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(Manuscript)

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Abstract

This paper addresses selectivity, substitution and complementarity of elderly support options in Bangladesh, a nation undergoing simultaneous mobility and aging transitions in an environment of limited economic change. Employing detailed qualitative analysis and descriptive quantitative results, the work suggests that while households execute conscious strategies of fertility control and human capital in response to socio-economic change, they must also manage the associated risk through more extensive use of existing social resources for personal support and care. In detailing this process, the paper introduces two interlocking hierarchies of financial and personal support. In these hierarchies, parents exercise two predominant preferences, favoring sons over other children and favoring linkage of sources of primary financial and personal support. When strategies fail or preferred children emphasize financial support over personal care, parents mobilize personal and financial support from sources at lower levels of the hierarchy. While the research finds that support mechanisms are highly adaptable to demographic transition and economic crisis, mechanisms in the current era still depend on higher fertility, lower longevity, and lower mobility than can be anticipated in the next generation. They also may generate unintended economic consequences such as inequality and disinvestment. The results support an agenda to better understand the "fuzzy logic" of family formation under a regime of informality, transition, and constraint.

I. Introduction

While most demographic research and policy effort in Bangladesh focus on issues associated with high fertility and high child mortality, the country will soon face the impact of a rapidly aging population. Like most countries in Asia, Bangladesh has experienced both a fertility transition, with a decline in fertility from 6.5 children per woman in 1979 to 3.4 in 1994 (Mitra et al.1994), and a mortality transition, with a rise in life expectancy from 47 to 59 years during roughly the same period (Bangladesh Bureau of Statistics 1997). Rapid fertility decline will shift age distributions toward a higher level of old-age dependency even as rapid population growth persists. Mortality decline, while less important to the overall dependency ratio, has begun to redefine notions of the term elderly, increasing the span of both active and inactive life.

Unlike other demographically dynamic countries in East, Southeast, and parts of South Asia, Bangladesh has not experienced a dramatic change in its level of income or economic structure. Outside of a few major urban areas, opportunities for returns to human capital are limited, as are infrastructural and foreign direct investment. While most economic opportunity lies in urban areas, individual migrants from major migrant-sending areas continue to depend heavily on backward linkages to rural areas for informal disability, retirement and unemployment insurance as well as a setting for child rearing. Given these urban-rural linkages, the percentage of population living in cities has thus far remained largely proportionate to the level of national income, as in much of Asia; but economic and ecological shifts could soon change this pattern.

In the coming period of rapid transition, three major shifts can force the process of rural-urban migration to evolve from a cooperative opportunity for family intersectoral economic diversification to a more discrete form of separation between migrant and origin community: 1) a declining rural asset base will limit a migrant's potential gains from cooperation with the rural origin community; 2) increasing opportunities for urban settlement and security will limit the need for rural dependence among more successful segments of the population; and 3) continued rural economic and ecological pressure and accumulation of urban social capital will expand

migration activity to regions, communities, and households that are less able to practice this kind of cooperation.

While rising prevalence of the typical practice of *individual, circular* migration can account for some of the trend towards greater urbanization, a far greater proportion can be attributed to 1) longer durations of migration, 2) expansion of migration to dependent family members of labor migrants, and 3) urban family formation and child rearing. These shifts entail a higher proportion of rural-urban migrants shifting not only their nuclear family's production to urban areas, but also their consumption and security investments. Economic separation does not eliminate the scope for provision of parental support after migration; it merely introduces an added level of uncertainty. The realities of comprehensive fertility change, rapid urbanization, and rapid educational transition under severe economic and ecological constraints lend strong support to the paramount role of strategy in the process of family building and securing one's own support at older ages (Willis 1982; Knodel et al. 1984). While past evidence of conscious strategy, commodification, competition, and social learning in Bangladesh make the issues of aging and urbanization conducive to qualitative study (Jensen 1987; Jahangir 1979; Munshi and Myaux 1998; Foster 1993; Cain 1981; White 199x; Kuhn 1999), the current environment of change creates particular justification for such work. The current period of transition stands in sharp contrast to previous generations, when the primary source of uncertainty in child rearing and familial security was the more transparent process of child mortality.

The current paper couples the results of qualitative, semi-structured interviews with descriptive quantitative results. While quantitative results are largely illustrative, qualitative analysis is desirable in itself for providing a level of complexity not permitted by empirical quantitative analysis. Just as important, detailed qualitative analysis will outline sources of selectivity and endogeneity in constructing causal quantitative models of family and economic change in Bangladesh. Interviews are conducted with urban respondents originating from a variety of areas in Bangladesh as well as rural respondents from Matlab, a major sending area. After placing the current work in the context of cross-cultural research on aging in Asia, two interlinked hierarchies of financial and personal support are presented. Subsequent analysis and

discussion demonstrate how parents adapt to the insecurity and inadequacy of a transitional system of familial support through two primary means: 1) substitution of familial support between children and over the life-course; and 2) complementary support from multiple children at the same time. While these two strategies often suit a parent's personal constraints and risk horizons, they have strong implications for security in both generations and for long-term economic development. The results support an agenda to better understand the "fuzzy logic" of family formation under a regime of informality, transition, and constraint.

II. Theoretical and Contextual Background

Debate on the impact of aging and mobility transitions on elderly well-being hinge on the causes of transitions themselves. If transition results from conscious, endogenous changes, planned by the elderly in their own best future interests, then there should be little expectation of a negative impact. If, however, transition can neither be controlled nor predicted, then it is likely to be problematic. In the case of migration, the historic default is to assume the latter, but a great deal of research has also shown that parents can continue to exercise preferences over children's location (Knodel et al. 1992) and maintain a high level of economic and social relations even after migration (Stark 1982; Massey et al. 1999; Oberai and Singh 1980). Declining fertility, the primary cause of developing world aging, appears to be under total parental control, but it is largely an irreversible decision that cannot be adjusted once most adults have reached older ages. Because of this, we may expect that a fertility decline will have been preceded by changes in the structure of risk in the society (Cain 1981; Nugent 1985).[1]

In Asia, the diversity of national and sub-national populations experiencing concurrent states of rapid transition offered opportunities for contextual research to approach these questions, looking comparatively at the role of family system, identity, gender system, religion, and economic structure on the shape and impact of transition. While those coming from disciplines with a tradition of qualitative or contextual research emphasized the importance of

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[1] Increasing longevity is largely outside the realm of personal control or prediction, but most of its impact is felt in the length of a period of dependency, not in the number of support alternatives during any era of the life-course.

explicitly context- and culture-driven research on family change (Thornton and Fricke 1987; Hammel 1990), others coming from a more strictly empirical tradition also applied basic contextual understanding in explaining results and in generalizing them to other settings (Lee, Parish, and Willis 1994).

The thrust of much of this research appeared to be that demographic and mobility transitions introduced greater complexity into elderly support systems, but by no means prompted a complete breakdown (Knodel et al. 1992; Asis et al. 1995). Existing cultural norms and systems structured the response to aging in much the same way they had structured the behaviors that had led to aging (Caldwell et al. 1988). There was also considerable room for adaptation, well summarized by Asis and colleagues, "Social change may simply lead to an adaptation that serves the same culturally determined goal but in a new socio-economic setting" (Asis et al. 1995; Mason 1992; Knodel et al. 1992). Although the broadest evidence supported a negative impact of modernization on support both between settings and over time, these results often pertained only to the strictest forms of support such as parent-child co-residence (Chan and DaVanzo 1991; Hermalin et al. 1990). Other forms of support, such as neighboring residence, financial support and institutionalized support, were less likely to weaken and often substituted for traditional forms of support (Lillard et al. 1999; Frankenberg and Kuhn 2001; Siriboon and Knodel 1995).

Others do emphasize not only the secular trend towards declining support, but also a more potentially devastating impact on marginal populations such as women, widows, the oldest old, the infirm, the landless, and those living in areas of high HIV prevalence (Martin 1990; Rahman et al. 1992; Rahman 1993; Mason 1992; Knodel et al. 2000). Concern over possible breakdown in elderly support among some sub-groups – along with heightened risk, vulnerability to crisis, and the failure of socially adaptive forms of support to translate to health and nutritional well-being -- have raised calls for an aggressive agenda of survey research linking national context, community resources and social support to concrete measures of elderly health and mortality (Hermalin 1993; Rahman 1998; Cain 1979; Beard and Kunharibowo 2001).

Given the complexity of the transitions at work and the numerous levels at which

breakdown could occur, a general conclusion that aging will not lead to a damaging breakdown in support appears to derive from two basic propositions: 1) transitions were often the result of conscious tradeoffs between personal and financial support, and quality vs. quantity of children (Cox 1987; Lillard et al. 1999; Becker and Tomes 1976); and 2) rising budget constraints, a result of economic development, facilitated the effectiveness of these tradeoffs (Lillard and Willis 1994; Willis 1994). While these points often hold true, little of this research addressed causation between the two or the outlook for family change when the first happened without the second, largely because there was no evidence that such a thing could happen.

In roughly the same era, researchers in areas of persistently low budget constraints used similar frameworks to study the persistence of high fertility. Cain (1981) suggested that fertility decline would be particularly unlikely in Bangladesh, even in comparison to rural areas in India, because children served as a best possible annuity against all relevant forms of risk in a society with limited institutions for risk management. At the time Cain published this work, systematic fertility decline may have already begun, introducing a process of transition that has been both rapid and persistent, cutting across socioeconomic groups and regions.[2] There is no reason to critique Cain's conclusions in hindsight, however, because they were based on a theoretically consistent interpretation of a set of institutional and economic insecurities that are still largely in place (Cleland et al. 1994). While this paper does not seek to explain the rapid decline of fertility in Bangladesh, that ongoing mystery and its antecedents must structure an analysis of its potential effects. If little evidence can be mustered to place fertility decline in a context of economic change, where does this take our expectations of the role of parental strategy and parental ability to adapt strategies?

Migration, urbanization and industrialization also offer a useful point of departure for studies of elderly support and care in Bangladesh. In one sense, Bangladesh distinguishes itself from a number of Asian nations for the extent to which opportunities for economic advancement

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[2] A number of data collection and critical accounting exercises have attempted to truly validate the true extent of fertility decline, but questions still remain. The rate of decline also appears to have slowed, which is consistent with Cain's (1983) expectation that fertility decline could slow in settings of high risk.

and human capital returns are focused on a few large cities or outside the country. Spatial separation creates a more discrete tradeoff, at least at the level of the individual child, between provision of personal care and provision of financial support. In the context of another highly centralized economy, Thailand, Knodel et al. (1995) emphasize the role of financial support in mitigating for the absence of a specific child. A number of other transitional Asian societies, however, are either small enough to avoid many of the negative implications of spatial distance or are large but have a spatially more broad-based set of economic alternatives. A comparative study of transfers in Bangladesh and Indonesia shows the dominance of transfers from children living outside the district or country over all other transfers in Bangladesh (see section IV) while transfers in Indonesia were characterized by smaller differences between migrants and non-migrants that suggested no fundamental role separation (Frankenberg and Kuhn 2001).

In another sense, Bangladesh is distinct for its high level of ongoing economic cooperation between migrant children and their parents, low level of urban income, and high levels of risk in labor markets. In studying inter-generational transfers in Taiwan, Lee et al. (1994) explain the high rate of transfers and their responsiveness to education in the context of life course investment strategies:

> During the process of rapid economic growth, parents invest in the children's human capital and the children repay it on the basis of both the amount of the parents' earlier investment in them and the parents' current needs."

When returns to human capital are low, as in Bangladesh, adult children often depend on parents nearly as much as their parents depend on them: for insurance against risk, for return migration opportunities, and for inheritance (Shaw 1988; Lucas and Stark 1985; Stark and Lucas 1989). While this dependency introduces opportunities for mutual cooperation and growth, it also introduces resource competition between parents and children. There is strong evidence that similar forms of urban-rural dependence defined the initial stages of urbanization in Taiwan, but continuing economic buoyancy meant that in practice, children could largely repay parental transfers without compromising their own interests and without future dependence on parental resources (Greenhalgh 1985).

A final distinction between urbanization in Bangladesh and other Asian settings is the potential for changing resource relations between rural and urban areas. The previous paragraph suggests a form of ongoing urban-rural cooperation between parents and children that runs throughout the life course, in contrast to a system in which resources flow to the children in youth and to parents in all subsequent stages. When transfers continue to go back and forth throughout the life course, children's incentives to provide support are very high, but only as long as parental resources can sustain a meaningful flow of resources in both directions. In the past, these relations were sustained by parental resources such as agricultural land, homestead land (important for retirement), and social capital, but recent years have seen the size of holdings decline and rates of landlessness rise. During an era of still above-replacement fertility and shifting of growth to the older ages, it is likely that rural per capita resource holdings will decline even as crude rates of out-migration from rural regions rise. Mirroring a rising ratio of old people to young people, this suggests a higher ratio of urban people to rural.

While Bangladesh's urbanization process could be placed within a larger Asian framework until recent years, shifting resource relations may have begun to shift the pattern of urbanization. Table 1 compares prevailing patterns of urbanization and economic development for the twelve largest economies in Asia and Latin America, demonstrating three contrasts that result largely from continental differences in land tenure, ecology, and history. Regionally, Latin America is much more urbanized, with 77% of the population living in cities in 1998 compared to 34% in Asia. Asia also has a far more heterogeneous pattern of urbanization, with some countries (like Japan and South Korea) above even the Latin American mean and others (like Bangladesh and Thailand) lying well below the Asian mean. In the recent past, the Asian pattern of urbanization could also be characterized by a far better alignment, both absolute and relative, between national income and national level of urbanization. In 1980, a simple linear comparison of the two variables in Asia explained 86% of variation in urbanization, whereas the same comparison in Latin America explained only 48% of variation. Except for a notable outlier in Thailand and a group of countries with similar incomes, national income rankings are well aligned in Asia. It is likely that much of the strength of the income/urbanization relationship in

Asia stems from a pattern of conditional migration, in which strong backward linkages to rural areas permitted return migration in cases of unemployment or retirement, in contrast to a Latin American pattern of permanent migration.

Table 1 suggests a weakening of the income/urbanization connection in Asia as emerging nations reach urbanization levels near the global maximum while countries like Bangladesh begin to see urban growth outpace economic growth. By 1998, Latin American urbanization is almost as well predicted by income as in Asia. Economic growth in Latin America between 1980 and 1998 has become a far better predictor of urban growth than in Asia. In the rankings, Bangladesh has moved from last in both income and urbanization in 1980 to 11th in income and 9th in urbanization in 1998. Given current expectations about income growth (which are never accurate) and urbanization (which are rarely so), Bangladesh will likely return to 12th in income while having its urbanization level approach or surpass those of India, Pakistan, China and Indonesia.[3] In an environment where traditional rural support relationships have become less enforceable or more monetized, even as rural economic opportunities are limited by increasing density and increasing inequality, many migrant's best economic and social option is to move with his family unit to the city (Kuhn 2000).[4] While family migration does not spell the end of parent-child cooperation or the end of support for parents, decreasing contact and decreasing economic linkage can alter the relationship. These issues constitute the focus of this analysis.

Differences between Bangladesh and other transitional Asian societies do not generate a new topic for study, but an opportunity to add to the cross-cultural literature on developing world aging with results from a setting of greater uncertainty and greater economic and ecological constraint. While this research can be guided by past results, it is interesting for its difference, which is likely to be manifested in some combination of higher likelihood of failure in elderly

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[3] Three of these four countries are likely to experience as rapid or more rapid economic growth than Bangladesh (excluding Pakistan). Their urbanization projections should largely be determined by rates of economic growth (and government mobility policy in China). Regardless of income gains, Bangladesh should be expected to make gains in urbanization relative to income.

[4] These families can live in slums, conducting informal economic activities and forming new, strictly-urban social support networks much like those formed in Latin American slums in response to mass urban migration (Portes 1972; Portes and Walton 1981).

support and more extreme or rapid adaptation of family systems to suit the needs of a new family system. Support of the latter form of change would bode well not only for elderly well-being in the near future, but would give further support to the resiliency of family systems in an era of change. Such adaptations, however, may generate unwanted side effects such as disincentives to economic development, exploitation, and degradation of human and natural resources. The analysis will seek to identify both forms of change in an effort to draw tentative conclusions about their impact and identify areas for future causal analysis. Results and methodologies may also prove a useful guide to research on ongoing fertility and mobility transitions in non-Asian settings of high risk and constraint (i.e. Kenya, Malawi).

III. Data and Methods

The primary analysis is based on qualitative fieldwork conducted in Bangladesh from June to September 1996 and from February to August 1998. Primary qualitative data come from the larger 1998 field project, which focused on urban-rural relationships between migrants and origin communities in Matlab Thana as well as the social context of migration within migrant sending areas. Secondary data come from the smaller 1996 study, which involved participant observation of an informal industrial district in Dhaka City.

The 1998 project used a randomly selected, but biased, sample of out-migrants from Matlab as an entrée into selected migrant-sending communities in the Matlab area. The Matlab Health and Socioeconomic Survey (MHSS) is a large-scale household survey conducted in Matlab in 1996 that included a follow-up of approximately 600 out-migrants to various parts of Bangladesh. Of the 200 out-migrants contacted in Dhaka in 1996, twenty were recontacted in February 1998 to initiate what could be more appropriately characterized as a sample of the communities from which these migrants originated. Of the 21 initial respondents, 17 come from four primary villages in the area of Matlab covered by the Demographic Surveillance System of ICDDR,B. These 21 respondents, plus 9 urban informants located through the original 21, were interviewed using a semi-structured questionnaire geared towards migrants still residing in the city. Interviews were collected by 5 interviewers (four male, one female) and translated into

English. Interviewers typically translated texts personally, utilizing their own notes and personal memory of the interview, but some texts were translated on a contract basis. Contractors also re-translated a sample of interviewer-translated texts for quality control purposes, while a smaller sample were reviewed by the investigator, with some assistance from native speakers. Each male interviewer was assigned to interviews with migrants from one of the four primary villages, which would become the primary location of his rural work as well. The female interviewer conducted interviews with female migrants from all villages.

A number of supplementary survey modules were collected in the city. The first and second urban phases (see below) included 17 interviews with migrants in slums along the shores of the Buriganga River in Dhaka. Previous project experience had demonstrated that slum residence was often a function not of urban income but of the absence of urban-rural social support mechanisms that could in part be replaced by within-slum social networks and informal economic activity. Thus, the inclusion of a sample of slum-based migrants not only better represented this portion of the urban population, but also offered better representation of migrants from poor or landless households; from areas of weak migrant-specific social capital; and from more distant regions of the country than the Matlab sample could provide. The phase I field experience included frequent informal visits to respondent households and their neighborhoods, informally discussing migration experiences and the process of migration.

Phase II took the interview team to Matlab, where the first activity was tracking the origin households of the Dhaka-based migrants. This work extended to parts of nine villages, focusing on four primary villages.[5] In these origin households, the head of the household (18 interviews) and any return migrants (7 interviews) to the household were interviewed, using separate semi-structured interview forms for heads and return migrants.

Having completed origin household interviews, additional interviews purposively sampled households in social and spatial proximity to the original household, talking to both

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[5] Work in each village typically focused on two to four small spatial areas in each village that could be largely tied to a specific *gusti* (roughly translated as the lineage).

return migrants (27 interviews), seasonal migrants (7 interviews), heads of other households that had sent migrants (19 interviews), and heads of households that had sent no migrants (21 interviews). Interviewers conducted daily informal conversations with villagers in each of their field areas, keeping notes, maps, and family lineage trees for each study area as part of the sampling effort.

The investigator would accompany a different field worker each day, moving between the field sites. The rural locale permitted freer movement between areas than in the urban area, and residents had more time available for informal conversations. The formal goals of these visits were to track new respondents, to select new directions for research within a specific neighborhood, to determine whether sufficient data had been collected in a neighborhood, and to convince non-cooperative respondents of the value of participation in the research. Additionally, the visits included informal activities such as taking meals with residents, carrying on informal conversations, conducting focused follow-up interviews with important informants, and gathering contextual information about the local community. Conversations were sometimes personal but many took place in large groups, around shops, tea stalls, and in *baris* (compounds, largely kin-based, which provide much of rural social structure and operate as the mobility space of most women). These conversations became heated at times, quite often drawing crowds of more than 50 people. Some conversations were taped but most were more informal with findings noted and commented in field journals. The rural phase concluded with 15 normative questionnaires administered to the more knowledgeable or senior residents of the villages and 3 focus group discussions.

The second urban phase completed the picture of rural-urban linkages by interviewing some of the out-migrants from households approached in the rural purposive sample. These included some who were brothers of the original urban respondents as well as some originating from other rural households. By conducting interviews in Dhaka as well as Narayanganj (industrial town near Dhaka) and Chandpur (minor port and District headquarters for Matlab), 20 of these follow-up interviews were collected.

The project utilized separate questionnaires for migrants, migrant household decision

makers, return migrants, and non-migrants. The out-migrant questionnaires included separate modules on ***Migration Decision (MG), History of Past Migration (HI), Village Context (VI), Capital Accumulation (CP), Urban Context (UR), Village Ties (VT), and Household Migration (HH).*** The rural interviews included the same sections with the exception of sections ***UR and HH***. Additional questionnaires introduced during the project included a seasonal migrant questionnaire, a questionnaire better suited to the needs of female migrants and household heads, a short questionnaire studying the origins of a Matlab-origin enclave in one part of Dhaka, an international migrant questionnaire, a normative questionnaire, and a focus group discussion guide.

Additional qualitative synthesis in the dissertation comes from a set of exploratory qualitative interviews collected personally in 1996 with the help of an interpreter (who was also field manager for the 1998 project). These interviews were designed to focus specifically on transfer behavior, but eventually delved into a number of other migration-related issues. The project developed into a more general study of economic life in an informal industrial area devoted largely to one small industry.

Thirty-four interviews were collected and recorded, with a concentration of interviews in the dormitory of one of the larger plastic factories in the area. This company was formed by a rural-urban migrant from an area in the southwest of Bangladesh, about 22 hours travel by boat, who had gained experience in the plastic trade through a distant relative. He eventually formed a larger business with help from the relative and financing from parental asset liquidation and transfer. The project included interviews with the owner of the factory, his brothers who worked with him, seven factory employees who were hired through the rural area, and a number of smaller plastic producers and traders who also originated from the same village. All formal and informal research activity for this project was based at the company's staff residential hostel, where a number of interviews were conducted. This was also the site of frequent conversations and debates about the role of migration and transfers.

Semi-structured interview texts from each project were conducted in Bangla, taped, translated into English, entered as text into a computer, and analyzed using the NUDIST

qualitative analysis package and STATA. Textual analysis was conducted in NUDIST using text searches and a manual structured coding system. Pseudo-quantitative data were entered into STATA for the purpose of summarizing the large number of qualitative interviews. Respondents answered a series of pseudo-quantitative questions in closed form while others were answered by the researcher *post hoc*, based on readings of the texts. These pseudo-quantitative files are not tabulated for inference or statistical significance testing, as the samples are not random or quasi-random. They are merely used for illustrative purposes and for sorting through text searches.

Supplementary quantitative data come from the adult questionnaire module of the MHSS. In addition to questions about health, migration, social networks and labor market participation, the adult module collected data on every non-householder source of exchange, offering separate sections for children, spouses, siblings, parents and institutions. These data, when combined with household roster information on householder kin, provide a picture of the social support network of respondents, which include all members of sampled households over age 50. The included analyses employ data for each married couple or widowed/divorced respondent to the adult module. Quantitative results are not intended to assert causality, merely to demonstrate the complexity of potential relationships and introduce a deeper discussion of sources of selectivity.

IV The Hierarchy of Parental Support in Bangladesh

A general account of Bangladesh's family system as patrilineal, patrilocal, and extended, with a strong practice of women's village exogamy, is generally accurate (Jahangir 1979). But while this account was never an historical absolute, it is particularly tenuous in the modern context (Jensen 1987). Modern Bangladeshi family structure is subject to a strong law of flexibility and a weak law of flexibility, both of which speak directly to the accelerating mobility transition. The strong law involves the decoupling of two major components of old age support: financial support and personal care. Whereas these forms of support are grouped when parents and children co-reside, the coresidence norm was flexible to life-course and financial constraints long before the practice of rural-urban and international migration entered the economic calculus (Foster 1993; Barkat-e-Khuda 1985). While spatial separation necessitates the decoupling of

personal and financial support, this process began to a lesser extent with transitions to highly liquid land markets, landlessness, labor market activity and commodification.

The weak law of family flexibility, also in effect long before fertility and mobility transitions reduced the size and diversity of the elderly support network, suggests that elderly support will deviate from the norm of the co-resident, married adult son when no such son is available. While such situations in the recent past resulted only from relatively rare events like sub-fecundity, divorce, extreme mortality, intra-family conflict, and unexpected child gender compositions, the solutions of the past can largely be seen in the solutions to a set of better-anticipated scenarios today. In this era of transition, once-idiosyncratic solutions such as married daughters' coresidence or daughters' labor market participation tend to gain a more institutionalized status (Knodel et al. 1995).

In light of the strong and weak laws of family flexibility, Bangladeshi family structure is perhaps best characterized by two highly interwoven hierarchies of support, which are loosely depicted in Figures 1 and 2. In remapping traditional family structure to a more flexible system of support, two constants remain from the ideal family structure: 1) for both types of support, sons are preferred over daughters; and 2) the preferred strategy involves both types of support coming from the same source or sources linked by marriage. It is the second strategy that perhaps best justifies the practice of *individual* migration following marriage when possible. If parental financial support is linked to support of one's own spouse while daughter-in-law's provision of care is linked to her personal safety and prestige, then parents have achieved a commodified and spatially far flung version of the traditional family structure.

Even in areas of high migrant social capital and urban proximity like Matlab, this strategy may not even apply to a majority of households at any time in the family life course, and such episodes may last from only one to twenty years. As the joint-stem household of traditional family sociology is an ideal that exists in wealthy, harmonious families at select periods in the family life-cycle (Caldwell et al. 1988), so the practice of individual migration after marriage represents an ideal that is largely meaningful for how it structures each subsequent level of the parental support hierarchy. Matlab is undoubtedly an area of Bangladesh where this ideal

applies for the maximum number of families for the maximum period of time, and thus this paper's qualitative findings on family migration are relevant to other regions of the country as they speak to the larger issues of family transition, mobility transition, extensification of support options, and economic and ecological constraints.

Looking in greater detail at the hierarchies, the top levels give priority to sons who either co-reside and pool agricultural resources or sons who earn income in urban or overseas labor markets. At lower levels of the hierarchy, we see the introduction of support from sons who have formed separate households but do not have access to outside labor markets. We also see the introduction of migrant daughters, who can provide financial support, and neighboring daughters, who can provide personal care as well as financial support (if their husbands have access to financial capital). At lower levels, financial support emerges from pensions and other financial instruments; from informal exchange of resources and liquidation of assets; from other relatives; and at the bottom, from informal resource transfers largely resulting from patronage arrangements or charitable contributions. Lower levels of personal support include occasional support from migrant sons, daughters and daughters-in-law; primary support providers accessed through direct market transactions or fosterage; and ultimately parental relocation to urban areas to live with migrant children.

Preference for migrant sons over neighboring sons in provision of financial support results not from an explicit preference but from a combination of higher earnings in those settings and the investment tradeoffs that resulted in migration by one son but not another. Preference for migrant sons over migrant daughters results to some extent from sons' greater participation in the labor market, and thus greater control over resources, and urban daughters' expected support of their parents-in-law. Gender discrimination in the urban and international labor markets, themselves a result of education, physical demands of core occupations and inequality, largely structure and perpetuate the continued preference for sons' financial support, but the emergence of women's labor market participation in professional and garments sector occupations demonstrates both the extensification of support and the role of global economic factors and educational change in driving family change.

While Figure 1 shows the value of support from different sources at the mean, it does not substantiate the role of substitution of support that defines the hierarchy. Recent models of parental transfer receipts in Matlab demonstrate clearly how migrant sons not only send more transfers and transfers of greater value than the average child, but how their own siblings send fewer transfers and transfers of fewer value than the average child of similar gender and location (Frankenberg and Kuhn 2001). The analysis also demonstrates the small but significant role of non-migrant sons and migrant daughters in providing financial support, a role that becomes far more defined when no sons have migrated or migrant sons provide no support.

V. The Meaning of Family Migration

To the extent that family migration results in decreased support from a specific child, the true meaning of this change depends on the availability of other social or financial resources that can compensate for this loss. If a family migrant child is the only possible source of support, then the impact is as large as the change in provision of support. If support can also come from a number of other sources, then the impact of family migration is diminished. More importantly, if parents who anticipate future family migration episodes use family building and financial strategies to preempt the loss of care, then its impact may be trivial.[6] In qualitative research, parents often refer to older children, both migrant and non-migrant, who have "separated" from their households. Although there may be an unspoken presumption of continued support in times of great need, this transition is often viewed as a natural passing of obligations to children at an earlier life stage as the older child focuses on his own family and old-age security options. To introduce sources of conditionality and isolate possible cases where family migration can have a particularly strong impact, this section outlines the range of alternate strategies and sources of support that may substitute for the lost support of a family migrant.

A typical male migrant responding to the qualitative survey balanced a desire to have his

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[6] At the extreme, family migration may not even be a negative outcome at all. Just because a son migrates with his family does not mean that he has formally separated his household. In some cases, particularly among upwardly mobile families, the spatial expanse of a cooperative extended family grows, and parents encourage sons to settle permanently in the city with their families as part of a larger strategy to expand the family's fortunes.

wife and children care for his parents against a need to feel secure in his wife and children's own well being. This topic arose in one interview when a jute mill worker from Matlab, whose wife lived with his parents, was asked why this arrangement was suitable:

> I am the eldest son of our household. Parents expect their son will earn money... if I take my wife off with me then I would send if I could after my household consumption. So it should be better to keep them with my parents. All the members of the origin household could live together. It might be that they get more food or less food, but they would live together by that income.

Figure 3 provides an illustration of the process of ensuring a source of local support and the role of substitution of support along the hierarchies shown above. As the number of total adult male sons increases, the number of total sons living in the city with their families increases. More importantly, the proportion having no family migrant son declines from 94% when there is only one adult son to 41% when there are five or more sons.

In spite of these efforts to limit family migration behavior when there are few sons, the proportion of parents having only family migrant sons (the top section of each bar) declines steadily with increasing number of sons, although starting from only 6% of respondents with only one son. In a coming period of greater mobility, smaller families and fewer parental resources, this variation could grow. Situations in which all sons settle in the city create greater need for substitution of other sources of care. Figure 4 provides basic support for the assertion that daughters are more likely to live with or near respondents if no sons are available.[7] Daughters are more likely to live with parents after marriage when fewer sons, particularly no sons, are living in or near the origin household. Married daughters are also more likely to live in a neighboring household if there are fewer sons in the area.[8]

A simple hypothetical situation in which the needs of both father and son may be unresolved involves an adult son with an infirm father with no land, no brothers in the origin community, and no sons near the age of maturity. In such a case, the most effective migration

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[7] These are largely cases that have no sons at all, since family migration by the last son is rare.

[8] These results once again do not consider a number of factors that may have a positive effect both on the absence of sons as well as daughters, including parental fecundity, migrant social capital, community resources, household resources, social power, and health.

strategy involves family migration, but the desire to continue provision of parental support may instead result in a decision of short-term migration, seasonal migration, or no migration at all. In this case, the son's outcome with the highest possible return may be avoided in favor of an option that permits continued parental support and avoids the risks associated with family migration. A number of common events, such as land foreclosure, ecological catastrophe, or intra-familial conflict, can quickly shift a son's best possible strategy from no migration or individual migration to family migration.

As time passes, an individual migration arrangement may be threatened by increasing household obligations for daughters-in-law; increasing desire for spouses to co-reside; intra-household conflict; and replacement of potential rural investment opportunities with urban ones. A major factor in the success of individual migration is the strength of the rural social network that provides physical security and market access for women living under the restrictions of *purdah.*[9] Particularly when parents are elderly and unable to offer protection themselves, the role of a migrant's brothers becomes crucial, since they can conduct business affairs and provide protection for the migrant's wife. Once a migrant's own sons reach maturity, they can conduct these activities or the migrant can return home permanently while his son moves to the city in his stead. If an elderly parent does not have any other sons in the *bari*, a potential migrant may have a greater incentive to migrate with his conjugal family.[10]

Over the life course of a typical contemporary family, high fertility limits the number of periods in which elderly or infirm household members are placed at risk of inadequate support from sons and daughters-in-law. The frequency of these periods could increase both with increasing longevity and with declining fertility. As enhanced longevity increases the number of years that children must support parents, particularly in stages of advanced morbidity, parental exposure to family migration episodes may increase in precisely the years of greatest need. As

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[9] Under *purdah*, much of a gusti's (lineage) status is derived from its ability to keep women within the confines of the *bari*. Many women conduct economic and trade activities, but even these often remain within the *bari*.
[10] This introduces the possibility, particularly in areas of high migrant social capital, that a parent might have multiple sons move to the city with their families.

fertility declines, not only does the total number of support options decline, but fewer parents will have access to two sons to perform urban and rural activities and declining age diversity of family members will limit the role of life course transition in mobilizing alternate sources of care. This sets the stage for a set of complex mechanisms for elderly support, made more complex by rapid changes in both the opportunity and need for spatial separation. While it is unlikely that parents can anticipate and prevent catastrophic outcomes even outside an era of rapid transition and fragility, qualitative evidence points to a number of mechanisms that provide such security.

Higher fertility is one possible strategy, but current trends in fertility decline suggest that it is clearly no longer the most prominent means of securing support. Within the context of rapid fertility decline, however, families exposed to a high level of economic risk and a high likelihood of future son's migration may try to ensure having two sons rather than one.[11] Within that strategy, parents may attempt to use educational investments and upbringing to point one son towards migration and one towards remaining in the origin village. Such strategies do not reveal elegant, obvious patterns of investment for achieving these goals. Supposing parents recognize that one of two closely spaced sons is more talented, intensive educational investment in the more skilled son might create more income gains, but it might also free the son from any need to maintain parental ties. Parents in areas of strong past migration experience and near to cities can use social networks to maximize incomes without making risky educational investments and to enforce migrant loyalty, but they also run the risk of having both sons migrate to the city. Furthermore, sons are not necessarily closely spaced, even in small families.

In the qualitative research, a number of far more complex life-course strategies emerged, and these largely diverged from those espoused in heated focus group and informal discussions on the ideal set of children. In a number of families, an older brother worked in an urban factory long enough for a younger brother to complete college. Once the younger son had finished college, then the older brother returned home while the younger brother entered a salaried job in

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[11] This may provide some clues to the slowing of fertility decline during the mid- and late 1990's.

the city. Alternately, one parent with greater assets and a greater threshold for sustaining risk, expended land to finance his oldest son's education. In this case, the hope was that by the time his second and third sons were older, the oldest son would be able to finance higher education for the more successful of the two remaining sons.

Even in a period of large completed family sizes, a number of families having no sons or having only migrant sons employed other strategies to secure direct old age support. These strategies can best be seen by the mobilization of daughters in parental support. Daughters provide care and housework prior to marriage, and women's ages at marriage in Matlab have been rising in recent years, allowing them to provide more care in their natal homes (Foster and Khan 1999). Unmarried daughters also migrate to cities to work in the garment industry. Migration removes daughters from the household, but it also allows daughters to bear some of their own dowry costs as well as the costs of younger siblings' education. In one urban interview, Zubaida and Nilu lived in the city together, working in garment factories in part to raise money for their younger brother's education. After he had completed primary school, they also arranged for him to stay with them and attend an urban secondary school. In this way, daughters' moves can be strategically arranged to fill some of the roles typically played by sons, creating a side effect of rapid adolescent social transition and identity formation for young women (Amin et al. 1998).

Following marriage, there is a great deal of room for daughter-parent support after marriage. Given the high level of parental control over a daughter's marital decision, parents can arrange for daughters to be married in closer proximity if their sons are unlikely to provide local support and care. Given that parents lacking in social and economic resources are unlikely to have contacts outside their villages, the population most vulnerable to family migration is also the population most likely to have daughters in close proximity. While a daughter's opportunity to care for her parents is constrained by obligations to her husband and his parents, almost all rural elderly reported seeing their daughters regularly and a number had received extensive health care and nursing during times of health crisis.

For women who have married a current individual migrant, it is quite common for her to

remain with her parents or maintain joint residence prior to her own migration, his return migration, or childbearing. This is another source of support that can at least be utilized for a few years, perhaps until the life-course nets some other alternative. In all of these cases, increasing investments in daughters' education may permit greater access to daughters' support by increasing empowerment, increasing labor force participation and attracting better-educated spouses. In that respect, Zubaida and Nilu might have been better placed both to find husbands in the city, their stated desire, or to find better educated husbands in the rural area.

The most extreme case of continued support from daughters, but one that was a common choice for parents without sons even before the emergence of labor migration, involves a daughter who remains in her parents' household permanently after marriage. For parents who lack sons but have some physical resources, daughters can marry men of lower wealth or status, and a son-in-law can become *ghar jamais*, which literally means to be living in someone else's home. In such a case, a son-in-law would fulfill the typical roles of a son, daughter's support would be guaranteed, and inheritance would pass to this couple's children.

These examples of long-term support from daughters, *ghar jamais* in particular, also demonstrate the role of physical resources and weak social ties as substitutes for strong social ties even in areas lacking in formal markets for caregiving. Parents in particularly strong economic positions can hire caretakers through the local labor market or patronage relationships. Parents of particularly successful children or parents who financed their children's businesses may also be able to move to the homes of wealthy children in the city. Although their own urban migration was a topic about which most parents expressed distress, many also knew that it might be their only option for care from a family member and were willing to accept it. Moving to the city in old age was often more acceptable to those who had some past experience in the city, but since a large majority of oldest old are women, the combination was not common. In the end, most who eventually moved to the city did so only after an ultimatum from wealthy, independent children who were unwilling to provide care in the village. The undesirability of this option also resulted in a set of complex solutions in which parents moved between the homes of urban and rural children on a rotating basis.

The reduction in care resulting from family migration is mitigated by substitution of alternate sources of support. While sources of care are not always coordinated directly by parents, they can compensate by maintaining access to a number of options, by planning their household strategies with an eye towards future transitions, and by maintaining strong cooperative relations with children. These efforts at coordination, however, have the potential to diminish with increasing parental age and infirmity. They also become more complex with decreasing number of children, decreasing diversity of children in terms of life-course stage, and increasing independence of children. When cohorts with low completed childbearing reach old age in an environment of increased migration and decreased rural security assets, alternatives for care giving may decline and the overall risk of falling through the cracks may increase. This introduces the need for further extensification of informal social resources, increasing rural-urban migration among the elderly, marginal government efforts at institutional provision of elderly support, and continued support from migrants through a combination of financial transfers and timed personal support.

VI. The Impact of Family Migration on Support

This section looks at the actual net loss of support from a specific migrating nuclear family. In the same way that family migration is most likely to occur when its impact is most likely to be muted, it is also largely true that the loss of the specific child's support due to family migration is most complete when the child's support is indispensable and the loss would be most damaging. In this sense, where the previous section offered insight into how parents substitute for the lost support of the family migrants, the current section looks at how family migrants may continue to play a small but complementary role in support. Support from family migrants, which occurs largely in times of greatest parental need and largely in response to parental need, can often be crucial in allowing other siblings to postpone their own parental financial obligations in favor of timely investments (Kuhn 2001). Results are structured according to the hierarchy of support, looking separately at financial support and personal care.

Financial Support from Migrants

Table 1 gives an idea of the basic structure of financial transfers from non-householder children to older parents living in Matlab. While all children provide, on average, some net contribution to parents, this contribution comes primarily from sons, who provide 97% of net transfers receipts in spite of being outnumbered by non-householder daughters. Net transfer receipts are also heavily weighted towards children living outside of the district (21% of net receipts from 37% of non-household children) or outside the country (75% of net receipts from 9% of children). This reflects to a certain extent the role of intersectoral cooperation between migrants and their parents while also reflecting an overwhelming pattern of migrants compensating for their absence by providing financial support. Although international migrant transfers comprise an overwhelming proportion of transfers by value, these receipts also include service of debts incurred in financing international moves. Internal migration also represents a more comprehensive process, with 40% of respondents having a son outside the district compared to 9% having a son outside the country.

The impact of family migration on financial support is complex, and transfers are the aspect of parental support that has prompted the most quantitative study. Studies in other settings have shown that having a spouse in the city reduces the overall flow of transfers. In Kenya, having a spouse in the city reduced the likelihood of sending any transfer (Rempel and Lobdell 1976), while the overall value of transfers was reduced in India (Banerjee 1981). Similar results hold for international migrants from Mexico to the United States (Durand et al. 1996). The rough data in Table 3 suggest that family migrants send half as much income in a given year as married migrants with wives in the rural area, but still more than unmarried migrants. These numbers in themselves can be misleading, since family migrants are likely to be more educated, more senior, and have higher incomes. More importantly, since family migration is largely a permanent state while individual migration a transient one, cross-sectional data pick up only a small proportion of those rural males who may at one point in time live alone in the city. The family migrants represented in this sample include a group that is likely selected for economic success and accumulation of human capital. All of these factors suggest that Table 3 may underestimate the true decline in transfer activity resulting from family migration.

The general finding that family migrants send fewer transfers than married individual migrants should come as no surprise given that a migrant's spouse and children, like his parents, claim at least a portion of his income. Perhaps because it is so obvious, little research has focused explicitly on the role of family migration on transfers. A more important claim of the family migration model, however, suggests that remittances might drop to zero rather than merely declining proportionate to the amount of transfer income that would have been consumed directly by a migrant's wife and children (Kuhn 1999). Family migration is also likely to result in changes in the determinants of transfer behavior as the child-parent relationship shifts from a combination of exchange and altruism to a combination of indifference and altruism. Table 3 suggests that, in addition to sending fewer transfers, family migrants also receive almost no transfers from their parents, reflecting a relationship structured more around uni-directional support, *implicit* exchange, and future inheritance rather than the more directly exchange-oriented relationship for individual migrants. In spite of observed relationships, many changes in the transfer pattern are not unexpected by parents and may be large only when parents can effectively compensate for the loss of transfer income through substitution of other sources. In such a case, the causal link between declining transfers from a given child and declining parental health or well-being is difficult to model without casting an eye for selection.

Understanding the transfer relationship, particularly in the context of a causal statistical model, is also quite difficult. Given that quantitative models of transfer behavior in Bangladesh and other settings have found a positive association between parental assets and transfers (due to children's motivations for inheritance and economic cooperation (Lucas and Stark 1988; Durand et al. 1995; Stark 1995), one hypothesis of transfer behavior would suggest a lower level of responsiveness to parental assets among family migrants because they are less concerned with rural economic activities. Another would suggest higher responsiveness because individual migrants would simply transfer as much as possible irrespective of parental assets. Altruistic models that support a negative income-transfer association (due to parental need and the desire to secure parental assets from liquidation) might suggest a stronger income association for family migrants because transfers are based solely on affection for parents rather than on economic self-

interest, but the association may also be weaker because children have fewer parental obligations (Lillard and Willis 1997; Lillard et al. 1999).

When thinking about the impact of a migrant son's attributes on his parent's transfer receipts, there are also two perspectives from which to analyze transfer value (Lillard et al. 1999). From the parents' perspective, transfers can be expressed as a simple amount of income received. But from the migrant's perspective, transfers are a function of earnings, job-related benefits, urban expenses and obligations, and the proportion of income or surplus income that is actually transferred. Without this decomposition, it is difficult to fully understand the extent of a migrant's investment in his rural household or to predict the returns that parents may receive from investments such as children's education, business formation and international migration, all of which may enhance productivity but diminish dependence on parental resources.

Educational investments, while a primary means of exchanging quantity of children for quality, represent not only an investment of great uncertainty, but also an investment that is not exclusively an investment. Educational expenditures may increase according to non-monetary goals for children, different value systems, and government regulations. In the same vein, government subsidies can influence the costs and opportunity costs of a year of schooling. A similar logic can apply to other parental investment that may enhance children's income, but few operate in as complex and uncertain a fashion.

An illustration of the complexity of each of these aspects of the transfer relationship comes from two qualitative case studies. A professional migrant (referred to here as "Halim Miah") lives in Dhaka with his wife and son, and earned 120,000 taka ($2550) during the year prior to the study. Of this, he sent 9,000 taka ($190) to his elderly, landed father, Mahfuz. Halim had received a Bachelor's Degree (a two year degree) from a small college. Another migrant, referred to as "Rafique", works in a shop in Dhaka, lives alone on the premises, and sent 8,000 taka ($170) out of a salary of only 22,000 taka ($470) to his father Hannan. While Halim has secured his long-term urban tenure by purchasing a small flat, Rafique intended to return to the village in a few years, to be with his wife, children and father.

In spite of Halim's higher income, he expended a similar portion of his urban income on

food and housing as Rafique because his wife and children live with him. Whereas Halim had a 60,000 taka surplus after his basic consumption (thus remitting 15% of surplus), Rafique had 11,000 taka available and remitted roughly 70%. In the interviews, it became clear that the difference in proportion of surplus income transferred resulted from different investment strategies. Mahfuz, Halim's dad, had alternate sources of income and other rural sons to provide care and work on his land, so Halim's transfers were primarily a supplementary source of income. Halim was free to use the remaining 50,000 taka in urban land, business and securities markets. Rafique, almost certain to retire in the rural area, sent money not only to support his father, wife and children, but also to contribute to agricultural expenditures in the household.

Considering investments in children, Rafique had achieved seven years of schooling. To pay for this, Hannan had made a small financial investment, which included liquidation of a small plot of land, and he had lost some of Rafique's potential agricultural labor during childhood. This investment actually involved more sacrifice and more forgone income than Halim's father's investment in 14 years of schooling. Since Hannan had deprived himself of some productive assets to educate his son, there appeared to be some understanding that Rafique would supplement his father's income and try to replace the land that had been sold, to benefit both his father and his own long-term future. Mahfuz had sacrificed very little for Halim's education and expected very little from him in return, yet he still experienced a return on his educational expenditure by virtue of Halim's high earnings.

Productive investment of transfers is subject to increasing returns to scale and is dependent on the availability of complementary assets. While Rafique's 7,000 taka remittance comprised a far larger portion of his father's household budget than Halim's 9,000 taka, it was also accompanied by far less complementary income from rural agricultural and business activities. If Halim's father were able to balance his budget in a given year without transfers (he wasn't in this particular year, but was not far off), the transfer income could be invested in land, housing improvement, and durable good purchases. For Rafique's father's, there was almost no chance that his income net of transfers would balance his consumption, so Rafique's transfers

were only invested in small and infrequent increments.[12]

In comparing these cases, it is clear that transfers of roughly similar value do not have similar impacts. Not only would the elimination of Rafique's transfer have a far greater impact on his father's consumption, but there is also a clear set of circumstances under which Rafique's transfers could cease. If only 37% of Rafique's income reached home while he was living alone in the city, it is easy to see how that could quickly drop to zero if his wife were to move to the city. While Rafique expressed no plans to alter his current living situation and he was aware of the constraints that prevented active pursuit of an urban-focused investment strategy, he also seemed to have a vague hope that his shop would be unexpectedly successful and he would be able to settle in the city without sacrifice. This logic crystallizes much of the distinction between Bangladesh, where economic success is the unlikely result of a combination of opportunity, aggressiveness and fortune, and economies like Taiwan and South Korea, where rapid economic growth and national planning allowed even the most risk averse, rural-oriented migrants to finance urban settlement. Rafique did not talk about an alternate but perhaps more likely scenario in which his father's land holdings decline and his remaining rural brother leaves the village, precipitating his wife's migration to the city due to inadequate rural security.

In contrast to Rafique's situation, Halim's transfers could potentially rise far above 7,000 taka level if Mahfuz were to experience a health or financial crisis. In the past, when his income was lower but he was not married, Halim had sent not only a higher proportion of his income to his father, but also a higher total amount. The low proportion of income transferred in this case represents a life-course transition away from parental transfers, but Mahfuz had to some extent anticipated and approved of this transition. Mahfuz expected transfers to continue their decline in coming years, but expressed a mixture of hope and concern about the possibility of future transfers if his health deteriorated. He knew that in Halim's current life course situation, his own

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[12] While these examples do not touch on the issue, the effectiveness of investments, particularly poorly capitalized ones, depends on access to other productive assets, credit, rural social networks, and available labor within the household. Declines in any of these attributes, by reducing the efficacy of transfer investment, can also reduce the migrant's overall utility gained from urban-rural cooperation.

nuclear family came first and there were few incentives to help his father. He also took comfort in the local support options and physical resources that allowed him to be largely unconcerned with Halim's investments. On the other hand, a combination of extreme risk aversion, ambitions of patriarchy, and a feeling that his local sons were not as dependable or industrious as Halim gave him cause for concern. In such a case, he felt that allowing Halim to reduce his annual contribution and go his own way could create the kind of goodwill and financial flexibility that might encourage a major financial contribution if he were to require surgery or chronic medical care in coming years.

While joint residence between parents and daughters-in-law precludes a decision of helping one's wife versus one's parents, qualitative respondents typically refer to remittances as being primarily for the benefit of their wives and children in spite of typically routing them through their fathers. One set of interviews focused on the lives of one urban brother who worked as a guard at a foreign embassy after having received 10 years of education (Bashir), his uneducated brother who worked their joint land holdings (Arafat), and their widowed but active mother (Khurshida). Bashir sent a substantial amount of money to Khurshida and Arafat jointly (about 15,000 taka yearly), who expended this money for the consumption of a joint household including Khurshida, Arafat, Arafat's wife and two children, and Bashir's wife and two children.

While Bashir spoke mostly of his wife's welfare in an interview that took place in Dhaka, all economic decisions were made by Khurshida and Arafat, and both clearly benefited from transfer expenditure. Arafat particularly benefited since he stood to inherit half of any land gained from investment of Bashir's transfers. Bashir acknowledged Arafat's agricultural contribution and the assistance Arafat provided to his wife, but he also suspected that Arafat was not pulling his weight; Bashir had begun to save some of his urban income separately. While Bashir thought about separating from his brother and bringing his wife and children to the city, he had no immediate plans to do so as long as his mother was alive.

While children clearly aren't so mercenary as to move their families to the city with a plan of alienating and cutting off their parents, their newfound urban focus and the constraints of family migration may cause support to wither over time. The slum-dwelling family migrants in

the qualitative sample were able to send at most 2,000 taka to their parents in a year and a more common transfer involved closer to 500 taka in a year plus the purchase of clothing during one of the *Eid* festivals. For households with short financial horizons, the qualitative data do show how a number of migrant and non-migrant brothers use elaborate arrangements for the concurrent sharing of parental financial support even after family migration and separation from their parents.

Milon was living in a slum on the embankment of the Buriganga River in Dhaka and expressed little desire to return to his village. He often referred in his interview to the inhumanity of village social life, citing a slum as a much more effective place to get loans and help than in a village. Yet Milon, his one family migrant brother, and his two non-migrant brothers, all officially separated from their father, had put together a surprisingly codified financing plan for their father. Each son, whether migrant or non-migrant, was expected to contribute roughly 600 taka ($12.80) per year to his father and mother and a piece of clothing for each during the *Eid* festival. While short-term contributions from all sides were equal, the two urban brothers were also busy building urban social support mechanisms and educating their children in urban schools, avoiding any fallout from the eventual liquidation of most of their parents' limited land holdings. The rural brothers were not so lucky given that they could expect to pass a longer retirement than their parents while holding less land and having fewer children.[13]

While the value of migrant transfers may decline with family migration, transfers also represent a way in which a family migrant can mitigate some of the deleterious effects of family migration and in which they can provide a crucial yet low cost form of support. In cases where budget constraints and risk horizons are on the high side, a more rapid transition to small irregular transfers from one son may facilitate mobilization of this resource at a crucial moment. Such a strategy is rarely feasible, however, and even more rarely executable; even secure respondents such as Mahfuz expressed tension over their current level of insecurity amid a

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[13] Non-migrant brothers' best hopes for old age lay with their children's' future migration opportunities. These are dependent on social support from migrant brothers, who may often compensate for differential opportunities by bringing a nephew, the son of a non-migrant brother, into their own business.

changing economic landscape. While diversification of support between children and over the life course can allow the provision of personal and financial support from different sources, demographic and economic changes can bring pressure on their effectiveness. To say that the elderly are wary and vocal on the subject of undesired transition is almost a truism in any society in any era, but informality and rapid transition create a very real need to manage change and a need to convert financial resources into a meaningful substitute for personal support without the benefit of explicit markets for care.

Continued Personal Support after Family Migration

The impact of family migration on migrant visits operates with similar layering to the transfer process. Variation in frequency of migrant visits depends to a great extent on the location of the migrant's spouse, but it also depends on, among other things, parental resources, parental needs and the distance between origin and destination area. Matlab is only six hours from Dhaka during any season of the year and it is no more than eight hours from any of its primary internal destination areas. Because of this, visits by individual migrants from Matlab tend to be frequent, with no individual migrant in the Matlab qualitative sample visiting less than once every two months. Most visited on a monthly basis, but few visited any more frequently. Individual migrants from more distant origin areas, particularly in Barisal Division in the southwest, tended to accumulate larger chunks of leave time over a longer period in order to maximize the value of long trips.[14]

Family migrants from Matlab visited far less than married individual migrants, typically visiting between one and four times per year. Family migrants from areas near Barisal were unlikely to visit more than once during a year and many did not even visit that frequently. For family migrants, visits are constrained not only by urban obligations but also by the costs of transporting an entire family to the village. Additionally, since many family migrants in slums hold casual employment, village visits entail not only expenditure, but also opportunity costs for

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[14] The other major migrant-sending belt in Barisal Division typically involves an 18-hour trip, at somewhat more peril and six times the cost).

each day of lost labor. For family migrants, it was in fact the difficulty and cost of making frequent visits that had often precipitated family migration. Most migrants placed the direct costs of a three-day visit from Dhaka to Barisal of 500 taka (almost for day's salary for a daily wager), not including opportunity costs or the inevitable cost of gifts and additional transfer demands from parents.

Family migration does not eliminate the potential for urban-rural visits, but it does reduce the overall likelihood. Much of the activity conducted on a rural visit, while benefiting both spouse and parents, is taken for the benefit of the spouse's security and well being. Frequent rural visits by individual migrants also provide an opportunity for a migrant to actually see his wife and children. Given family migration, these motivations for visiting are eliminated, plus the migrant may feel an increased need to focus on urban activities rather than making visits.

Elderly parents can feel the burden of a son's lost labor in numerous ways, but this assistance is probably not as important for day-to-day survival as the assistance provided by daughters-in-law. As parents-in-law reach older ages, a woman's obligations of household work and agricultural labor are accompanied by activities of care giving. Some qualitative case studies suggest that, other things being equal, these very obligations can create some motivation for daughters-in-law to want to leave the rural area. Migration by a specific daughter-in-law does not eliminate the possibility of her continuing to provide care in times of crisis. While the moves of married women are rarely reversible unless their husbands return as well, numerous women in the field study had traveled alone to the village of their parents-in-law to provide care for periods of up to six months.

In families where family size, family diversity, or wealth allows effective substitution of one care giver with another, these temporary moves are not necessary. When it is necessary, however, moving to the rural area for a short period of care giving may still be more economically feasible than forgoing the entire migration process in order to care for parents. In one case study, an individual migrant had brought his wife and children to the city for security and to further his children's education. Now that his oldest son had grown older, it was possible for his wife to travel to the rural area with her son and provide care for his ailing father. He

would return to his father's village when possible, but far less frequently.

While sons' monthly or bi-monthly visits involve the conduct of a wide range of activity essential to maintaining the delicate balance of a system of individual rural-urban migration, the visits that render such a system feasible are visits of up to two weeks during the yearly rice harvest. While not all rural-urban migrants return to their villages during harvests, this practice is particularly prevalent among workers in the industry traditionally at the core of the individual migration economy: jute processing mills.[15] In this industry and in other small industries, workers are also frequently part-time agriculturalists, providing an important source of labor during the period of peak wages. By offering flexible leave-time during peak agricultural periods, mills contribute to their workers' land tenure, which in turn limits a number of potential costs that otherwise might be expected of a wage or benefits package. Most of the current jute mill workers and spouses of absent jute mill workers in Matlabi villages reported return visits during the harvest, which is staggered over different sending regions and thus does not completely shut down a mill during any one week. Mill workers return at the very least for a couple of days to contract laborers and arrange for the sale of crops, but most would actually come to their villages for the entire harvest period, participating in the harvest as if they were permanent members of their households.

Visits occurring on a more regular basis include many personal, business, and community activities. In a sense, a migrant attempts to fulfill as many obligations and satisfy as many needs as possible given an absence of a month or more on either side of the current long weekend. While some parents may purchase their own groceries and purchase groceries for daughters-in-law, they will often purchase them on margin with the understanding that migrants will settle the debts during their visits. In addition to shopping, migrants also conduct other household

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[15] Although their importance has precipitously declined in recent years, jute mills for many years represented Bangladesh's top source of foreign capital. As an entirely export-oriented industry, the jute processing industry had a particular interest in maintaining low production costs. To keep costs low, employees were encouraged to migrate alone both by generally low salaries at mills and by direct subsidies for bachelor housing, subsidies that were removed from paychecks irrespective of whether a migrant utilized bachelor housing or lived off site with his family. Living with family at a jute mill entailed lost income and mills were typically located in mill towns that were not friendly to families and had public services that did not live up to typical urban standards.

activities such as business with relatives and neighbors, making arrangements for their wives' consumption needs in their absence, and hiring agricultural laborers or sharecroppers for any agricultural activities conducted in their absence. Community activities are also important, including paying courtesy calls to local patrons and horizontal family relations and participating in the *salish,* the village court.

Continued migrant activity in the rural household economy is unlikely once a son has undertaken family migration. Harvest visits are unlikely both because of the opportunity costs of lost work and because family migrants are often not concerned with the outcome of his origin household's agricultural activities. The assistance that sons provide on these rural visits can also come from competing sources such as other sons, sons-in-law, and other contacts in the village, while many agricultural households can use reciprocal labor-sharing arrangements to generate extra labor during the harvest peak. Much of a son's lost labor may be replaced by contracting wage laborers, however, and transfers may be unlikely to cover the costs of incurring these laborers.[16] For families having few sons or only family migrant sons, the costs of hiring wage labor reduce expected agricultural profits, often below the point of profitability. Poorer parents may liquidate these lands to substitute for lost transfer income while wealthier households may liquidate land in favor of urban economic investments, maintaining a small amount of land largely as a symbol of the family's continued rural presence. In cases of land liquidation, a combination of lost migrant transfers and lost complementary labor from migrants may result in behavior that damages the long-term financial security of non-migrant brothers.

VII. Conclusion: Tradeoffs in Support from Multiple Children

This paper has used qualitative data and basic quantitative data to analyze the impact of rapid transitions in mobility and aging on social support of elderly Bangladeshis. As an essential source of income and security in an economy where most jobs and most returns to education are

[16] It should also be noted that the parents of family migrants are often not as likely to own land (Kuhn 2000), and thus do not require this form of assistance. This is one way that family migration does not have a stronger impact on those lacking resources.

highly centralized, migration is inevitable in numerous communities and families. While migration frequently serves as an opportunity for families to transcend spatial boundaries in creating security through diversity, it can also serve to sever many of the social and economic bonds underpinning the primary role of children, particularly sons, in providing parental support. A qualitative analysis of the transition from individual to family migration permits a deconstruction of a particular aspect of mobility and economics while offering suggestions about a set of broader transitions: from large families to small ones, from a rural society to an urban one, and (potentially) from an agrarian economy to one driven by industry and information.

All reasonable research and projections suggest an ongoing and irreversible family and mobility transition. Declining fertility, declining mortality and increasing migration raise the ratio of older rural people to younger urban people. Population density, rural land markets and urban economic growth raise the prospects of urban areas relative to rural areas. At the same time, the practice of migration may spread towards regions and communities where social and spatial barriers limit the effectiveness of urban-rural cooperation. These changes could threaten elderly health and well being as the relative per capita costs of parental support and the transactional costs associated with this system outstrip marginal gains in economic output and income. This raises concern that uncertain parental investments in children, which constitute a majority of private rural-urban transfers at the macro level, could dry up.

Preceding sections have presented a picture of an elderly security system that is complex and tenuous, particularly in an era of rapid transition, but one that is ultimately resilient. Its complexity is largely a result of its informality, which is itself necessitated by limited government resources. An informal system of old age support, while not ideal, does tend to encourage high rates of savings and investment, high rates of private transfer in both directions, and high rates of foreign capital penetration (Willis 1982). A similar form of informality may have driven historically unprecedented rates of economic growth in other settings within Asia where some combination of planning, politics, ecology, education, foreign trade and foreign investment generated subtle but overwhelming differences in economic trajectory. With growth, rising budget constraints added further fuel to these initial engines of growth.

The primary substantive sections of the paper center on two approaches to adapting an entrenched system of informal support to a set of inevitable family and mobility transitions. One involves substitution, typically including a set of life-course tradeoffs in which 1) children with access to labor markets trade financial support for personal support offered by those outside the labor market; or 2) children of different ages trade support obligations as they pass through distinct life stages (skills accumulation and limited support; high income and intensive support; and high income with infrequent support). This approach, which lends itself well to aggressive family building and investment strategies, suffers from two limitations to universal adoption. First, it may still hinge on above-replacement fertility and on active participation of all children regardless of gender. Second, it assumes a long-term planning horizon far longer than what is reasonable for mainstream rural households in Bangladesh. This second problem is particularly relevant when rapid social transition temporarily prevents effective forecasting of children's future activities.

In something of a paradox, this type of long-range planning is probably unnecessary in settings of rapid economic growth while it is only feasible in settings of low growth when financial and social budget constraints are almost limitless. In the qualitative research, an undistilled form of these tradeoffs did not occur as part of a noticeable quality-quantity tradeoff so much as they occurred in households with large land resources, social and political power, and *numerous highly educated* children. Such households, already endowed with greater wealth and power than their neighbors, can use the strategic advantage of division of labor and mutual cooperation to make the jump from landed peasant to spatially transcendent power elite within just one or two generations.

At the opposite extreme, the prevailing approach involves concurrent provision of complementary support from all possible sources, with limited tradeoffs between personal and financial support. When contributions from the top tier are insufficient or eliminated, the lower tiers do not assume the entire obligation; their support is merely added to whatever the top tier can provide. Rather than making a life-course transition out of support obligations, absent or disinterested sources in the top tier provide what they can, when they can, in spite of economic

or spatial constraints. At its extreme, two rather stark truths apply to this approach. First, the term strategy does not apply. Lower tiers are not mobilized because a role was anticipated, but because there are no other options. Unified financial and personal support at the top tier is rarely possible, thus limiting the desire to invest heavily in any one source. Second, complementarity reaches the point of universality. Even members of the support network whose roles appear completely marginal – the estranged, the deceased – play indispensable roles. The effectiveness of this non-strategy, even close to the margins of poverty, is sociologically impressive for its perseverance, but economically regressive for its comprehensiveness. When individuals with a financial comparative advantage and a spatial disadvantage are forced to provide care, when individuals with no financial advantage are expected to make cash contributions, and when personal investment strategies are constrained by shared obligations, the potential drags on productivity and investment are clear and demonstrable (Kuhn 2001).

For the majority of the population who are neither occupied by dynastic ambitions nor by persistent threat of crisis, prevailing strategies to secure economic support and personal care in older ages involve a mix of these two strategies. Because some households do have some scope for long-term planning and because some strategy is almost always better than no strategy at all, households enact the full range of strategic and serial responses to transition outlined in the body of this paper. As transition accelerates and rapid adjustments are needed in the midst of the best planned, best executed strategies, a number of family strategies that were historically acceptable only when other options had failed become institutionalized through increased practice, eventually becoming accepted strategy. Because of this tension and because of economic and ecological constraints, small families were becoming a common strategy even as research was just beginning to demonstrate the props to large family sizes (Cain 1979). Because of this tension, women's labor market participation became an accepted engine of economic growth even as people questioned the feasibility of a female-oriented garments sector in a society dominated by the practice of *purdah*. Because of this tension, unmet need for economic diversification drove Bangladeshis to pioneer large-scale institutional networks of micro-finance. And because of this tension, parents may someday accept migration to children's urban homes as

a viable alternative.

Using family-building and investment strategy to plan for one's own informal support in old age is always a difficult proposition, even when a process with the *relative* predictability of mortality drives most of the uncertainty. When the uncertainty is driven instead by trading numeric diversification of support options for spatial and economic diversification of only a few options, strategies become even more tenuous. As a dominant means of entry into the cash economy, migration represents both a potential loss and a potential gain. In the first era of such a transition, even social learning is not an adequate guide. But economic and ecological constraints make this transition theoretically understandable and empirically very real, and it presents unique options for future economic, demographic, and spatial planning. As long as strategy is likely to help, and households are comfortable managing the variance, then strategies are worth making; the alternative is certain marginalization (Jensen 1987). In Bangladesh, households execute strategies along these lines, based on a combination of social learning, expected outcome, and instinct. Explicit strategies are executed with the knowledge that the expected outcomes are not much higher than the outcomes of the non-strategies, but flexibility and family cohesion allow rapid reversion to secondary sources of support and extensification into previously unexplored sources. Increasingly, governmental and non-governmental institutions play an important role as well. Strategies are executed and revised and abandoned with a kind of "fuzzy logic" appropriate to the level of risk.

Meaningful economic and social policy, driven by effective causal modeling, must be ever mindful of this fuzziness and the potential for both local and global changes to induce unexpected transitions in economic and social practice. Such analysis can best be conducted through the iterative and complementary application of empirical quantitative analysis, rich qualitative observation, and first-hand historical and contextual understanding. Without such an approach, the certainty offered by experimental design and robust data analysis is hollow. Without such an approach, statistical projections of future economic and demographic needs offer little in the way of context or confidence. While it is impossible to anticipate the substance of a particular social evolution or adaptation, history has taught us that evolution will always

occur where constraints cannot be loosened, and that its form will be only slightly different from what has come before it. When social policy is unable to effectively loosen constraints, as in much of the developing world, its most appropriate role may be in creating comprehensive and equal opportunity for citizens to find their own form of evolution.

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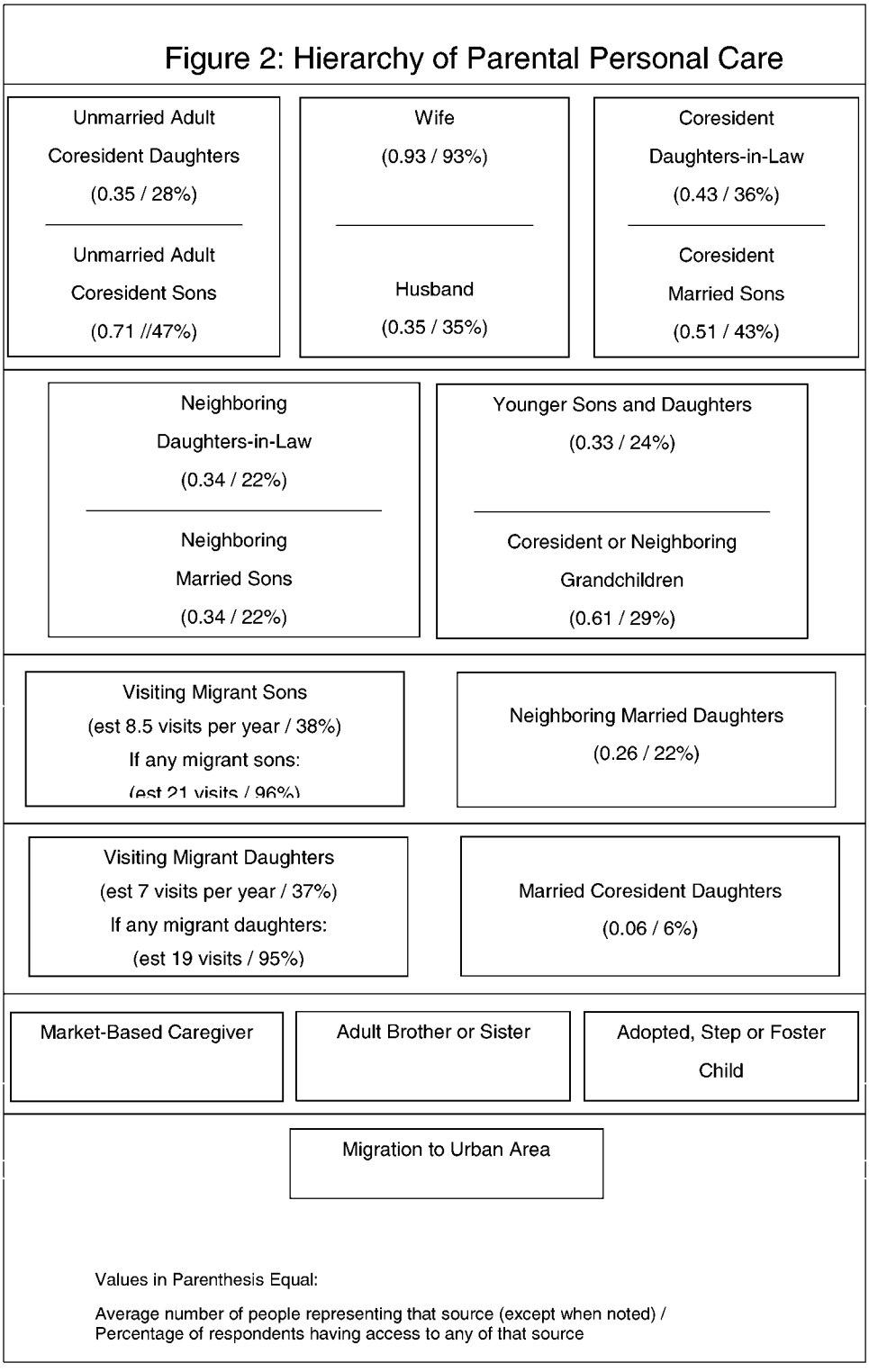
Figure 1: Hierarchy of Parental Financial Support

Values in Parenthesis Equal:

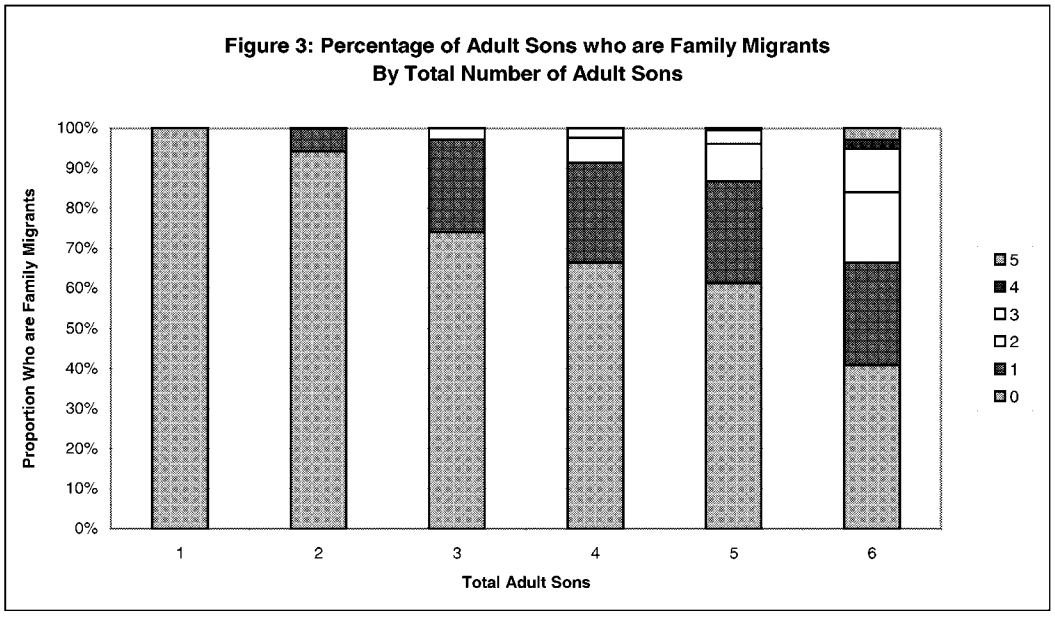
Total net value of source to average household (unconditional on any receipt) /
Percent of respondents experiencing net gain from source
Percent of respondents experiencing net gain > 1000tk
45tk = $1U

Figure 2: Hierarchy of Parental Personal Care

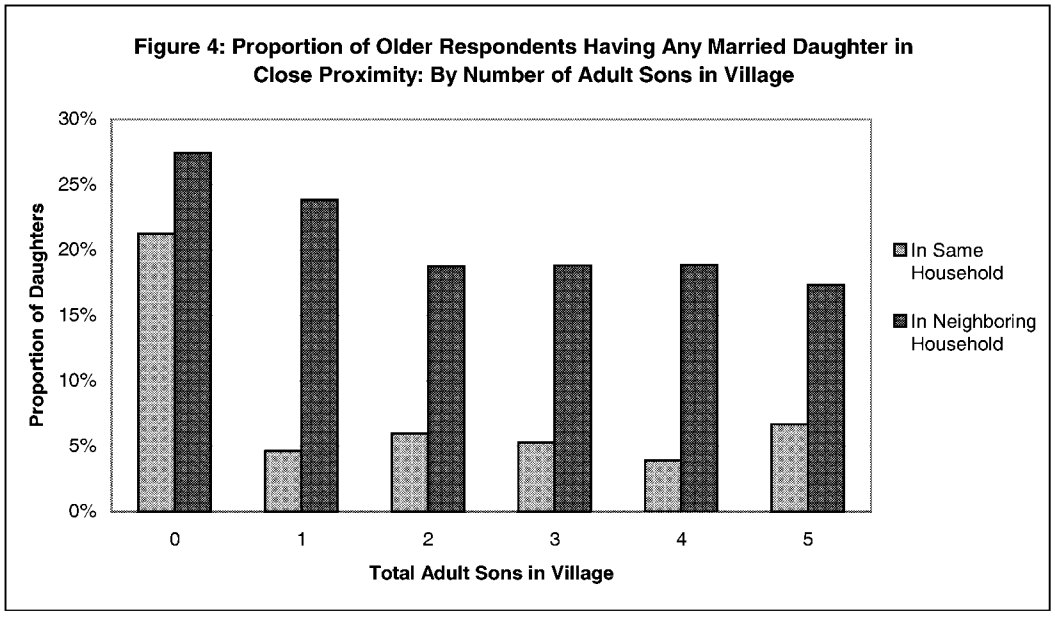


Values in Parenthesis Equal:

Average number of people representing that source (except when noted) /
Percentage of respondents having access to any of that source



Source: Matlab Health and Socioeconomic Survey (1996)



Source: Matlab Health and Socioeconomic Survey (1996)

Table 1:
National Urbanization and GDP in Copmparison, Asia and Latin America

Asia	1980				1998			
	% Urban		GDP / Capita		% Urban		GDP / Capita	
Bangladesh	14	(12)	175	(12)	24	(9)	361	(11)
Thailand	17	(11)	696	(4)	21	(11)	1823	(4)
Vietnam	19	(10)	514	(7)	20	(12)	350	(12)
China	20	(9)	310	(9)	32	(7)	762	(7)
Indonesia	22	(7T)	587	(6)	40	(5)	461	(9)
Sri Lanka	22	(7T)	273	(10)	23	(10)	830	(6)
India	23	(6)	258	(11)	28	(8)	429	(10)
Pakistan	28	(5)	313	(8)	36	(6)	487	(8)
Philippines	38	(4)	672	(5)	58	(3)	886	(5)
Malaysia	42	(3)	1780	(2)	57	(4)	3411	(3)
Korea, Rep of	57	(2)	1632	(3)	81	(1)	6843	(2)
Japan	76	(1)	9071	(1)	79	(2)	30177	(1)
Mean	25%		$799		34%		$1915	
SD	13%		$1919		13%		$5843	
Urban vs GDP R^2	0.86				0.62			
Urban vs GDP Cubic R^2	0.93				0.78			
Urban Diff vs. GDP(Ratio) R^2	0.01							
Urban Diff vs. Annual GDP Growth R^2	0.00							

Latin America	1980				1998			
	% Urban		GDP / Capita		% Urban		GDP / Capita	
Guatemala	37	(12)	1139	(10)	39	(12)	1755	(10)
El Salvador	42	(11)	864	(12)	46	(11)	1883	(9)
Ecuador	46	(10)	1444	(6)	64	(9T)	1581	(12)
Dominican Republic	51	(9)	1254	(7)	64	(9T)	1702	(11)
Colombia	64	(8)	1022	(11)	73	(8)	2597	(7)
Peru	65	(7)	1194	(9)	72	(7)	2399	(8)
Brazil	66	(5T)	1228	(8)	81	(5)	4552	(4)
Mexico	66	(5T)	2899	(4)	74	(6)	4199	(5)
Venezuela	79	(4)	4650	(2)	87	(3)	4115	(6)
Chile	81	(3)	2540	(5)	85	(4)	5042	(3)
Argentina	83	(2)	7478	(1)	90	(2)	8341	(1)
Uruguay	85	(1)	4489	(3)	91	(1)	6886	(2)
Mean	67%		$2354		77%		$4252	
SD	9%		$1872		9%		$1571	
Urban vs GDP R^2	0.48				0.57			
Urban vs GDP Cubic R^2	0.49				0.69			
Urban Difference vs. GDP(Ratio)	0.58							
Urban Difference vs. Annual GDP	0.46							

Sources: International Monetary Fund Data; World Bank World Development Report 2000

Table 2: Transfers from Non-Resident Children to Couples in Matlab
One Spouse Age 50+

	Total Children	Total Sent In	Total Sent Out	Total Net Receipt
All Children	4,949	2,778	361	2,417
Male	2,016	6,371	681	5,689
Female	2,933	309	142	167
In Village	914	358	59	299
In District	1,764	276	213	64
Out of District	1,824	1,677	275	1,402
Out of Country	447	22,095	1,922	20,173
Out of District				
Male	939	2,862	434	2,428
Female	885	419	106	313
Males out of District				
Unmarried	311	2,628	991	1,637
Married individual	120	5,125	608	4,517
Family migrant	508	2,471	51	2,419
Household Earned Income	1,509			30,189

Source: Matlab Health and Socioeconomic Survey (1996)