2001

Reading Changes in Family Support Through Regional Development in China

Ge Lin

Reading Changes in Family Support Through Regional Development in China*

By

Ge Lin

RESEARCH PAPER 2001-16

Assistant Professor
Department of Geology and Geography and
Regional Research Institute
West Virginia University
Morgantown, WV 26506-6825

Tel: 304-293-8540   Fax: 304-293-6699
Email: mailto:glin@wvu.edu

Abstract: This article examines the degree to which the traditional family support system would be reshaped by the modernization and industrialization from a geo-developmental perspective. In particular, we examine the impact of rapid social changes and economic developments on family support for older parents in contemporary urban China to assess trends that might lead to a different path from the western style of old-age support purported by modernization theory. Based on the 1992 Survey on China's Support Systems for the Elderly, the study divides the sample from three levels of economic development, which in turn, are used as proxies for developmental trends. It finds that intergenerational support in urban China is persistent as far as instrumental support is concerned, and the level of support follows a U-shaped pattern along the level of economic development. It is the mid-developed urban areas that intergenerational support seems the weakest. If the pattern from less-developed to developed-urban areas reflect a developmental path, then the trajectory seems to correspond to our expectations. The beginning and developed stage represent a transitional period during which rapid urbanization processes and greater geographic separation between parents and adult children often leads to weakened intergenerational support for the elderly. The study concludes that although the old age support system, on the whole, in China will diverge from the path of the West, some aspects of economic support to the elderly will likely be consistent with modernization theory.

*An earlier version of this paper was presented at the 97th Annual Meeting of the Association of American Geographers (AAG), New York City, February 27-March 3, 2001, at a special session in honor of Professor Larry Ma.

INTRODUCTION

The modernization thesis of Goode (1970) postulates that as a society becomes modernized with urbanization and industrialization, so does its family structure shifting from vertically or patrilineal extended family structure to neolocal residence with smaller nuclear family. This shift in family structure is compatible with other aspects of societal modernization, and will lead to weakening extended kinship ties and intergenerational support common to most pre-industrialized societies. Since 1949, China has become more and more industrialized; its society has experienced widespread and rapid societal changes. Urbanization and industrialization have greatly increased geographic mobility and geographic separation between generations. The eradication of feudalism, especially during the Cultural Revolution, has eroded and ended many traditional practices (such as arranged marriage), which in turn, has weakened intricate family ties of the traditional family and the influence of elders on the next generation. However, if one looks at the Chinese family structure, the changes have not been dramatic (Gou, 1994). The average size of Chinese families was 4.30 in 1953 and 4.29 in 1963, and it remained at that level throughout the1980s (e.g., 4.43 in 1982 and 4.23 in 1987). By the 1990 census, Chinese family size was dropped to 3.8 persons, but this decline might be attributable to mortality and fertility declines of the demographic transition, as their joint effects mean population aging and decreasing in household size.

In the last 50 years, China has completed the demographic transition from high fertility and mortality to lower fertility and mortality. During the 1950s and early 60s, China experienced steady decline in mortality, a period of fluctuation in total fertility rates, and a steady decline afterward. For instance, the total fertility rate was about six in 1950s, and remained at that level until 1970. It dropped to 3.6 in 1970, and slightly below two in 1995 (Lee and Wang 2000). The drastic decline in fertility during the late 1970s and 1980s is the result of the draconian single-child (family planning) policy. After 25 years of its implementation, a sharp cohort contrast resulted between the 1950-70 baby boom and 1970-90 baby bust generations. The decline in mortality also affects elderly population, as medical advances extended the life expectancy for about 10 years, from around 7 years to 16-17 years after age 60. All of the demographic trends point to a rapid or even sudden population aging process. In 1990 nine percent of the population were age 60 and over, and many provinces and provincial cities in China (e.g., Beijing, Tianjing, Shanghai, Jiangsu, Sichuan, Shandong), had already reached more than 10% of the elderly

population age 60 and above, an indication of aging society by the world standard. It was projected that 20% of the population would be age 65 and over by 2020, posing enormous and unprecedented challenges to economic, medical, and social supports to the elderly (Du, 2001).

Accompanying these social and demographic changes are social welfare provisions instituted by the Chinese government. In the early 1950s, the Chinese government established an occupation-based security system providing disability (Laobo) and pension for workers and staffs of government and state-owned enterprises. All the salaried were guaranteed to have a pension (between 60 to 70% of pre-retirement salary) and almost 100% of the medical care excluding home care from their work units. This policy also provided a referential framework for other enterprises, and, to a large extent, was matched by collected-owned enterprises, although detailed provisions were set by each enterprise. In essence, most people working for urban and industrial sectors had some kind of pensions and medical coverage. This occupation-based security system is non-portable between work-units, and if an enterprise did not meet the profit targets, or failed to survive, in the case of collectively-owned, the retirement benefits could be reduced or even become insolvent. In 1978, it covered 78% of employment in the urban sector.

However, as the economy picked up its speed following Deng's reform in 1978, many government units, especially those old industries (e.g., mining, heavy machinery) could hardly keep up with skyrocketing costs of pensions and medical care due to structural shifts in industrial sectors and the demographic transition. After experimenting with several versions of the old-age security reforms, the Chinese government issued the 26th decree of 1998 calling for the establishment of a multiple-pillar social security system similar to those existing in many Western countries. The decree closely followed the World Bank 1998 *report—Old Age Security: Pension Reform in China*, and entails employers' contributions, mandatory employee and employer contributions, and individual savings. However, there was heated debate about various schemes of contributions and their potential impacts on the economy (Xu, et al 1999). A vexing question central to this debate was the extent and availability of family support to the elderly, as the level of family support directly relates to the government welfare policy (Bartlett and Phillips, 1997). The government would be able to afford minor support if the level of the traditional family support remains high (Martin, 1988). A low familial support, on the other hand, may signify that the society is likely to move toward Western models of elderly care with

2

greater financial responsibility by the government. Between the two, there are other models where certain elements of the traditional mode of family support may persist while others vanish.

In this article, we examine the degree to which the traditional family support system would be reshaped by the modernization and industrialization from a geo-developmental perspective. In particular, we examine the impact of rapid social changes and economic developments on family support for older parents in contemporary urban China to assess trends that might lead to a different path from the western style of old-age support. We use the 1992 *Survey on China's Support Systems for the Elderly*, which allow us to isolate which elements of the traditional mode of family support may persist, and which elements may vanish in the development process.

Fertility transition to old-age support transition in economic development

In his well-cited article of demographic transition, Caldwell (1976) refers transitional society to the Third World countries with rapid social and economic changes, especially changes in the impact of children on old age support systems. The thrust in Caldwell was to use the transitional society as a laboratory for the study of the fertility transition, i.e., a country moving from a higher fertility stage to a lower one. The fertility transition theory rests on the old-age security hypothesis: the greater the industrialization of a given society, the lower the level of its fertility, as modernization will ease many uncertainties that an elderly individual might face in an agrarian society. Unlike the traditional agrarian society where elders often have the final say, the modern production system requires free movement and productivity from its labor force, which is often in direct conflict with the family based production system. According to Goode (1970), the conjugal family system is more compatible to the modern production system, and all social systems will move toward the conjugal family system during the process. Consequently, older parents are less likely to rely on grown children for social and economic support. The weakening of family support, both socially and economically is a concomitant outcome of industrialization and modernization.

Undoubtedly, many phenomena and changes described by Goode (e.g., urbanization, geographic and occupation mobility, weaken power and controls of elders over subsistence) are happening worldwide. Empirical evidence from many developing countries shows that (1) the demand for old-age support is an important reason for having children, and (2) the provision of

publicly funded social security is inversely related to fertility (Caldwell 1967; Nugent, 1985). Both phenomena point to some kind of old-age support transition later on after the fertility transition. Here the old-age support transition means a society moving from the traditional old-age support system of relying on many adult children to a modern old-age support system that rely on personal accumulated income (e.g., pensions, social security, savings) and institutionalized personal care for old life.

Now, all the developed countries had long completed the fertility transition, and most developing countries have either passed or are in the process of completing this transition. In addition, most western European and North American countries have already made the old-age support transition following the demographic transition. Family systems in these countries are conformed to Goode's description and characterized by the dominance of nuclear family and weaker family ties. Elderly persons in these countries enjoy public-funded social security, private pensions, and universal health care, and adult children in general only provide emotional and other informal support. Other than these two continents, the evidence is far from conforming to this pattern.   For most developing countries or recently developed countries, the family systems, typically found in East Asia, are characterized by a variety of joint households (Hajnal, 1982). These countries are unlikely to follow the path of the West even when the level of economic development/modernization are comparable or exceed those in the West (Aaron, 1999).

In fact, sociologists and demographers have long questioned the wisdom of the modernization theory in rapid developing societies, such as Taiwan (Freedman et al., 1978; Weinstein et al, 1990) and developed societies, such as Japan (Morgan and Hirosima, 1982; Tsuya and Martin, 1992). For example, Japan enjoyed remarkable industrialization and yet found little evidence that the traditionally joint households were waning. Morgan and Hirosima (1982) believe that rather than anachronism, the persistence of Japanese extended household is an alternative strategy for copying with shortages (e.g, housing, childcare) during rapid industrialization. Based on time series surveys (1989, 1996 and 1999) of the elderly welfare in Taiwan, Zhang (2001) reported that the proportions of older parents living with married children remained the same from 1989 to 1999 even though the economy had been transformed tremendously.

Other than the convergence to old-age support system of the West, what other paths might there be? There is no easy answer, as it requires time series data. However, if we read history side way—inferring time trends through a geographical comparison of different development stages, we might be able to understand the process of the old-age transitions atypical to the West. Already, there have been several studies of changes in living arrangements and developments, and most of these studies are cross-county comparisons, where old age support is implicated but not compared. Goody (1996) for instance, noticed that the geographic patterning of older parents living with adult children does not always scale downward from Europe to Asia (see also Reher, 1988; Ruggles, 1987). Spain and Japan, for instance, do not seem to fit the development gradient. Both countries have relatively high level of economic development and high proportions of joint households. Palmore and Manton (1974) empirically correlated the stage of modernization and the status of the elderly for some developed and developing countries, and found a broadly U-shaped curve. The status of the elderly tends to be high at early and late stages of modernization. In their analysis, less developed countries are considered at an early stage of modernization (e.g., Philippines, Malaysia), and advanced industrialized countries (e.g., U.S. Canada, Sweden) at a later stage, and some rapid developing countries (e.g., South Korea, Taiwan) in the middle. Hugo (1988) further theorizes this model representing a typical trajectory of the West. The U-shape portrays a transition from high levels of family support to high levels of institutional support; the middle stage is tabbed as an institutional lag, during which the traditional familial system has already weakened, while the institutional support mechanism is not yet sufficient. With time, institutional support to the elderly will phase in to replace the traditional informal support.

For societies with strong family traditions, we offer an alternative explanation to the U-shape curve. We can think of three forces shaping intergenerational support to the elderly: the dynamics of economic necessity, geographic proximity between elderly parents and adult children, and cultural (Phillips, 1992). In the early stage of industrialization and urbanization, elderly parents and their adult children tend to live very close or under the same roof due to limited geographic mobility. The elderly at this stage still exercise strong family influence by holding various family assets and adult children are expected to take care of their elderly parents. Thus, the wish of rearing sons for old age can often be reified. When urbanization picks up speed, children tend to most likely move away from their natal communities, and their

5

willingness to support their aging parents is hindered by geographic separation from their parents. Finally, urbanization reaches a certain level, the urban size at this stage tends to be big even according to the Western standard, and many adult-children do not really have to move out of the area to find a job (Lin and Rogerson, 1995). If we attribute the improved welfare of the elderly in later stage of U- shaped pattern (Hugo, 1988) to the institutional improvement in the West, the later stage of U-shaped pattern may reflect an improved family support system in the East, following urbanization and industrialization.

One underlying cultural reason for persistent intergenerational support during the modernization process is that old-age security, in the traditional society, such as China, is not the only reason for having children. In fact, continuing the family chain (in Chinese proverb "relaying ancestors to descendants") and maintaining harmonious family life are the most frequently cited reasons for having children (Thornton and Lin, 1994). These reasons suggest a long-lasting impact of Confucianism on various aspects of economic development (Tai, 1989), and they provide non-economic explanations for old-age support. Lin et al (1999) divided old-age support into economic and informal support. The economic support refers to financial aspects of old-age support mechanism (social security, pensions, and personal savings, etc), and the informal support refers to help instrumental activities (e.g., washing clothes, shopping, and other household tasks) of daily living (IADL), and in the case of the frail, activities of daily living or ADL (e.g., bathing, eating, toileting). For societies with a strong family system, the amount of informal support may experience fewer changes, even though income support to elderly parents is likely to be inconsequential as social security and pensions gradually phase in. When the economy picks up its speed in the mid-stage of industrialization, adult children often cannot afford to regularly interact with older parents, sometimes not even with their children. Even at this stage, adult children would still be the primary source for providing instrumental support, and the level of support would increase as their older parents became older and more frail. In this regard, the bottom of "U" is a temporal strategy by adult children for coping with rapid economic development and urbanization. At a later stage when adult children start to enjoy the fruit of the development and when their social life became stabilized, and various traditions have a chance of being rejuvenated or reinvigorated, people began to appreciate family relations and intergenerational ties more and more, similar to the value shift in post-modern societies (Inglhard, 1997, p. 335). At this stage, adult children and elderly parents would be more willing

to move closer to each other as housing becomes more affordable. If the West experiences a transition from weakening family ties to strengthening family ties during the span of over 100 years of industrialization, modernization, and post-modernization processes, the strong and persistent family value in the East will make this transition unnecessary during the modernization process.

In the following, we empirically examine the developmental process of the old-age support transition with a particular interest in differentiating supports in income and household tasks in the transition.

Data and Analyses

Although there is no substitution for long–term time series data on old-age support, when such data is not available, regions with different levels of economic development are suggestive to time trends. The assumption is that regional disparities in economic development reflect a developmental trajectory for a country: a more developed area will take the lead in the nation's development, and less developed areas will follow the lead and become developed. This approach allows us to examine time-dependent variables, such as elderly support, through a cross-sectional survey of regions, whose development levels are time-dependent. Here we have two competing hypotheses: the convergence hypothesis based on modernization theory and the U-shaped pattern along the path of economic development (Figure 1). The levels of regional development could be proxies to the development stages along the horizontal axis, and the level of intergenerational support is measured along the vertical axis. For the convergence hypothesis, we would expect that elderly parents from developed areas are less likely to receive various forms of support from adult children than the elderly from less developed areas. For the U-shaped hypothesis, in contrast, we would expect an increased family support for the most developed areas.

Figure 1. Testing development hypotheses via a regional lens
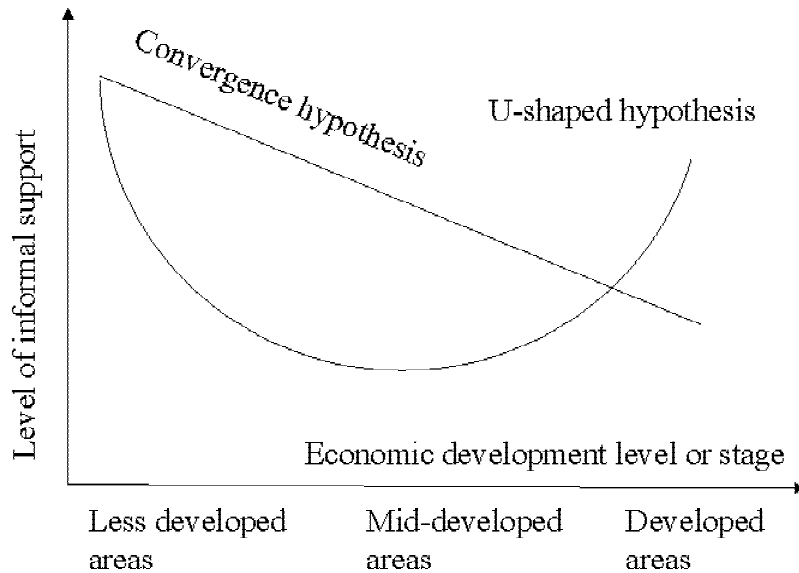
In addition, we also examine the effects of key socioeconomic status (SES). According to the convergence hypothesis or the literature for the developed countries, people with high levels of education, as opposed to low levels of education, would be less likely to live with adult children. Likewise, those with greater economic resources would receive less income support from adult children compared to those with fewer economic resources. These variables will be simultaneously evaluated along with the level of economic development of the regions.

We use the 1992 *Survey on China's Support Systems for the Elderly*. This survey was funded through the United Nations and was coordinated by China Research Center on Aging. The survey employed a stratified and cluster sampling designed to be representative of the elderly (60 and over) within Han-dominant provinces and representative of the three levels of economic development in China (less developed, mid-developed, and developed). This design is particularly suitable for this study, because Han-Chinese have the closest attachment to the Confucian ideology than any other ethnic minorities, and the three levels of economic development also fit our purpose. The sample is equally divided between urban and rural areas

with nearly 20,000 respondents. This study used the urban sample and selected only those who have at least one surviving child. This restriction only reduces the original urban sample slightly from 9,889 to 9,663. Compared with the urban sample, rural elders enjoyed greater intergenerational support by about 7 to 10% (See Lee and Xiao 1998 for more detail on rural and urban comparisons). However, since no formal retirement and other income mechanisms were instituted in the rural areas, it would be very difficult, if impossible, to comparably test our hypotheses although rural areas would represent a starting point in industrialization and modernization processes.

For the urban sample, 24 provinces or provincial level cities were divided into three groups according to their per capita gross domestic products (GDP) in 1991. Within each stratum, provinces are selected based on the geographic representation and the willingness of local participation. Twelve provinces or provincial cities were selected. Beijing, Tianjing, and Shanghai were selected as most developed areas. Sample cities in Jiangsu, Zhejiang and two most developed cities, Chuqing, and Chendu were selected as the mid-developed areas. Finally, cities in Guizhou, Guangxi, Shanxi, Heilongjiang, Hubei, and Shaanxi were selected as less developed areas. Due to the sample restrictions, minority autonomous regions and remote provinces in the West were not selected, which in fact would represent the least developed regions in China.

The survey was administered via face-to-face interviews in the spring of 1992. Information was collected on the demographic characteristics of respondents, living arrangements, and financial and other help from children. More specifically, the respondent was asked separately whether he or she received assistance with activities of daily living (bathing, dressing, toileting); assistance with certain instrumental activities (household chores, shopping, washing, cooking, and managing finances); financial assistance and material assistance in the form of food, clothing, or other goods. Although Chinese scholars have already used the data set (Wang and Xia, 1994; Guo and Zhang, 1996; Lee and Xiao 1998; Lin et al., 1999) to examine availability of various elderly support, no one has used the data linking old-age support with economic development from the geographic approach.

In multivariate analyses, three dependent variables were used to assess (1) if the respondent received IADL support from children or not, (2) if the respondent received income support from children or not, and (3) for those who received income from their children, the

amount of income support received. Formally, we define IADL support as getting help for any of the following tasks: preparing meals, washing clothes, shopping for groceries, managing money and doing household tasks. We used logistic regression to estimate the likelihood of receiving household or income support, and the ordinary least squares (OLS) regression to estimate the amount of income support. Following Lee and Xiao (1998), male and female respondents were analyzed separately to avoid potential bias due to over-representation of males in the sample.

The primary variable measuring the development is the three-level dummy variable for economic development. The developmental hypothesis implies that provinces with higher per capita income should have a lower level of children's support to parents, and people with higher education, or income are less likely to receive the support. Here we use a three-level dummy variable of no education, elementary, and high school or above to capture the educational levels, and we use respondent' subfamily (individual or couple's) income and pension status to measure the income effect. Other demographic variables (marital status, number of children, co-residence status) are used as control variables. For the likelihood of receiving IADL support, we use proximity, socioeconomic and demographic as controls. Since income transfer is not necessarily distance-dependent, we dropped proximity measurements and add if the IADL support as a control variable for intergenerational exchanges.

Table 1 lists some descriptive statistics of the sample by three levels of economic development. It shows that the three types of urban areas have similar profiles in age and marital status. Respondents from less developed areas tend to have more children than the other two areas, while education and income follow a gradient favoring developed areas. These indicators are consistent with the general profile of development stages.

Table 1. Descriptive statistics for some independent variables

	Elderly men			Elderly women		
	Developed	mid Developed	less Developed	Developed	mid Developed	less Developed
Married	86.4	88.36	87.72	61.12	56.51	52.64
age 60-69	63.32	60.02	63.94	63.35	59.75	64.37
age 70-79	30.49	33.06	30.49	29.18	31.09	29.83
age 80+	6.19	6.92	5.57	7.47	9.16	5.8
N 0f children=1	9.85	9.17	6.78	14.5	12.96	11.15
N 0f children=2	17.35	16.61	8.65	14.15	14.51	12.24
N 0f children=3	23.92	22.45	17.54	19.04	19.21	14.08
N 0f children=4+	48.87	51.77	67.03	52.31	53.31	62.53
> high school edu.	19.14	12.56	5.75	7.21	3.15	0.57
Retired	98.78	94.72	91.53	69.22	62.24	36.72
Functional limited	9.29	10.92	11.55	13.43	14.42	14.66
Personal income	166.86	121.65	115.74	67.6	48.78	29.11
Total N	1066	1951	1653	1124	2129	1740

RESULTS

Descriptive analysis. Parent-child proximity is one of most important determinants to the level of intergenerational interactions. To set the context, we begin our analyses by reporting parent-child proximity along with some descriptive statistics on intergenerational support (Table 2). At the national level, 55% of urban elderly respondents co-reside with their married children; including co-residence, 75% and 98% of respondents have at least one adult child in the same neighborhood and same city, respectively. These numbers vary moderately among the three types of regions. Compared with the 57% of the coresidence rate of the developed cosmopolitan cities, the mid-developed urban areas tend to have the lowest rate (50%) and the less developed areas are in the middle (54%). The lower coresidence rate in the mid-developed urban areas could be a temporary phenomenon. Many developed rural areas have recently been incorporated into urban areas, and the lower number of co-residence could reflect changes in status from "leaving the farm but not the township" to "leaving home but not the township" in the registrars. Once the range of proximity extends to same city district and beyond, there is little difference among the three regions. So if we use city limit to define the availability of adult children, 98% of elderly parents have at least one adult child available. This number is close to the results reported by Bian et al. (1998) in large urban areas.

Table 2. Parent-child proximity and living arrangements in urban China

	Developed Areas	mid-developed	Less developed areas
Proximity to adult children			
Co-residence	56.53 (57)	49.56 (50)	53.99 (54)
same neighborhood	21.37 (78)	20.76 (70)	20.48 (74)
same district (municipality)	10.05 (88)	14.85 (85)	13.73 (88)
same city	10 (98)	13.06 (98)	10.49 (99)
not same city	2.05 (100)	1.76 (100)	1.3 (100)
Living arrangements			
Married son	29.68 (30)	25.86 (26)	31.48 (31)
Married daughters	11.23 (41)	11.15 (37)	6.84 (38)
Unmarried children	15.62 (57)	12.55 (50)	15.68 (54)
Spouse but not children	32.97 (90)	37.79 (87)	32.86 (87)
Others	2.33 (92)	1.69 (89)	2.45 (89)
Alone	8.17 (100)	10.96 (100)	10.7 (100)
Support from children			
% get help from children	60.05	51.42	59.77 **
% get help from sons	37.08	28.43	35.72 **
% get help from daughters	33.01	30.12	35.04 **
% have income from children	56.26	39.26	52.05 **
Income from children	325.04 *	203.86	282.5
Total N	2190	4080	3393

Note: Percentages in parentheses are cumulative. There are 1.2% of married sons and daughters live with respondents in the same households, and they are equally split between the two categories.

** significant at the 5% level for the Chisq statistic against independence with 2 d.f.

* significant different from mean at 5% confidence interval

With respect to living arrangements, the majority of elderly respondents live with grown children. Nationally, around 40% urban elders live with married sons or daughters, with another 15% living with unmarried children. For those living with adult-children, son preference is clearly registered. For every elderly parent living with a married daughter, there are three parents living with married sons. However, "rearing sons for old age" has somewhat eroded in the developed and mid-developed areas; older parents in developed areas seem more open to the idea of living with a married daughter. More than 11% elderly parents in the developed or mid-developed urban areas live with daughters, compared to 7% in the less developed urban areas. Another way of looking at the developmental effect on living arrangements is through the proportion of older parents living independently. As a mirror image of living with unmarried

children among the three areas, we find that parents in the mid-developed region have the highest degree of independent living. Combining living with spouse and living alone, this area has 41% elderly parents living independently in contrast to 49% in the mid-developed areas, and 43% in the less-developed areas. These results are consistent with our description of the U-shaped developmental trajectory along economic development.

It is known that coresidence is one of most important determinants of intergenerational support. Living with children, after all, is an important way for pooling the economic resources from the two generations. If we say that elderly living arrangements along the three developed levels are "bell-shaped", the percentage of parents receiving assistance to instrumental activities of daily living (IADL) from children (sons or daughters) is a shadowgraph of the living arrangements with a U-shaped pattern. For example, 51% elderly parents receive some kind of help from children in the mid-developed areas as opposed to 60% in the developed or less developed areas, and these rates mirror surprisingly close to the rates of coresidence. However, gender differences in providing support do not mirror gender differences in coresidence. Remember that parents are nearly two times more likely to live with a son than with a daughter, but the chance of getting help from daughters is comparable to that from sons. Non-coresidence daughters, therefore, must be much more likely than non-coresidence sons to help their elderly parents.

Finally, child-income transfers to parents have a U-shaped pattern. Children in the mid-developed areas are least likely to transfer income to parents, and parents in these areas receive the least amount (204 Yens). It is likely that parents in less developed areas are more likely to suffer from financial difficulty, and relatively more income transfers reflect their real income need. It should be noted that the cost of livings and income levels are both low in less developed areas, small towns, so 285 Yens in small towns could mean 428 yens (applying 1.5 ratio) or even more in terms of real income effects if the cost of living is adjusted according to the one in big cities (State Statistic Bureau, 1992).

Multivariate analyses. In multivariate analyses, we examine regional differences in intergenerational support while controlling for respondents' sociodemographic characteristics. From the geographic perspective, we are looking for regional differences in family support. From a sociological perspective, we are looking for trends in education and income effects. If,

13

for instance, the modernization hypothesis is rendered from the regional perspective, it should also be reflected from education and income variables, i.e., parents with high educational attainment and high income are expected to receive less support. For the regional comparisons, we use the mid-developed areas as the reference category. In this way, the modernization hypothesis would expect opposite signs, while the U-shaped hypothesis would have positive signs for the developed and less-developed areas.

Table 3 displays the odds-ratios from the logistic regressions on children's IADL assistance. First, we find that the effects for need indicators, such as age, functional limitation, and marital status, are consistent with the literature and general expectations.   The IADL assistance increases with age, and those with functional limitations or those who are widowed are more likely to receive IADL assistance. However, economic resource variables (income, educational level, and pension status) do not have much impact on the likelihood of receiving IADL support, a finding consistent with Logan et al. (1998). By far the most salient factor is proximity to children. The odds of receiving IADL assistance is drastically reduced by three-fourths from coresidence to living in the same city district and is reduced further along each proximity category. In other words, more income or higher social status will not be as effective as being in proximity to adult children. It is common that older persons with high social status can afford to live independently. As a result, they tend to be less likely receiving help from their adult children. Indeed, if we delete proximity variables from the model, having a high school or higher education reduces the likelihood of IADL help from adult children. Together, these results suggest living with grown children or getting close to them are the most effective ways of garnering children's support. Economic resources, at present stage, are the secondary concerns; as long as children living close by, those having greater economic resources are likely to get same amount of children's support as those having fewer economic resources. If parent-child proximity remains close, as suggested by the proximity pattern in the previous table, children's IADL help to parents are unlikely to decline even when parents have more income and other economic resources.

Table 3. Logistic regressions on the likelihood of IADL helps from adult children

Variable	Females		Males	
	Odds-Ratio	Chi-Sq	Odds-Ratio	Chi-Sq
Proximity (Co-residence)				
same city district	0.256	369.1356 *	0.34	239.9739 *
same city different districts	0.156	327.2427 *	0.227	182.091 *
different cities	0.032	89.0973 *	0.039	54.4213 *
age	1.03	22.5054 *	1.043	52.4774 *
Unmarked vs (Married)	1.807	30.2591 *	2.977	99.2371 *
With an ADL limitation vs (no)	1.975	38.5648 *	1.157	1.8934
Number of Children (1)				
Number of Children=2	1.201	2.0533	1.301	3.357
Number of Children =3+	1.511	16.3184 *	1.387	7.3994 *
Education (no education)				
Less than high school	0.93	0.942	1.125	1.9291
High school +	0.768	4.9365 *	1.098	0.8357
Couple's income	1.019	0.4205	0.933	2.3655
With pension vs. (no)	0.878	1.848	1.779	8.6606 *
Development level (Mid-level)				
Developed	1.352	12.4014 *	1.527	25.7114 *
Less developed	1.379	17.0679 *	1.348	16.3441 *
Likelihood ratios with 14 df	986		707	

As mentioned in the introduction, there will be many single-child older parents in the coming decades in China. Although the coefficients for the number of children show that the elderly with three or more children are much more likely to receive children's help (1.5 and 1.4 times for female and male respectively) than single-child parents, for parents with one or two children, the odds of receiving IADL assistance are more or less the same.

Having accounted for proximity, demographic, and economic variables, we find that those in the mid-level cities are least likely to receive children's help than those in less developed cities. Elders are either comparable or slightly more likely to receive IADL assistance in the developed cities than in less developed cities. In essence, it is a U-shaped pattern, where elderly parents in the developed and less developed areas have roughly the same chance of getting IADL assistance from their children. Elderly parents in the mid-developed cities are least likely to receive IADL assistance from children. If the three types of regions represent a developmental

trajectory, then the mid-level cities can be seen as a transition stage. The U-shaped developmental hypothesis on old age support seems more acceptable.

Moving to income transfers, we report odds-ratios of receiving income from adult children (Table 4). Results for socioeconomic measurements seem reasonably consistent with associated expectations from the modernization theory or the convergence hypothesis. Respondents' family income and educational level are inversely associated with the likelihood of income support. For example, those females with elementary or high school are, respectively 20% (1-0.809) and 40% less likely to receive income support as opposed to those without any formal education, and those with retirement income are about one-third as likely as those without retirement income. These results make sense because parents with higher educational levels tend to be well off economically, and they are, therefore, relatively less likely to rely on children as an income source.

However, the results for the developmental comparison seem divergent from the modernization hypothesis. Recall in Table 2 that we had a U-shaped pattern, where the percentage of receiving IADL assistance is higher for both developed and less developed areas. This result is basically retained. For elderly men, the odds of receiving income from children is 3 and 1.5 times over the mid-developed areas. For elderly women, those in developed areas have a higher probability of receiving income transfer. Thus, the likelihood of intergenerational income transfers does not seem to weaken as the economy becomes more and more developed.

Table 4. Logistic regressions on income support from children

Variable	Females Odds ratios	Males Odds ratios
Age	1.021 **	1.023 **
Unmarried vs (Married)	1.293 **	0.503 **
With an ADL limitation vs (no)	1.15	1.041
Number of Children (1)		
Number of Children=2	1.682 **	1.487 **
Number of Children =3+	2.741 **	2.257 **
Education (no education)		
Less than high school	0.809 **	0.986
High school +	0.607 **	0.78 *
Couple's income	0.809 **	0.573 **
With pension vs. (no)	0.31 **	1.165
IADL helps from children (no)	1.431 **	1.512 **
Development level (Mid-level)		
Developed	2.691 **	3.079 **
Less developed	1.086	1.485 **
Summary statistics		
Likelihood ratios with 12 df	1291	597

The final set of analyses is to estimate the dollar amount of income transfer to elderly parents (Table 5). First, it is of interest to compare some results between Tables 4 and 5 as the latter is conditioned upon those receiving income in Table 4. We know that those receiving income transfers tend to have a lower income, and Table 5 shows that the lower the income, the greater amount of income transfers to the elderly mothers. Likewise, those with retirement income are less likely to have income support, and when they do receive income transfer, they tend to have a lower dollar amount than those without retirement income. As for other control variables (age, marital status, and functional limitation), the results are reasonably consistent with general expectations for both the logistic (Table 4) and the OLS regressions (Table 5). Older parents, those with a functional limitation do not necessarily need to receive more income support, especially when other SES variables are accounted for. And the results show these variables are not important. For the likelihood of receiving income transfers, having more children holds a key advantage. However, when parents do receive income transfers, one or two children make little difference to the amount of transfers. Only for the mother of three-children,

the amount of income transfers increase substantially. Given these reasonable effects above, the amount of income transfers along with regional development seems to support neither the U-shaped, nor the convergence hypotheses. Both hypotheses would contend that income transfer to the most developed area should be less due to greater income sources for the elderly. However, the results, after controlling for relevant economic and demographic variables, suggest that the elderly in more developed urban areas may not necessarily receive less income support.

Table 5. OLS regressions on the amount of income transfers from children

	Females	Males
Variable	Coeff.	Coeff.
INTERCPT	6.088608 **	5.6842 **
Age	-0.001499	0.0023
Unmarried vs (Married)	0.045161	0.0173
With an ADL limitation vs (no)	0.028333	-0.0186
Number of Children (1)		
Number of Children=2	-0.038088	-0.2266
Number of Children =3+	0.187418 **	-0.0694
Education (no education)		
Less than high school	0.134547 **	0.2557 **
High school +	0.619133 **	0.5081 **
Couple's income	-0.103952 **	-0.0018
With pension vs. (no)	-0.369605 **	-0.5659 **
IADL helps from children (no)	0.17317 **	0.1955 **
Development level (Mid-level)		
Developed	0.206782 **	0.0898
Less developed	-0.02779	0.1719 **
Summary statistics		
Adj-R-square	0.1438	0.154

The separate analyses for females and males revealed some differences mainly from the level of income transfers. First, elderly men are less likely to receive income support from children. Among the 4,670 elderly fathers, only 1,744 (or 37.3%) received income support as opposed to 2,859 out of 4,993 (59.3%) mothers. Second, for those receiving income support, elderly men receive less dollar amount (478 yen) than elderly women (584 yen) annually. These differences primarily reflect the fact that elder mothers tend to be less likely to have retirement income, and when they do have retirement income, the income level tends to be lower than that for elderly men. Finally, education gradients in income support are much stronger for elderly

men than elderly women. For example, both elderly men and women with less than a high school education receive more income transfers than those without any formal education, but the effect for elderly men is almost twice as it is for elderly women (0.2557 vs 0.1345). However, when the educational level reaches high school, the educational effects for both elderly men and women are quite similar.

DISCUSSION

In this article, we used economic development and SES indicators to examine trends in family support in contemporary urban China. The results of intergenerational support along the level of economic development suggest a U-shaped pattern. It is the mid-developed urban areas that intergenerational support seems the weakest. If the pattern from less developed to developed urban areas reflect a time path, then, it suggests trajectory that seems to correspond to our U-shaped expectations, and in a broad sense, this path will not lead to the convergence to the old-age support system found in the West. This finding is consistent with other cross-area studies in China. At a local scale, Skinner (1999) and his associates compiled living arrangement profiles for the Yangzi Delta region. They found that joint households with adult children are high in the Shanghai urban area and rural fringe counties, it is the mid-developed counties that have the lowest rates of coresidence. At the national scale, Du and We (1998) found that children as the main source of economic support for the elderly (60+) are high both in developed and less developed provinces, and coastal provinces such as Jiangsu, Zejing, and Guangdong have lower income support from children. Hence, the actual involvement in supporting elderly parents may not be predictable by the level of economic development.

There are many possible explanations for the observed patterns. What seems plausible is that geographic mobility of labor force has not caused considerable spatial separation between parents and adult children. The somewhat higher spatial separation between parents and adult children in mid-developed urban areas represents some kind of transitional stage due to their rapid urbanization. Finally, when "reading time-path sideways", we may not be able to pick up all the trends. However, this caveat may not alter the basic results of this study, as the provinces sampled are all Han Chinese societies, and some of the problems associated with international comparisons of economic development with different cultures can be avoided (Nugent, 1985). In any case, community and formal support mechanisms to the elderly have not been an effective

option for elderly care arrangements as traditional intergenerational support seems strong and persistent even in most developed areas in China. From a post-modernism vantage, the idea of heterogeneous old support systems converging to a homogeneous Western-like system seems to overstress and privilege the path of development taken by the West. Multiple paths and multiple modes of family support are all possible under the single term of modernization, in which culture and traditions may help shape particular modes of modernism. Close family ties and intense family support are "structurally fit" to modernization, and Confucian in the East is just as important as Protestantism is in the West in economic development (Redding, 1990).

We have found that education and income levels are not important for IADL support, but are important for income support. In some respects, these results suggest income support to the elderly does correspond to the convergence hypothesis. When parents become well off financially, they do not really need much income from their grown children, and as a result, they are less likely and receive less income support than those elderly parents who are less well off. In such a society as China, where the cultural traditional of filial piety is very strong, the old-age support system seems less malleable in instrumental support than the income support. The old-age support transition may happen in economic support to the elderly similar to the West, but IADL and subsequent ADL support to the elderly may not necessarily make the transition from a family based to an institutional based system. Recent time series studies from Taipei, the largest city of Taiwan adduce to this view. Compared to 20 years ago, when the Island economy started to pick up speed, elderly parents became less likely and less willing to live with their adult children, but they are were more likely to receive children's help (Marsh, 1996). In addition, young Singaporeans have placed great importance on care for the elderly in recent value surveys with 92% respondents strongly agreeing to be filial to and support their aged parents (Chew et al., 1998). Given Taiwan and Singapore both share the same cultural tradition as China, it is not surprising to see that informal support to elderly parents remains high regardless of the level of economic development. In this regard, China, Taiwan, and many other Confucian societies in East Asian countries, may well be representing a path divergent from the world modernization theory; the persistence of intergenerational support may promote rather than hinder economic development.

The policy implications on social security of the study are twofold. Given the rapid industrialization and modernization process in China, the elderly should have decent economic

security accrued from years of employment and work. When elderly parents do have good retirement incomes, they seem less likely to rely on grown children for such support. Thus, the improved economic welfare of the elderly are effective in de-linking elderly's welfare from their children's welfare and wills. Given the demographic momentum of aging population, it might be better both economically and socially to encourage and promote intergenerational support, so that it is less costly for both parent-child generations and the society. In Japan, the government has substantially scaled back long-term care, and implemented new policies promoting home and other alternative care for the aged (Ogawa and Retherford, 1997).

Although it is not our emphasis, the number of children and proportion of elderly remaining childless also has significant bearing on our policies implications. The study found that as long as parents have one child, they will likely get instrumental support comparable to those who have two children, a finding consistent with Lin et al (1999) in a local survey in Baodin, China. In the current urban sample, about 2.3% of the early do not have children. For the next 20 to 30 years, the childless rate is not likely to increase substantially according to Lin's (1994) simulation, and empirical studies of fertility decline in East Asia (Leete, 1987) and China (Shen, 1987). Hence, China can still place great emphasis on family-based elderly care and support system.

It should be noted that due to limited questions (only two) in the survey, we did not include the perspective of adult children receiving help from elderly parents. However, we did find persistent patterns of older parents helping their adult children. As Lin et al (1999) stated, there is no "retirement" in the Chinese aging-belief system, working at his or her capacity and helping grown children whenever possible, are deeply rooted in the Chinese culture. Future studies should examine intergenerational support from both parents and children's perspectives.

REFERENCES

Aaron, Henry. 1998. Chinese social security reform: Security and economic development. *Paper presented at the International symposium on China's Social Security* June 23-24, 1998. The Chinese version is included in (Eds) Xu, Dianqing Jason Yin, and Yuxin Zhang, 1999 *Social security reform in China* Economic Science Press: Beijing, China.

Bartlett, Helen and Phillips, David. 1997. Aging and aged care in the People's Republic's of China: National and local issues and perspectives. *Health and Place* 3:149-159.

Bian, F., Logan, J. and Bian, Y. 1998. Intergenerational relations in rrban China: Proximity, contact, and help to parents. *Demography* 35:115-124.

Caldwell, J.W. 1976. Toward a restatement of demographic transition theory. *Population and Development Review* 2: 321-66.

Chew Soon Beng, Mike Leu Gwo-Jiun and Tan Kim Heng. 1998. *Values and lifestyles of young Singaporeans* New York: Prentice Hall.

Du, Peng. 2001. Changes in elderly living arrangements in Mainland China. *Proceedings: Symposium on Population Aging between Taiwan and Mainland China*. Taipei, March 21-23, 2001.

Du, Peng and Wu Chuao. 1998. The analysis of primary source of economic support among the elderly in China. *Population Research* 23,4: 51-57.

Freedman, R. Moots, B., Sun T. and Weinberger, M.B. 1978. Household composition and extended kinship in Taiwan. *Population Studies* 32: 65-80.

Goode, William J. 1970. *World revolution and family patterns*. Free Press: New York.

Goody, Jack.1996. Comparing family systems in Europe and Asia: Are there different sets of rules? *Population and Development Review* 22,1:1-20.

Guo, Zhigang. 1994. *Population development and changes in family households in contemporary China*. People's University Press: Beijing.

Guo, Zhigang, and Zhang Kaidi. 1996. Retesting the role of number of children in family support for the elderly. *Population Research* 20,2: 7-15.

Hajnal, J. 1982. Two kinds of preindustrial household formation systems. *Population and Development Review* 8: 449-494.

Inglethart, Ronald. 1997. *Modernization and postmodernization: Cultural, economic, and political change in 43 societies*. P 324-42. Chapter 11. Trajectories of Social Change. Princeton University Press: Princeton, NJ.

Lee, J. and Wang, F. 2000. Malthusian models and Chinese realities: The Chinese demographic system 1700-2000. *Population and Development Review* 25:33-65.

Lee, Y and Xiao, Z. 1998. Children's support for elderly in urban and rural China: Results from a national survey. *Journal of Cross-cultural Gerontology* 14,4:357-378.

Leete, R. 1987. The post-demographic transition in East and Southeast Asia: similarities and contrasts with Europe. *Population Studies* 42:187-206.

Lin, G, Bao, S., and Sun, X. 1999. Issues in establishing Chinese social security and social support systems for the elderly in China. *Population Research* 23,2: 55-60.

Logan J. Bian, F. and Bian Y. 1998. Tradition and change in the urban Chinese family: The case of living arrangements. *Social Forces* 76: 851-82.

Marsh, Robert 1996. *The great transformation: Social change in Taipei, Taiwan since the 1960s.* Armonk, N.Y: M.E. Sharpe.

Martin, Linda G. 1988. The aging of Asia. *Journal of Gerontology: Social Sciences* 43:S99-113.

Morgan, Philip and Hirosima, Kiyosi. 1982. The persistence of extended family residence in Japan: Anachronism or alternative. *American Sociological Review* 48:269-81.

Nugent, Jeffrey B. 1985. The old-age security motive for fertility. *Population and Development Review* 11,1:75-99.

Ogawa, Naohiro and Retherford, Robert. D 1997. Shifting costs of care for the elderly back to families in Japan: Will it work? *Population and Development Review* 23:59-94.

Palmore, E. and Manton, K. 1974. Modernization and the status of the aged: International correlation. *Journal of Gerontology* 29:205-210.

Phillips, David R. 1992. *Aging in East and Southeast Asia*. London: Edward Arnold.

Redding, S. G. 1990. *The spirit of Chinese capitalism*. Berlin: W DE Cruyter.

Reher, David S. 1998. Family ties in Western Europe: Persistent contrasts. *Population and Development Review* 24,2:203-234.

State Statistic Bureau, 1992. *China annual statistic yearbook, 1992* State Statistic Press: Beijing.

Skinner, William. 1999. Classifying Settlement Types in the Census Data file and Positioning Households in Hierarchical Regional Space. *Paper presented at the International Symposium of Geoinformatics and Socioinformatics*, June 19-21, Ann Arbor, MI.

Ruggles, Steven. 1987. *Prolonged Connections: The rise of the extended Family in Nineteenth-Century England and America,* University of Wisconsin Press: Madison.

Shen, Yimin. 1987. Selected findings from recent fertility surveys in three regions in China. *International Family Planning Perspectives* 13,3: 80-5.

Tai, Hung-Chao. 1989. *Confucianism and economic development*. The Washington Institute Press: Washington, DC.

Tsuya, N and Martin, L. 1992. Living arrangements of elderly Japanese and attitudes toward inheritance. *Journal of Gerontology: Social Sciences* 47,2: S45-54.

Wang, Mei, and Xia, S. 1994. Assessing the burden of old-age support in China. *Population Science of China* 43:37-43.

Weinstein, M. Sun, T, Chang, M. and Freedman. 1990. Household composition, extended kinship, and reproduction in Taiwan: 1965-1985. *Population Studies* 44:217-239.

Xu, Dianqing, Yin, Jason and Zhang, Yuxin. 1999. *Social security reform in China* Economic Science Press: Beijing, China.

Zhang, M. 2001. Changes in elderly living arrangements and support in Taiwan. *Proceedings of the Symposium on Population Aging between Taiwan and Mainland China*. Taipei, March 21-23, 2001.