These traditional familial attitudes have been related in the past to education level, but the shift of educational composition toward larger proportions in better educated has not been the principal source of the aggregate changes in these familial attitudes and values that have taken place. The changes have taken place on a society - wide basis.

## Footnotes

Pertinent relatives eat and/or live together

A study by Joan Chi-Chiung Lo (1987) of a sample of all Taiwan households based on a time series of surveys on family income and expenditures deals with trends in household composition from 1976 to 1985 for households with "elderly" (65 or older) couples. This is really not comparable to the sample for our study, since it deals with persons over 65 (instead of parents of women of childbearing age) and for the most comparable table it is restricted to intact father-mother couples (instead of considering husband's parents regardless of whether one or both are still alive). Her estimate of 17 percent living alone is rather close to our 19-20 percent, after we adjust for co-residence with married daughters or unmarried children. However, this should not be taken as validation of our estimates, since (apart from the different definition of the older generation) her data show a much sharper decline of co-residence with married children and rather substantial increase in the proportion living with unmarried children--reaching 23 percent of all older couples in 1985. This figure seems quite high for couples over 65 in view of the fact that most Taiwanese men and women eventually marry. In 1986 at age 45-49, 91 percent of males and 89 percent of females were currently married and 95 percent of males and 97 percent of females were ever married (1986 Taiwan - Fukien Demographic Fact Book (Taipei: Ministry of the Interior, Republic of China, 1987))

The results reported in this section are little different if only husband's par-

ents not living with any married son are considered.

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# 生育轉型與代間支持態度之變遷 ——以臺灣地區為例

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## 摘要

本文旨在利用一九七三～八五年間臺灣地區有關資料，探討家戶組成、擴大親屬、和傳統家庭觀念的轉變，並進一步透過現代化社會階層間家戶組成、財務交換、及代間支持態度等之變化趨勢，以闡明生育轉型理論。

分析結果顯示，各項變化均為顯著，但不相對稱。其中以對男孩之偏好和老邁時期望兒女支持態度之變化最顯著，而實際與至少一個已婚兒子共居之變化較為緩慢。同時，每一教育階層也呈顯代間支持態度之變化，顯示總體數據之改變，並非源自教育結構之變化。因此，目前台灣地區低生育水準仍符合我國傳統孝道之價值觀念，因養育一個男兒已足以維繫我國傳統的主幹家庭，但此一主要的家戶組成已日漸式微。

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