Viet Nam's Older Population: the View from the Census

A common fear... is that development will be associated with desertion of elderly parents by socially or residentially mobile adult children. The census results provide no evidence so far that this is occurring in Viet Nam

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Viet Nam, as many other countries in East and South-East Asia, has been successful in its policy to lower fertility in the interest of national development. According to United Nations estimates, the total fertility rate fell from over six, just three decades ago, to close to the replacement level by the turn of the twenty-first century. Life expectancy at birth increased during the same time by almost 20 years to close to 70 (United Nations, 2001a). Past high fertility, combined with mortality decline, is resulting in substantial growth in the

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numbers of the older persons and, in conjunction with the subsequent fertility decline, to an increasing share of the overall population who are at older ages. Recent United Nations projections indicate that the population aged 60 and over will increase by 80 per cent in size in the first two decades of this new century and grow fivefold by mid-century (United Nations, 2001b). By 2050, persons aged 60 and over will constitute almost a quarter of the total Vietnamese population.

Most of what we know about Viet Nam's older population derives from a few small-scale studies and two regional surveys of older persons (Bui The Cuong and others, 2000). Although important characteristics of the older population can be derived from the recent national censuses, published reports contain very little information for older age groups. Tabulations typically group persons 50 and over into a single age group. Thus, although recent censuses are generally of high quality, so far they have not been exploited to yield detailed information on the older population.

The purpose of the present study is to redress this situation by providing a descriptive analysis of Viet Nam's older population based primarily on special tabulations from the 3 per cent public use sample of the 1999 census. Results are weighted to be nationally representative. We draw on a public use CD-ROM that allows original tabulations from the 100 per cent count to provide a detailed examination of the age structure. Finally, we use the 5 per cent public use sample of the 1989 census to examine changes in living arrangements. We define the older population as those age 60 and older. Although this defintion is somewhat arbitrary, it reflects the mandatory age of retirement in the public sector for men in Viet Nam and is the most commonly used age cut-off to demarcate the older population in Asian countries.

Although by its very nature the census is quite restricted in the amount of information it can collect for any individual, it nevertheless covers some crucial characteristics that bear on the well-being of older persons and the context in which they live. In this study, we examine the age distribution of older persons, marital status, education and literacy, work status, religious affiliation, housing quality and media possession, and living arrangements. We typically focus on differences between men and women, between rural and urban residents, and among age groups within the older age span since these basic background characteristics can be strongly related to some of the characteristics we examine.[1] In the case of living arrangements, we examine regional variation and incorporate information on the gender and marital status of co-resident children. We also appraise evidence of change in living arrangement patterns between 1989 and 1999.

Table 1. Age and sex distribution of older population by sex and residence, Viet Nam 1999

	Total	Sex		Residence	
		Men	Women	Urban	Rural
Population aged 60 and over as percentage of total population	8.0	6.7	9.3	7.5	8.2
Percentage distribution of 60+ population:					
60-64	28.5	30.1	27.3	30.1	28.0
65-69	26.8	28.8	25.5	27.0	26.8
70-74	19.7	19.8	19.7	19.3	19.9
75-79	13.4	12.2	14.2	12.5	13.6
80+	11.6	9.1	13.3	11.1	11.7
Total	100	100	100	100	100
Sex ratio (men per 100 women) by age:					
60-67	77	-	-	78	76
65-69	79	-	-	81	78
70-74	70	-	-	74	69
75-79	60	-	-	60	60
80+	48	-	-	46	49
Total	70	-	-	72	69

Source: 1999 census (100 per cent count).

Note: A hyphen (-) indicates that the item is not applicable.

The age distribution of older persons

Table 1 summarizes the age and sex distribution of the older population of Viet Nam based on the full 100 per cent count of the 1999 census. Approximately, 8 per cent of the total population was aged 60 or over of whom a fourth are aged 75 and over. The extent of population ageing, however, differs by gender. Both the share of older persons relative to the total population and the share of the older population that is in age groups 75 and over are greater among women. This reflects lower female than male mortality throughout the lifespan, a factor that is likely to have been somewhat exacerbated through excess male military casualties during the prolonged periods of war dating from before mid-twentieth century through 1975 (Hirschman, Preston and Vu Manh Loi, 1995). In addition, as indicated by the sex ratios, older women outnumber older men with the imbalance increasing with each successively older age group. This pattern reflects the continuation of higher male than female mortality into the elderly age span. Among persons 80 and older, women outnumber men by more than 2 to 1. Despite higher fertility in rural areas, and thus higher proportions of children, the proportions in older ages are also modestly higher in rural than urban areas, which probably reflects rural-to-urban migration among younger adults.

Table 2. Marital status distribution of older population by age and sex, Viet Nam 1999

	Total	Men	Women
Percentage currently married:			
60-64	75.5	92.8	61.9
65-69	69.3	88.9	53.5
70-74	58.6	83.6	40.6
75-79	45.7	75.0	28.1
80+	27.8	60.2	12.1
Total	61.1	84.8	44.2
Percentage widowed			
60-64	21.9	5.9	34.4
65-69	28.7	9.9	43.8
70-74	39.8	15.2	57.4
75-79	52.6	23.7	70.1
80+	70.9	38.5	86.6
Total	37.0	14.0	53.3
Percentage single, separated, divorced:			
60-64	2.6	1.3	3.6
65-69	2.0	1.3	2.6
70-14	1.6	1.2	1.9
75-79	1.6	1.2	1.9
80+	1.3	1.3	1.3
Total	2.0	1.3	2.5

Source: 1999 census (3 per cent sample).

The 1999 census indicates that population ageing has progressed further than anticipated by the United Nations in its 2000 assessment, which presumably was made before the census results were available. According to United Nations estimates, only 7.5 per cent of the population was anticipated to be aged 60 and over by 2000, compared to the censuses result of 8.0 per cent in 1999 (United Nations, 2001b). This could reflect a faster fertility decline than anticipated by the United Nations. Additionally, the sex ratio of the older population according to the census is considerably lower thanthat estimated by the United Nations (70 versus 88 men per 100 women).

Marital status

Over the recent past, marriage has been close to universal in Viet Nam. Thus, few of today's older persons have never been married. Likewise, divorce and permanent separation are relatively uncommon, so that 98 per cent of older Vietnamese as enumerated by the census are either currently married or widowed. As **table 2** shows, the balance between these two statuses shifts

rapidly with increasing age and differs markedly by gender. Currently married persons form the majority of the older population in age groups under 75, but the widowed population dominates in older age groups. The majority of older-aged men, however, remain married in all age groups, including even those aged 80 and over. In contrast, more than half of women aged 60 and over are widowed and only among those under age 70 are most currently married.

The fact that older men are almost twice as likely as older women to be currently married is attributable to several factors. As higher male than female mortality persists through the older ages, older women are at increasingly higher risk of widowhood than are men and hence gender differences in marital status increase. In addition, older men who experience the loss of a spouse are more likely to remarry than are older women.[2]

Education

As **table 3** shows, there are pronounced cohort differences in education among Viet Nam's older population reflecting a steady improvement in literacy and formal schooling during the period that today's older population passed through their school ages. Thus, over three fifths of those aged 80 and over are illiterate compared to less than a fifth of persons aged 60 to 64. Gender differences, however, are particularly pronounced and, although not as striking, the urban and rural populations also differ substantially.

The census reveals that older women are clearly disadvantaged compared to older men in educational backgrounds. They are much more likely to be unable to read or write and to lack any formal schooling than are men of the equivalent age group and are much less likely to have any secondary education. The gender gap in both literacy and the lack of any schooling increase with age. Overall, almost half of older Vietnamese women are illiterate and fully three fourths of women age 80 and older cannot read or write. In contrast, less than 15 per cent of men 60 and older and less than a third who are 80 and older are illiterate. The fact that the percentage of both men and women who are illiterate exceeds the percentage who had no schooling indicates that some have lost this ability to read and write over time.

At all ages the urban population of older persons is characterized by higher levels of education than their rural age peers. Urban-rural differences are particularly striking with respect to achievement of secondary education. For almost every age group, the percentage with secondary education is at least twice that for urban elders than for those residing in rural areas.

Table 3. Literacy and educational attainment of older population by age, sex and residence, Viet Nam 1999

	Total	Sex		Residence	
		Male	Female	Urban	Rural
Percentage illiterate:					
60-64	19.4	7.3	28.9	12.5	21.4
65-69	26.3	10.5	39.0	18.3	28.5
70-74	38.0	15.8	53.9	27.7	40.8
75-79	48.6	22.7	64.3	37.2	51.7
80+	62.5	34.6	75.9	49.3	66.0
Total	33.7	14.2	47.6	24.3	36.4
Percentage with complete primary (at least grade 5):					
60-64	45.7	66.4	29.5	61.8	41.1
65-69	37.2	57.1	21.1	41.4	33.2
70-74	27.4	47.5	13.1	40.9	23.8
75-79	21.1	39.0	10.2	33.1	17.9
80+	13.1	28.3	5.8	22.4	10.6
Total	32.8	53.2	18.3	46.9	28.9
Percentage with some secondary or higher education (grade 6+):					
60-64	29.2	48.4	14.2	46.0	24.3
65-69	22.3	38.6	9.1	36.0	18.5
70-74	14.9	28.7	5.1	26.9	11.7
75-79	10.3	21.3	3.6	19.9	7.8
80+	5.7	13.7	1.9	12.4	3.9
Total	19.3	35.3	8.0	32.5	15.6

Source: 1999 census (3 per cent sample).

Economic activity and household work

The continuation of work into older ages may reflect a variety of influences and circumstances, ranging from economic necessity to a desire to keep active to provide personal fulfilment and a sense of purpose. Likewise, the cessation of work may reflect the loss of physical stamina, mandatory retirement rules, or a desire for relaxation and leisure. As already noted, in Viet Nam,under most circumstances in the state sector, retirement is mandatory at ages 60 for men and 55 for women. The majority of the population, however, does not work in the formal state sector and those who do may switch employment to the non-state sector once they pass the mandatory retirement age (Friedman and others, 2001).[3]

The 1999 Vietnamese census asked what type of work, if any, each individual in the household spent most time on during the prior 12 months. Household work is recorded as a separate category in the census form and not

Table 4. Economic and housework activity by age, sex and residence, Viet Nam 1999

	Total	Sex		Residence	
		Male	Female	Urban	Rural
Percentage economically active in the last 12 months prior to the survey (excluding household work):					
60-64	44.1	54.2	36.3	27.1	49.1
65-69	30.2	38.9	23.1	18.0	33.5
70-74	15.9	22.7	11.0	9.3	17.6
75-79	8.5	13.3	5.6	4.8	9.5
80+	2.4	4.5	1.4	1.4	2.7
Total	25.3	34.1	19.0	15.5	28.0
Of those economically active, percentage in agriculture:					
60-64	84.7	83.3	86.3	38.0	92.3
65-69	85.2	85.8	84.4	40.0	92.0
70-74	85.4	87.1	82.9	42.8	91.5
75-79	84.9	87.6	81.2	34.0	91.7
80+	81.9	80.3	84.4	30.4	89.4
Total	84.9	84.8	85.1	38.9	92.0
Percentage who primarily did household work:					
60-64	16.9	4.0	26.9	22.1	15.3
65-69	14.3	3.6	22.9	15.3	14.0
70-74	10.8	3.4	16.0	9.3	11.2
75-79	7.8	3.1	10.6	6.4	8.1
80+	3.1	1.4	4.0	2.0	3.4
Total	12.2	3.4	18.4	13.6	11.8

Source: 1999 census (3 per cent sample).

considered as part of economic activity. Such a definition is common in many countries and reflects the centrality of the market as symbolic of the economy with a focus on commodity production and on production for exchange rather than production for use. Nevertheless, the exclusion of household work from the definition of economic activity is coming under increasing criticism, particularly because it tends to understate the contribution of women to the economy (Editor, Gender Dialogue, 2001; Clark and Anker, 1993). In the present analysis, we examine both economic activity (as more narrowly defined) and household work.

As **table 4** shows, only a fourth of the population age 60 and older were economically active during the 12 months prior to the census. Even among persons aged 60 to 64, the majority said they had not worked. Women are far less likely to be economically active for all age groups. The largest absolute

gender difference in terms of percentage points is among those in their 60s. It is unlikely that the differences in the mandatory retirement ages for men and women account for much of this difference since the declines in the percentage economically active between 50-54 and 55-59 do not differ greatly between men and women (results not shown in table). Economic activity decreases steadily with age among both older men and women but the gender gap in participation persists at all ages.

Economic activity rates among older persons also differ substantially between rural and urban areas. Older-aged persons in rural areas are almost twice as likely as their urban counterparts to be active. Moreover, a rural urban contrast is evident for all age groups. This is clearly related to the higher percentage working among persons for whom agriculture has been their major livelihood (Friedman and others, 2001). Thus, among those older persons who are economically active, a very high proportion are engaged in agriculture, accounting for well over four fifths of both economically active older men and women. Even among older-aged urban residents, almost two fifths reported agriculture as their main work.

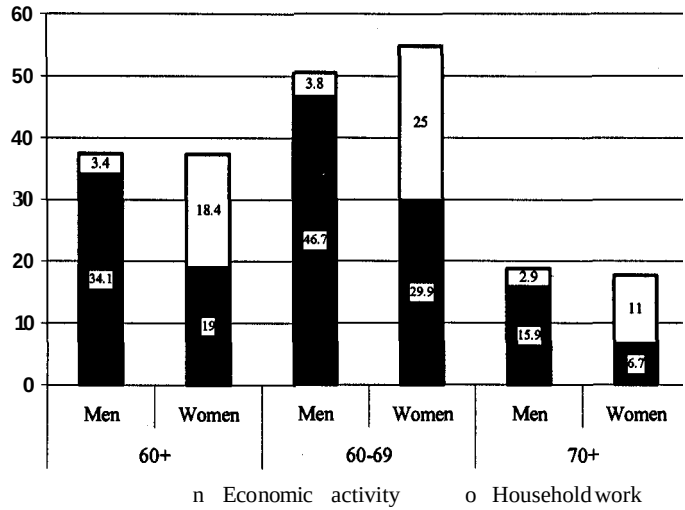
A substantial share of persons who did not report themselves as economically active reported that they were doing household work. Although only 12 per cent of all persons aged 60 and older reported household work as their major activity during the prior 12 months, this was far higher for women than for men. Household work is also somewhat more common among urban than rural elderly although the difference is not very pronounced. As with economic activity, performing household work declines with each successive age group within the older-age span.

When household work is considered together with economic activity, gender differences in terms of work disappear. As **figure 1** indicates, the percentage who are either economically active or do household work is almost identical for men and women age 60 and over (37.5 vs. 37.4 per cent). Moreover, this combined percentage is slightly higher for women than men in their 60s,although in both cases at least half are active in one or the other sense.

Religious adherence

In many societies, older persons play important roles as religious leaders and old age is associated with increasing preoccupation with religious matters (Cowgill, 1986). In Viet Nam, however, as **table 5** indicates, only a minority of the older people profess a religion, likely reflecting a de-emphasis of religion as part of the long-standing socialist orientation of the Government. Overall, just modestly more than a fourth (28 per cent) of the older population profess a

Figure 1. Economic activity and household work by gender and age, Viet Nam 1999



religion according to the 1999 census. There is only a very slight tendency for the proportion doing so to increase with age within the elderly age span. More pronounced is a gender difference with older women more likely than men to profess a religion. In addition, religious adherence is higher among urban than rural elderly.

Clear regional differences, not shown in the table, exist with half (50 per cent) of the older residents of the South-East region and over two fifths (43 per cent) of those in the Mekong Delta indicating a religious affiliation. Among older persons who profess a religion, almost two thirds (64 per cent) are Buddhists and over one fifth (22 per cent) are Catholics. The remainder are accounted for mainly by two indigenous regional religious sects, Cao Dai and Hoa Hoa. Adherents of the former are largely concentrated in the South-East and Mekong Delta regions and the latter are almost exclusively restricted to the Mekong Delta.

Housing quality

The census provides information on housing characteristics, including permanency of dwelling unit, the type of toilet, access to electricity, and the type of water supply. In addition, the census records whether or not the

Table 5. Religious adherence by age, sex and residence, Viet Nam 1999

	Total	Sex		Residence	
		Male	Female	Urban	Rural
Percentage who profess a religion:					
60-64	26.9	21.7	31.0	33.9	24.9
65-69	27.8	23.1	31.5	34.2	26.0
70-74	29.3	23.8	33.3	34.3	28.0
75-79	28.6	23.2	31.9	32.8	27.5
80+	30.1	27.5	31.4	34.6	28.9
Total	28.2	23.2	31.7	34.0	26.6
Percentage distribution by religion among those who profess a religion:					
Buddhist	63.8	56.5	67.6	68.6	62.1
Catholic	22.4	26.1	20.5	24.0	21.9
Cao Dai	6.0	7.0	5.4	3.9	6.7
Hoa Hao	6.2	8.4	5.1	2.7	7.5
Other[a]	1.6	1.9	1.4	.8	1.8
Total	100.0	100.0	100.0	100.0	100.0

Source: 1999 census (3 per cent sample).

[a] Category "Other" excludes those whose religion is not classifiable.

household had a television or radio. These items can be used to judge the quality of the dwelling unit and reflect the material wealth of the household. **Table 6** presents each of these items individually as well as a summary index of housing quality that is based on a weighted combination of all: While the possession of television or radio is not literally an aspect of housing quality, it is also included in the table since it can serve as an additional indicator of the material wealth of the household. Moreover, having a television or radio is important in its own right given that access to the media can serve not only as an important source of entertainment but as a crucial channel through which olderpersons become informed about ongoing changes in the Vietnamese society and economy.

The census distinguishes between four different types of housing structures in terms of their degree of permanency. Only a little over a tenth of older Vietnamese live in what are considered to be the most permanent structures, while almost a fifth reside in structures that are considered least permanent. The large majority of Vietnamese elderly have access to electricity but only a small minority have piped water. Although the vast majority have a toilet, only a small minority have a modern (flush) toilet in the house. There is very little difference between older men and women in their quality of housing as indicated by the overall house quality index. However, older persons in

Table 6. Housing quality and possession of television and radio by gender and marital status, Viet Nam 1999

	Total	Sex		Residence	
		Men	Women	Urban	Rural
Housing quality:					
Percentage living in a permanent house	11.6	11.8	11.5	27.0	7.4
Percentage in temporary housing	17.1	16.4	17.6	8.5	19.5
Percentage with access to electricity	81.5	81.5	81.6	96.6	77.4
Percentage with piped water	12.4	12.7	12.2	50.7	1.8
Percentage with modern toilet	16.0	16.4	15.7	58.5	4.2
Percentage with no toilet	13.7	13.0	14.2	6.8	15.6
Overall house quality index	4.5	4.6	4.5	6.5	4.0
Televisiodradio possession:					
Percentage with a TV	55.3	58.1	53.4	80.7	48.3
Percentage with neither a TV or radio	30.4	26.6	33.2	14.3	34.9

Source: 1999 census (3 per cent sample).

Note: The index of housing quality is constructed by summing scores for type of house (ranging from 0 for least permanent to 3 for most permanent), access to electricity (0 if no access and 2 for access), water supply (2 for piped water, 0 otherwise), and type of toilet (ranging from 0 for no toilet to 2 for flush toilet).

urban areas live in substantially better housing than those in rural areas. Over half of older persons in Viet Nam live in a household with a television. At the same time, 30 per cent have neither a TV nor radio in their house. Women are moderately less likely to live in a household with a TV and slightly more likely to live in one that lacks both a TV and a radio. Older persons in rural areas are far less likely to have a TVand much more likely to have neither a TV nor a radio.

Living arrangements

In Viet Nam, as in many other Asian countries, living arrangements are closely intertwined with the support provided to older persons by their families. Co-residence with a spouse and a married child is the social norm for older persons whose children are adults and constitutes an important part of the context in which inter-generational exchanges of support occur (Truong Si Anh and others, 1997). Elderly persons who live alone, or with only their spouse, could be among the most vulnerable within the older-aged population. Some who live alone or only with a spouse, however, may do so out of a preference for privacy, especially if they have adult children living nearby. In these cases, their ability to do so may reflect a greater physical and financial ability to live independently.

Table 7. Living arrangements of the older population by age, sex, residence and region, Viet Nam 1999

	Percentage living with any child	Percentage living with any married child	Percentage living alone	Percentage living only with spouse
Total	**77.6**	**53.8**	**5.8**	**11.5**
Age:				
60-64	83.4	46.2	3.4	9.4
65-69	77.8	51.3	4.6	12.6
70-74	74.0	56.7	6.8	13.8
75-79	71.8	60.6	8.6	12.9
80+	74.8	66.7	9.2	8.5
Sex:				
Men	78.0	47.4	2.7	14.7
Women	77.2	58.4	7.9	9.2
Residence:				
Urban	82.7	59.3	3.9	7.3
Rural	76.2	52.3	6.3	12.7
Region:				
Northern Uplands	82.7	63.7	8.5	18.2
Red River Delta	68.6	46.1	3.4	9.7
Central North	73.5	48.8	6.3	16.3
Central Coast	75.9	46.5	8.2	10.3
Central Highlands	85.2	56.2	2.5	8.0
South-East	83.9	58.6	4.4	5.9
Mekong Delta	83.9	60.0	3.9	5.3

Source: 1999 census (3 per cent sample).

Several measures of living arrangements can be directly calculated or estimated based on the census. These include co-residence with adult children (based on information on relationship to head of all household members) living alone, and living with a spouse only.[5] **Table 7** indicates that most Vietnamese elderly persons in 1999 co-resided with their children. Over three fourths lived with at least one child and just over half lived with a married child.

Co-residence with any child is higher for younger than elderly persons, undoubtedly reflecting a life cycle process for the family in which children move out of the parental house as they get older and as their parents age (Knodel and others, 1996). In contrast, co-residence with a married child is highest for the older elders again reflecting a life cycle process in which, as parents age, their adult children get married. There is little difference between men and women with respect to the percentages who co-reside with any child,

although elderly women are more likely than men to live with a married child. This difference largely reflects the fact that women typically marry men who are older than themselves and thus, compared to men of the same age, have been married longer and have older children on average, who in turn are more likely to be married. Hence, more children of women 60 and over are married than of men at the same age.

Co-residence levels vary considerably by region and moderately by rural-urban residence. Co-residence is least common in the northern regions of Viet Nam, especially the Red River Delta, while southern regions in general exhibit the highest levels. Co-residence is higher in urban than rural areas, a common pattern found in a number of developing countries, perhaps in part reflecting differential costs of housing (Hashimoto and others, 1992).

Only a small minority of older persons in Viet Nam live alone and only a moderately higher percentage live only with a spouse. The proportion living alone increases with age although even among persons 80 and older less than a tenth live in solitary households. Living alone is more common for women, while living only with a spouse is more common for men, reflecting gender differences in mortality and remarriage. In addition, as noted above, the children of women over age 60 are older on average those of their male age peers and thus are more likely to have left the home.

Co-residence levels by gender and marital status of child are shown in **table 8**. Summary ratios of co-residence with sons to daughters indicates the dominance of children of one sex over the other within each marital status category in the living arrangements of older Vietnamese. The summary ratios of elderly persons living with single sons as opposed to single daughters exhibit little gender preference on the part of the elderly parent. In contrast, Vietnamese elderly persons are almost four times as likely to live with a married son as opposed to a married daughter, suggesting a clear son preference with respect to co-residence with a married child. This varies little with the age or gender of the parent. Regional variation in this respect, however, is substantial. The preference for married son co-residence is much greater in the northern than the southern regions. Rural-urban differences in the predominance of co-residence with married sons rather than married daughters are pronounced. This regional variation in married son co-residency is consistent with other evidence, indicating a greater prevalence of patriarchal and patrilocal practices in the north of Viet Nam than in the more southern regions (Knodel and others, 2000).

Equivalent measures of living arrangements can be calculated from the 5 per cent sample of the 1989 census and compared to those from the 1999

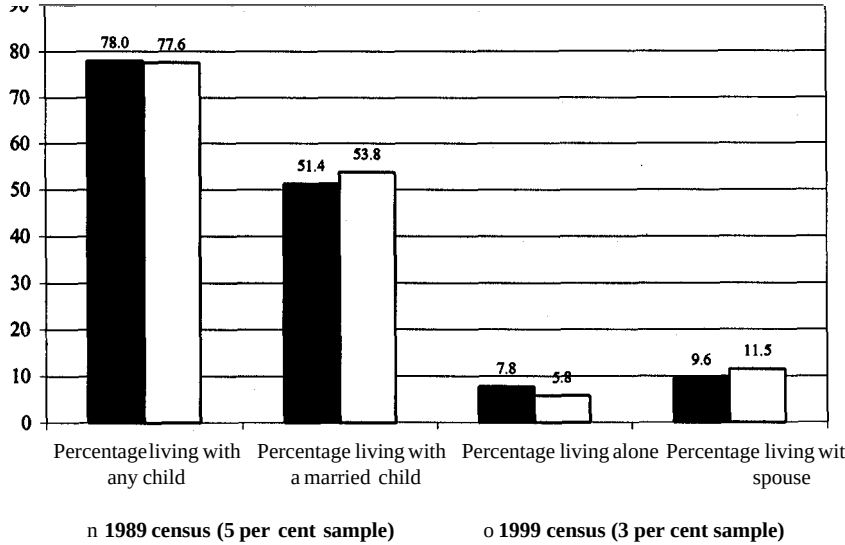
Table 8. Co-residence patterns of the older population by sex of co-resident child, age, sex, residence and region, Viet Nam 1999

	Percentage living wlth a single son	Percentage living with a single daughter	Ratio of eo-resiling with a single son to single daughter	Percentage living with a married son	Percentage living with a married daughter	Ratio of co-reslding with a married son to a married daughter
Total	**23.9**	**22.4**	**1.1**	**44.5**	**11.9**	**3.7**
Age:						
60-64	41.0	33.9	1.2	38.2	11.3	3.4
65-69	27.7	24.8	1.1	43.1	11.4	3.8
70-74	15.5	16.9	0.9	47.7	11.6	4.1
75-79	7.9	12.0	0.7	49.9	12.2	4.1
80+	3.3	8.5	0.4	52.8	14.8	3.6
Sex:						
Men	31.8	28.7	1.1	39.8	10.5	3.8
women	18.2	17.8	1.0	48.0	12.9	3.7
Residence:						
Urban	29.7	26.8	1.1	43.8	22.1	2.0
Rural	22.4	21.2	1.1	44.7	9.1	4.9
Region:						
Northern Uplands	19.0	15.1	1.3	57.6	7.0	8.2
Red River Delta	17.5	16.9	1.0	40.1	6.8	5.9
Central North	20.7	19.7	1.1	43.6	5.9	7.4
Central Coast	30.3	27.9	1.1	35.9	13.2	2.7
Central Highlands	3 1.7	21.3	1.5	42.7	15.9	2.7
South-East	32.1	31.2	1.0	42.2	24.0	1.8
Mekong Delta	28.6	28.9	1.0	46.9	17.6	2.7

Source: 1999 census (3 per cent sample).

census, thereby providing evidence to judge the extent of change between the two censuses. Such a comparison is of particular interest given that the intervening decade was marked by very substantial transformations in the Vietnamese economy, including the extension a series of free market reforms, commonly knownas Doi Moi (literally "New Change)". As **figure 2** shows, living arrangements have remained remarkably stable. Co-residence with any child or with a married child remained barely changed between 1989 and 1999, despite the dynamic social and economic environment that characterized the decade in between. While solitary living declined slightly between 1989 and 1999, living only with a spouse increased slightly so the combined percentage in these categories remained virtually unchanged.

Figure 2. Living arrangements of the older population, Viet Nam 1989 and 1999



Conclusions

The Vietnamese census is a valuable source of information on the older-aged population. The availability of microsamples permits exploration of numerous characteristics of the elderly that are either not tabulated in sufficient detail or not available at all in published reports and thus provides an important basis for informing policies and programmes related to population ageing and the welfare of older persons in Viet Nam.

Perhaps the most remarkable finding of our examination of census data related to the Vietnamese elderly is the remarkable stability in their living arrangements with respect to co-residence with children. A common fear, embodied for example in the International Plan of Action adopted by the United Nations-sponsored Second World Assembly on Ageing, is that development will be associated with desertion of elderly parents by socially or residentially mobile adult children (United Nations, 2002). Clearly, the census results provide no evidence so far that this is occurring in Viet Nam. This stability is also likely to be viewed as encouraging by the Vietnamese Government which, since instituting the series of market reforms that constitute Doi Moi, has moved away from a policy orientation in which the State

assumed primary responsibility for the welfare of its citizens, including the elderly. More recent emphasis is being placed on reliance on families, as well as other institutions in the private sector and civil society, to contribute significantly to the care of the elderly, as well as to social welfare more generally (Bui The Cuong and others, 2000).

The census results also reveal substantial rural-urban contrasts among Viet Nam's older population. Rural elderly are clearly disadvantaged in terms of educational attainment, housing quality, and access to the mass media. Also, much higher percentages of rural elderly remain economically active, quite possibly out of necessity. Policies directed to the social and economic welfare of the older population in Viet Nam clearly need to target disproportionately the elderly living in rural areas.

The findings in relation to gender are of considerable interest. Non-governmental agencies and international organizations, including the United Nations, frequently argue that older women are disadvantaged compared to men on virtually every dimension related to social, economic and physical well-being (United Nations, 2002; (World NGO Forum on Ageing, 2002). The census evidence, however, provides only limited condition of a disadvantaged situation for older Vietnamese women compared to men. Blanket recommendations (such as contained in both the United Nations and NGO plans of action emerging fiom the recent World Assembly on Ageing) that ageing policies include a heavy emphasis on women thus may be not be fully appropriate for Viet Nam.

Women clearly compare unfavourably to men with respect to formal educational attainment and literacy. In addition, older women are far more likely to be widowed than are men of the same age. Given that marital status is likely to have an important bearing on material and emotional well-being, the higher incidence of widowhood among women can clearly be considered a disadvantage (although it is in part due to the women's advantage in mortality risks). In contrast, gender differences in terms of housing quality are almost non-existent and women are only modestly disadvantaged with respect to access to modern mass media (television and radio). Perhaps most significantly in terms of its implications for well-being, there is no gender difference in the likelihood of co-residing with any child and older women are actually more likely to live with a married child than are men.

While older women are less likely to be economically active than men, they are more likely to be active in housekeeping and related work. Overall, when these two type of activities are considered together, virtually equal

percentages of both older Vietnamese men and women are active in either what conventionally is thought of as economically productive work or in maintaining the household. Both activities are likely to be valued by their families, especially when the elderly persons are living together with younger generation family members. Thus, it is not clear whether the gender difference in the types of activities that older men and women are engaged in should be considered an advantage or disadvantage for either sex. In any event, the results make clear that many older Vietnamese men and women are not simply dependents but making useful contributions to the family's ability to sustain themselves. This, in turn, is likely to contribute to stability in living arrangements, even as Viet Nam is undergoing a major transformation of its economy.

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Endnotes

1. Urban-rural residence is measured in terms of current residence and does not reflect changes of residence over the lives of the older persons.

2. For example, based on the combined results of two regional surveys of persons aged 60 and over, 53 per cent of men over 60compared to only 6 per cent of women who were widowed or divorced some time in the past have married for a second time (Friedman and others, 2002).

3. Examination of the percentage economically active by single years of age in the 3 per cent sample of the 1999 census does not reveal particularly sharp declines associated with age 55 for women or age 60 for men (results not shown).

4. The index of housing quality is constructed by summing scores for type of house (ranging from 0 for least permanent to 3 for most permanent), access to electricity (0 if no access and 2 for access), water supply (2 for piped water, 0 otherwise), type of toilet (ranging from 0 for no toilet to 2 for flush toilet).

5. Living arrangements for the elderly were identified from the household size and the recorded relationships of each household member in relation to the household head. An older person was considered to be co-resident with a child whenever an older head of household or spouse of head resided with a child, or when an older person was identified as a parent of a head of household. This approach is likely to yield slightly downwardly biased estimates of the true co-residency rates, since elderly who are neither head nor parent of head are never considered to be co-resident even when some indeed are.

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Estate Women's Fertility in Sri Lanka: Some Aberrant Perspectives in the Causal Links

The deviant path taken by the fertility performance of the estate women since the 1940s unravels determinants of an unusual nature, outside the dictum of accepted demographic parlance for they are basically an outcome of negative factors

By P. Puvanarajan*

The common findings of research are that women in the labour force bear fewer children than those out of it. However, the behavioural pattern of Indian Tamils is somewhat aberrant in nature as for some time in the 1950s, 1960s and 1970s, their fertility performance was lower than for those women in the other major ethnic groups in the country, namely the Sinhalese and the Sri Lankan Tamils. On closer examination of the underlying factors, it becomes evident that it is again not the labour force participation per se that was the determining factor, and that fresh and different evidence reveals factors accounting for this impressive but anomalous inverse link.

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The work of the Indian Tamil women in the estates, involving the picking of tea, is in no way to be associated with any career-building process but is basically linked with the struggle for survival. This is evidenced by the findings of Langford (1982) who, on analysing World Fertility Survey data, indicated that 95 per cent of the Indian Tamil women on estates had worked since marriage, compared with 41 per cent of Sinhalese, or 22 per cent of Sri Lankan Moors. Langford (1982:26) further states that "the World Fertility Survey data indicates not only that almost all estate. women had gone out to work since marriage but that 90 per cent or more of them worked at each stage of family building", meaning thereby that childbearing and work occurred concurrently. Therefore, it is hard to identify the common association that is often established as existing between working women and fertility, as it is a situation where women are engaged in hard labour. An attempt to account for their deviant lower fertility performance needs to look for the prevalence of negative factors, which disturb the process of reproduction from conception to live births. Thus, the main objective of the study is to examine the changing scenario in fertility trends among the estate women in Sri Lanka from the mid-1940s. The study centres around bringing to light the determinants which contributed to the anomalies that prevailed over time in their fertility behavioural pattern and establishing the causal links.

Data and limitations

The study is primarily based on secondary data which include the 1975 World Fertility Survey, the population censuses of Sri Lanka from 1946 to 1981 and statistics for the period 1957-1981 from the Registrar General's Department, along with data provided by the Demographic and Health surveys of 1987 and 1993, to show recent transitional trends in their fertility behaviour.

Apart from the secondary data used, the study leans on vital qualitative data obtained through a number of case studies of the Indian estate Tamil women that helped establish the causal links in respect of their reproductive capabilities. Moreover, the census of population was not conducted after 1981 and data from the July 2001 census are still being processed, while the Registrar General's Department has not published data on fertility performance by ethnic groups since 1989.

Results

Estate Indian Tamils: background

The Indian Tamils who form the estate labour population of Sri Lanka were drawn from a poverty-stricken population in South India. Socially, they belonged to the lower stratum of society in the prevalent caste system which is

woven into the fabric of community life there. Hence, the management which undertook to employ them on the plantations was able to satisfy them with the provision of the basic amenities of life in respect of health, housing and education. Consequently, their socio-economic conditions, compared with other sectors of the population in the country, could be regarded as the lowest. Their educational background is poor, with literacy rates among the estate women being the lowest: only 56.3 per cent literate in 1981 compared with the national level of 83.2 per cent of women. Educational facilities in the estates were kept to the bare minimum. They did not fall in line with the general educational system of the land, for there was much disparity in the quality and standards maintained.

Trends in age at marriage revealed that the singulate mean age at marriage for the country was on the rise between 1946 and 1981. This record was corroborated by the World Fertility Survey findings of 1975. Furthermore, Langford (1982), using evidence from that survey, indicated that the age at marriage of women had been rising in all major ethnic groups in the country. But strangely, the survey data of the sample of the estate Tamil women revealed that their age at marriage was lower than that of most other women in the population, with a singulate mean age at marriage of 18.1 (compared with 19.7 for the rest). Such an early marriage behavioural pattern of this segment of the population may be explained by their origins from South India, with their roots in the system of child marriage. "Despite laws prohibiting girls from marriage before the age of 17 and boys before the age of 18, there were over 10 million child brides in the late 1980s in India" (Population Headliners, Nos. 168, 169). According to the Family Planning Foundation of India (FPFI), 46 per cent of girls in rural areas were married before the age of 13 and the rest before the age of 17.

With a low average age at marriage, one would expect the estate women to have a higher fertility performance than those in other ethnic groups, in view of their longer period of marital life during their reproductive span than those marrying at latter ages. Here again, as on the earlier occasion when relationships between fertility and the degree of labour force participation of these women were looked at, anomalous facts surfaced. The marital fertility of the estate women was found to be lower than the population of Sri Lanka as a whole, with 3.63 mean number of children ever born to the estate women and 3.94 to all groups (**table 1**). The table reveals the mean number of children ever born to estate women and to other ethnic groups in the population by age at marriage and duration of marriage. The interesting fmding is that the estate Tamil women, despite their relatively lower ages at marriage, show the least fertility performance at all ages, This trend was found to be consistent both

Table 1. Mean number of children ever born to estate Tamil women and to other ethnic groups in SriLanka by age at marriage, 1975

Age at first marriage	Sinhalese	Sri Lankan Tamils	Sri Lankan Moors	Estate Tamils	All
All ages	3.94	3.95	4.35	3.63	3.94
<20	4.89	4.55	4.80	4.12	4.75
20+	2.86	2.65	2.89	2.35	2.81

Source: Langford, C.M. (1982). "The fertility of Tamil estate workers in Sri Lanka", World Fertility Survey Scientific Reports, No. 31 (Voofburg, International Statistical Institute).

among women who married before age 20 and those who married later. Such unusual aberrant fertility behaviour among these women is further highlighted in the survey, which also revealed that these women had reported far less contraceptive use than women in other ethnic groups in the sample, making the task of accounting for their lower fertility behaviour far more formidable.

Features and trends in fertility

The fertility of the Indian Tamil estate women was on the decline from 1946 to 1971 and showed a rise in 1981. In 1946, their fertility was higher than the all-island figure: a crude birth rate of 41.2 per 1,000, compared with a crude birth rate of 37.4 per 1,000 population. However, from 1946 to 1971, the crude birth rate of the estate women fell from 41.2 to 25.7, representing a 38 per cent fall, whereas the all-island rate dropped by only 19 per cent from 37.4 to 30.4. Furthermore, it is interesting to note that between 1946 and 1953, the figures for Sri Lanka and all other ethnic groups in the country recorded an increase in birth rates. For instance, among the two major ethnic groups in the island, the Sinhalese showed a 6 per cent increase in the crude birth rate, which rose from 38.7 to 41, and the Sri Lankan Tamils recorded a 10 per cent increase from 35.6 to 39.2. At the same time, astonishingly, the Indian Tamils showed a 20 per cent decline in their crude birth rate from 41.2 to 33. In addition, Langford (1982) observes a fall in the general fertility rate as well as in the estimated marital general fertility rates of estate women during the period 1946-1953. Trends in the crude birth rate from 1953 to 1971 indicate declines among all ethnic groups in the country but the estate women reveal the lowest fertility performance among them all. However, the fertility of the Indian estate women is seen to undergo a change in trends after a lag of three and a half decades when in 1981 it indicated a rise in the crude birth rate. This behaviour again is a departure from that of other ethnic groups as they all continued to record a fall in the crude birth rate (**table 2**). An attempt will now be made to account for these unusual tendencies over time in the fertility behaviour patterns of the Indian estate women.

Table 2. Crude birth rates by major ethnic groups, Sri Lanka,1946-1981

Ethnic groups	Crude birth rate				
	1946	1953	1963	1971	1981
Sinhalese	38.7	41.0	34.5	29.9	27.6
Sri Lankan Tamils	35.6	39.2	37.6	31.8	29.9
Sri Lankan Moors	41.7	42.7	42.9	39.0	31.8
Indian Tamils	41.2	33.0	28.3	25.7	30.0
Sri Lankan	37.4	38.7	34.4	30.4	28.2

Source: Fernando, D.F.S. (1990). "Differential mortality and fertility in Sri Lanka, by ethnic group", *Biology and Society* 7(4):215-224.

Mortality of Indian Estate Tamils

Although the all-island demographic indicators are impressive and stand out best among the countries in South Asia, disaggregated analysis reveals that this segment of the population living in the plantation districts forms an ethnic group which is not a representative sample of the overall macrodemographic picture. While the all-island crude death rate in 1981 was 6.0 per 1,000, the Indian Tamils recorded a high 10.7 rate per 1,000.The discrepancy is all the more significant when comparisons are made with other ethnic groups, all of which express a better performance than the national rate (**table 3**). Similar trends are seen in the infant mortality rate, which has been consistently much higher than for other ethnic groups over the years and stood at 73 per 1,000 live births in 1981 (**table 4**), when the all-island figure was only 30 with all other ethnic groups recording less than the national rate.

From 1963 onwards, not only was there a change towards a further rise in the prevalent levels in life expectancy of the Sri Lankan population, but a change came about which signalled a transformation from developing pattern to a developed pattern, whereby the expectation of life of women began to be higher than that of men.

Table 3. Crude death rates by major ethnic groups, Sri Lanka,1946-1981

Ethnic groups	Crude death rate				
	1946	1953	1963	1971	1981
Sinhalese	20.5	10.4	7.9	6.8	4.9
Sri Lankan Tamils	20.9	12.4	10.5	8.2	5.1
Sri Lankan Moors	25.5	14.0	10.1	7.9	5.8
Indian Tamils	18.2	12.1	11.1	13.4	10.7
Sri Lankan	20.4	11.0	8.7	7.7	6.0

Source: Fernando, D.F.S. (1990). "Differential ,mortaliiy and fertility in Sri lanka, by ethnic group", *Biology and Society* 7(4):215-224.

Table 4. Infant mortality rates by major ethnic groups, Sri Lanka, 1957-1981

Ethnic groups	1957-1959	1960-1964	1965-1969	1970-1974	1975-1979	1980	1981
Sinhalese	56	49	46	40	37	31	27
Sri Lankan Tamils	66	54	48	39	31	26	21
Sri Lankan Moors	76	62	55	46	36	28	27
Indian Tamils	106	101	103	113	99	86	73
Sri Lankan	63	55	52	47	41	34	30

Source: Fernando, D.F.S. (1990). "Differential mortality and fertility in Sri Lanka, by ethnic group", *Biology and Society* 7(4):215-224.

A district study of mortality by Rao (1976) revealed that the Nuwara Eliya District, which has the largest plantation population in the country, showed a female expectation life of 55.1, as against 56.1 for males compared with the national level of life expectancy, being 67.1 for females and 64.2 for males. Census data reveal that in 1981, the estate females still lagged behind the males with a life expectancy of 64.6 and 64.7 respectively in the Nuwara Eliya District, when the national expectation of life for females was 71.7 and 67.8 for males. ESCAP estimates of Sri Lanka for 1992 were 74 for women and 70 for men (ESCAP, Population Data Sheet, 1992). Hence, it is disheartening to note that the exogenous factors, which contributed to the precipitous fall in mortality referred to in studies by Meegama (1967), Nadarajah (1976), Selvaratnam (1970) and Newman (1965), had failed to permeate the estate population. The resultant effect is visible in the low expectation of life at birth prevalent among the estate population, with women still lagging behind men whereas women reached better life expectancy than men at the national level as far back as 1963. These trends in mortality and expectation of life are evidence of the deprivation factor in respect of health, medical and educational services which the estate population faces and which the rest of the population in the country are fortunate to enjoy.

In addition to the poor education levels attained by this segment of the population, their health facilities were minimal, with estate dispensaries manned by a category of personnel called "Estate Medical Assistants", whose professional attainments only equipped them to answer minor health problems. Most estates had a maternity ward with limited bed capacity and deliveries handled by a midwife. Above all, the estate population were housed under the most uncongenial living conditions. The housing type provided being "line rooms", a long row of dwellings subdivided into smaller units of living space of around 3 by 3.75 metres, ill-ventilated, cramped and skirted by drains often containing stagnant water.

Poor nutritional levels and fertility: some findings

For women to reproduce, they should not only be free from specific diseases but also in a state of health that would permit them to establish or fulfil their reproductive capability. Poor nutrition could disturb the physiology of reproduction, leading to delays in puberty and the impairment of ovulation, or bring about abnormalities in the menstrual cycle. Poor nutrition is widespread in many developing countries and there is evidence of the relationship between malnutrition and amenorrhea. "Therefore, in selected populations with severe malnutrition, or in a subgroup of disadvantaged women within a population, poor nutrition may prolong post-partumamenorrhea sufficiently to have a significant demographic effect. This is in part attributable to the slow down of metabolic processes as a result of the lack of essential nutrients" (Gray, 1983:143).

Moreover, it must be noted that reproduction itself is an important cause of nutritional disorders in women. Menstrual blood loss contributes substantially to iron deficiency anaemia in societies with inadequate dietary iron supplies, while pregnancy and lactation make major demands upon maternal protein, calorie vitamin and mineral stores. Thus,repeated cycles of pregnancy and lactation may be a factor leading to the state of chronic undernutrition observed in many women in developing countries (Jelliffe and Jelliffe, 1978).

Sector data on calorie intake show the estate sector as having the highest, which is around 2,000 calories. Nonetheless, their nutritional levels are the lowest being adjudged by the fact that chronic undernutrition in the estate sector was as high as 60 per cent, whereas for both the urban and rural sectors, it was around 33 per cent (Janatha Estates Development Board, 1984). Of the total expenditure on food in the estate sector, 19.02 per cent was spent on wheat flour compared with 1.56 and 2.21 on that item by the urban and rural sectors respectively. This consumption pattern among the estate sector had remained fairly consistent in the consumer finance surveys of 1963, 1973 and 1978-79. In this regard, it is necessary to indicate that wheat flour is regarded in Sri Lanka as food of the poor and as the largest proportion of its consumers are among the estate population it does seem to provide convincing evidence of their low nutritional levels.

Many of the above deficient health, welfare and nutritional aspects of life have their origins in the poor educational background of the estate women. Apart from the employment prospects that education could provide for women, it helps in maintaining the desired levels of health, personal hygiene and nutrition.

The poor socio-economic conditions surrounding the estate population and the resultant low nutritional levels among mothers have resulted in their impoverishment and inability to reproduce. Hence, it is such negative factors that need to be regarded as contributing to lower fertility. However, such low fertility performance, when related to the remarkable degree of the estate women's participation in the labour force, ironically signals an inverse link which needs to be regarded as spurious in nature. The common, if not the popular, inverse relationship established by researchers between the two variables turns out to be a fallacy in this situation. It is the negative side of these women's life with its inherent qualities of undernourishment and the concomitant anaemic state which contributes to such low fertility performance, and possibly not those factors associated with the enhanced status that women normally derive fiom being in employment.

The determinants at work in this situation do not conform to the accepted norms where, for example, demographic factors like age at marriage, which has an inverse relationship with fertility, strangely shows a positive association among the estate women. Therefore, their fertility behaviour creates anomalies in their relationship with other demographic variables. Indeed, their lower fertility level does not find any association with labour force participation per se since it is not linked with women's positive achievements, an outcome of aspirations due to higher educational attainments and a desire for career building, but to a combination of negative factors. Some are attributable to a legacy of the past, others to the unfortunate turn of events after their arrival in the island, setting the stage for the general deterioration of their lives.

Possible determinants of abnormal fertility behaviour

Studies have focused attention on the estate population with a view to attempting to account for their unusual fertility behaviour. Langford (1982) regards foetal loss and poor health care as the causative factors involved. He provides evidence from the World Fertility Survey data which indicates estate women having reported more wasted pregnancies than others. Ratnayake and others (1984) regard the varying intensity of breastfeeding as determining the changes in fertility. This argument stems from the fact that if breastfeeding and the consequent duration of lactation continue long after childbirth, it results in the absence of menstruation, which contributes to women remaining in an infecund state. They attribute the lower fertility levels of the estate women before 1975, when the World Fertility Survey in Sri Lanka was conducted, to breastfeeding and regard any visible rise in their fertility performance during and after the World Fertility Survey to improved living conditions brought forth by the nationalization and state takeover of the estates in 1975. The better life, they contend, led to the introduction of healthy substitutes such as powdered baby milk which led mothers to withdraw breast feeding earlier than

before. However, Langford (1982), considering the high degree of labour force participation of the estate women, which keeps mothers away from their babies, and going by evidence provided by the World Fertility Survey refers to the "weakening of the impact of breastfeeding" (Langford 1982:20). He assigns it a less significant function in determining the fertility of the estate women. Caldwell and others (1987:18) state "there is probably no clear cut explanation for low fertility on the estates because its causes are multiple. Undoubtedly, estate women breastfeed for much longer periods than most of the rest of the society. The duration of post-parhun sexual abstinence was probably always considerably longer among the estate Indian Tamils and continues to be so. As with much of the rest of society, there are probably high levels of terminal abstinence, but there seems to be little doubt that the Indian Tamils are more likely to practise sexual abstinence at other times as well. Together these are probably the major causes of low fertility". Moreover, they had observed the population as possessing knowledge of abortion through respondents who expressed their familiarity with points of access to the service in the nearby town of Kandy. Nonetheless, they sound highly sceptical about the truth underlying low fertility. This is explicit in their conclusion, which indicates that to uncover the truth they would require the services of investigators drawn from within their community. But with the poor educational background of this population, one has to be pessimistic of achieving any success through this suggestion.

Changing trends in estate fertility: a discussion

An attempt to account for the low fertility performance of the estate women needs necessarily to comprehend their low income and educational levels, poor state of health and the resultant low nutritional levels, as well as the extremely uncongenial housing conditions in which they are made to live. Primarily, it hinges on the negative aspects of their life and any trace of improvement in their fertility needs to be regarded as having a threshold effect and an indication of improvements in their living conditions and related standards.

The women who work on the plantations perform hard manual labour, involving the climbing of steep mountain slopes laden with weights on their backs as they keep picking tea. However hard the task, they have to engage in it due to sheer necessity for survival. The socio-economic setting that surrounds them, with its accompanying poor health and nutritional levels, is in itself an unsatisfactory state which keeps them with marginal calorie levels in their system to perform the type of hard labour that their employment demands. The task of childbearing would make additional calorie demands. Inability to match the desired level to achieve this additional task results in their experiencing what is termed "secondary sterility", distinguished from primary sterility

where women have never been able to produce a child. Secondary sterility may arise after one or two children are born, in cases where the woman is in a low nutritional state, resulting in her being incapable of conceiving and carrying pregnancy to the live birth stage. This is because the period of gestation or pregnancy followed by lactation constitutes a significant drain on a woman's nutritional reserves. Pregnancy and lactation recurring during the reproductive span of a woman can lead to chronic malnutrition called maternal depletion syndrome, resulting in the woman losing her ability to conceive and reproduce. It leads to severe disruption of the reproductive physiology, considerably affecting fertility. This is evidenced by the World Fertility Survey findings that estate women not only had fewer live births but also fewer pregnancies. Another line of inquiry that needs to be pursued with this segment of the population is with a view to ascertaining whether there is any evidence of pathological infdlity associated with diseases that could also arise from poor health and sanitation. If such a morbid state is related to poor curative medical facilities, effective access to antibiotics and other facilities of modern medicine would help to reduce childlessness and poor fertility.

Case studies

Realizing the invisible, if not obscure, nature of the determinants at work that have contributed to the fertility behaviour of the estate women, Caldwell and others (1987: 18) state that "the full unravelling of the mysteries of fertility control on the estates awaits not better research instruments and methods but investigators who can identifj with the community".

I would now put forth a personal view, having played a similar role not by living among them in the estates but by employing women drawn from the estates. They formed part of my household as domestic help for well over a decade and a half. In short, I have played the role of a "participant observer" in my household, not of any one individual but of 10 to 12, all of whose ages ranged from 15 to 30 and thus belonged to the reproductive age group. On being brought into the household, they all revealed characteristics of being undernourished and anaemic. They required medical attention before being assigned to handle food and babies. Worm treatment had to be administered to all of them. Above all, observations relevant to the issue is that the majority of those women whom we engaged, despite having reached puberty did not menstruate, a clear reflection of their lower nutritional levels and the consequent inability to reproduce due to physiological infertility. Medical opinion confumed their anaemic and malnutritional state as causing it. This is evidenced by the fact that within a period of six to eight months after joining the household, they began their monthly cycles, an indication of their improved nutritional condition and the resultant signs of their ability to reproduce. Therefore, the dormant period when they did not menstruate is attributable to

the slowing down of metabolic processes arising from the lack of essential nutrients in the system. Hence, the poor nutritional levels of this segment of the population could keep them in a persistent state of being unable to reproduce.

The age of menarche could also vary, being sensitive to nutritional levels. Bongaarts (1980) had demonstrated that girls with a good diet had had significantly earlier menarche than those with a poor diet. He further contends that there is an inverse relationship between age at menarche and socio-economic status. This provides additional support for the influence of nutrition on the onset of puberty. It is a line of inquiry that is worth pursuing on a larger sample of estate women, with a view to detecting the underlying causes for their prevalent seemingly anomalous fertility behaviour. Thus, no set behavioural patterns in human reproduction could be inferred as it is an outcome, if not the product, of an extremely complex process. The causal links between nuptiality behaviour, such as exposure to early or late marriage and fertility, would vary among the subgroups of the population as it could be sensitive to the changing societal situations and norm which tend to be a reflection of the underlying developmental processes in force.

In pursuance of this line of argument, it is worth looking at the underlying factors that had worked towards higher fertility in the estate sector at different points of time. It is important to realize that the fertility of this segment of the population, except for being a shade lower than the Sri Lankan Moors, who recorded a crude birth rate of 41.7, was higher than for all other ethnic groups in the country in 1946, recording a crude birth rate of 41.2 live births per 1,000 population (**table 2**). Moreover, at that point of time, their crude death rate was even more impressive. By being as low as 18.2 per 1,000 deaths, it was strikingly lower than for the other ethnic groups, who all recorded crude death rates above 20 per 1,000 (**table 3**). Such a performance in births and deaths of this immigrant population could only find plausibility in one explanation, which is that in 1946, the Indian Tamils enjoyed the right to vote and would probably have been on a better footing in respect of gaining access and being entitled to education, health facilities and other related welfare measures. Being at the receiving end of these services would have had its desired effects on the population. Therefore, their higher fertility and lower mortality at such points of time need to be related to better life.

The disenfranchisement of the Indian estate Tamil population brought into effect by legislation enacted in 1948 dealt a blow to their future welfare as power was exclusively in the hands of those who managed the estates. The companies that managed the estates, with an outlook primarily commercial in nature, led to the gradual & generation of their living conditions. This is shown in the lower fertility and higher mortality levels recorded thereafter when compared with other ethnic groups.

Trends in the infant mortality rates among the different ethnic groups in the country from 1957 to 1981 (**table 4**) reveal a steadily eroding health situation of the infants in the estate sector when compared with other ethnic groups and with national rates as a whole. The difference between the infant mortalityrates of the estate population and the national level more than doubled from 68 per cent between 1957 and 1959 to 143 per cent in 1981, a sign that the region is lacking in the provision of health care and associated services. However, Langford (1982:14) computed indices of mortality for the estate population between 1946 and 1971. According to him, the infant mortality rate in 1946 for the estate population was 131, lower than the rate for Sri Lanka as a whole, which was 141. Thus, it establishes the viewpoint that it was the changes that took effect during the post-disenfranchisement period that made the estate population worse off, It therefore lends support to reiterating the disenfranchisement hypothesis, as between 1946 and 1953 the Sri Lankan rate declined to 71, thereby recording a 50 per cent fall, whereas the estate infant mortality rate dropped to only 112, recording only a 16 per cent fall, a clear reflection of the poor state of their health. Accompanying this rising trend in the infant mortality rate was the falling trend in the fertility rate which continued until 1971, to rise again in 1981.

The changing scenario and its aftermath

There were traces of some improvement in the lot of the Indian estate population who continued to remain stateless on being disenfranchised in 1948, when in October 1964, the issue was taken up by the Governments of Sri Lanka and India. Accordingly, an agreement designated the Sirima-Shastri pact (derived from the names of the then Prime Ministers of Sri Lanka and India respectively) was signed. Under the terms of this agreement, 300,000 of these persons, together with their children, were to be granted Sri Lankan citizenship, while 525,000 with their natural increase, were to be repatriated to India, both processes to take place simultaneously over a period of 15 years (United Nations, 1976).

There were other benchmarks of progress which later contributed to uplifting them. The period of government from 1970 to 1977 saw many private ventures being nationalized. Included in the programme were land reforms. The plantations, which were a private enterprise, were affected after being brought under the control of two government corporations, namely the State Plantation Corporation (SPC) and the Janatha Estate Development Board (JEDB). This move also meant that the estate schools, which had hitherto been under the care of the management, came under the state education machinery. In this regard, it is necessary to indicate that many problems which plagued the estates had their

roots in the poor educational facilities accorded to the population. Above all, the takeover of the estates by the State resulted in the plantation labour becoming State Corporation employees serving public estates. However, changes towards a better deal for women surfaced only in 1984, when the principle of equalization of wages came to be enforced. Under this new wage structure, both male and female labour on the estates were paid the same wages. Thiswas seen as a significant improvement in terms of employment for women, who so far had earned lower wages despite working longer hours than their male counterparts.

Furthermore, with a view to providing a better quality of life in the plantations, there were other areas where improvements were in sight. The provision of better health facilities was made possible with resources provided by the Asian Development Bank. Health education, associated withen-lightening women on prenatal, postnatal care and child care, has been introduced with aid sought from the United Nations Children's Fund (UNICEF). This is a step in the right direction, reckoning that it is the degree of ignorance prevalent among the Indian estate women that causes most of the health problems. The above measures were accompanied by others related to maternity leave, with emoluments which may have effects on encouraging fertility. Above all, the plans to improve the housing conditions in the estates had the desired effects. In the Janatha Estates Development Board's Housing Needs Assessment Survey (1986), a sumof Sri Lankan rupees 200 million (1 $US = SL Rs 95.9503) was spent on improving the housing conditions in the estates.

The nationalization of the estates and its aftermath brought many desired changes to life in the estates. Side by side with these, the powerful trade union the Ceylon Workers Congress (CWC), which represents them closely, watches their interests and rights. It began to wield greater influence in monitoring their welfare when their leader was not only elected to represent them in the National State Assembly but was also made a Cabinet Minister with a portfolio covering the plantation sector.

Based on the developments over time, one is no doubt tempted to attribute the recent upturn in fertility of the Indian estate women to the improvements listed above. **Table 2** reveals that the birth rates of Indian Tamils, which consistently remained the lowest among the ethnic groups from 1953 to 1971, had moved by 1981 to second rankwith a crude birth rate of 30, coming next only to the Sri Lankan Moors. The latter are normally the highest fertility performers in Sri Lanka. Evidence of such fertility behaviour by the estate women was earlier observed in 1946 when they again came second in rank only to the said high-fertility Sri Lankan Moors. Thiscould be deemed a

Table 5. Age-specific fertility rates, general fertility rates and total fertility rates by ethnic groups, 1981 and SriLanka 1971 and 1981

Age groups	Sinhalese	Sri Lankan Tamils	SriLankan Moors	Indian Tamils	Sri Lankan 1981	Srl Lankan 1971
15-19	36.4	40.0	55.5	39.3	38.5	39.8
20-24	167.6	167.5	209.0	230.6	173.3	184.2
25-29	192.3	198.7	235.2	263.1	199.8	231.9
30-34	148.3	162.4	177.9	174.1	153.3	199.1
35-39	89.0	97.7	104.6	102.7	91.8	131.0
40-44	27.2	26.8	27.2	27.8	27.2	39.6
45-49	4.1	3.7	4.7	3.5	4.0	5.6
GFR (15-49)	107.7	111.6	201.9	139.2	111.5	126.9
TFR	3.32	3.48	4.07	3.83	3.44	4.16

Source: Fernando, D.F.S. (1990). "Differential mortality and fertility in Sri Lanka, by ethnic group", *Biology and Society* 7(4):215-224.

reflection of the better life enjoyed by the estate population prior to being disenhnchised. **Table 5** shows the age-specific fertility rates, the general fertility rates and the total fertility rates for all ethnic groups in the country as at 1981 and for Sri Lanka in 1971 and 1981. It is seen that the course taken by these indicators points to the rising trend in fertility among the Indian Tamil population. The general fertility rate and the total fertility rate of the Indian Tamils are higher than for all other ethnic groups, except for the Sri Lankan Moors, who differ in their fertility pattern. Looking at the course of age-specific fertility rates, the Indian Tamils show the highest rate for the 20-24 and 23-29 age groups, exceeding in this case even the Sri Lankan Moors, who had been steady in having the highest fertility. As for all other age groups, except for the 45-49 age group where their performance is the lowest, they rank higher than other ethnic groups except for being a shade lower than the Sri Lankan Moors. The low fertility of the Indian Tamil women of the 45-49 age group may be accounted for by their belonging to the earlier cohorts affected by the period of neglect. Above all, the rise in the fertility rates of the Indian women in 1981, compared with other ethnic groups, is all the more significant when at the national level one observes a consistently falling trend in fertility reflected in a lower general fertility rate, total fertility rate and age-specific fertility rates at all age groups between 15 and 49 in 1981 (compared to 1971). This overall change in direction in fertility observed among the Indian women is highly significant viewed against the background of the persistent falling trends prevailing between 1953 and 1971.

Table 6. Some demographic indicators of estate population, Sri Lanka, 1981-1993

Year	Crude birth rate	Crude death rate	Infant mortality rate	Peri-natal mortality rate	Still birth rate
1981	32.5	n.a.	68.7	104.3	73.4
1982	30.2	7.7	74.0	90.7	67.3
1983	31.8	7.4	58.3	84.4	61.8
1984	28.5	7.1	50.1	74.5	55.2
1985	30.6	7.7	44.9	69.5	50.3
1986	26.3	7.5	48.9	82.0	61.6
1987	22.1	7.7	48.3	84.3	61.6
1988	22.3	6.8	33.9	65.3	51.5
1989	20.4	n.a.	33.9	59.4	44.9
1990	17.6	n.a.	31.0	59.0	45.6
1991	20.9	6.4	28.8	55.6	43.5
1992	18.9	6.4	27.9	55.7	42.8
1993	17.9	6.4	29.4	55.7	43.7

Sources: Sri Lanka State Plantations Corporation (1991). Statistical Report and Analysis of Social Development 1980-90, Colombo and Plantation Housing and Social Welfare Trust (1997). *Health Bulletin of the Estate Sector*, 1991-1993, Colombo.

Note: n.a. = not available.

All such evidence of a change in their fertility behaviour may suggest support for the Malthusian principle of population, as within it is embodied the relationship between better times and higher fertility. Thisexample is not cited in isolation as studies of famine in Europe and in Bangladesh (Stein and Susser, 1978; Mosley, 1979) referred to by Gray (1983: 145) show marked decline in the birth rate expected for the period of maximum food shortage. Conversely, approximately nine months after the restoration of food supply, there was a recovery in the birth rate. These seasonal variations may be related to the factors influencing the fecundability among women.

Apparent demographic effects of societal uplift

Looking at recent demographic statistics presented by the Sri Lanka State Plantation Corporation in its Statistical Report and Analysis of Social Development (1991) and the Plantation Housing and Social Welfare Trust in its Health Bulletin of the Estate Sector (1997), the estate population seem to have passed the threshold stage and now show a trend towards stability. **Table 6** shows that the crude birth rate, after having risen to levels above 30 per 1,000 live births in the early 19809, began to decline quite sharply from the mid-1980s. Moreover, the overall improvement in the living conditions and

the introduction and close monitoring of expanded programmes of immunization, health care and sanitation are seen reflected in the recent decline in mortality rates, including the crude death rate, infant mortality and perinatal mortality rate.

The marked declines in both the perinatal mortality rates and the still birth rates are evidence of the improvements undergone in respect of maternal health and care, thereby enabling mothers to carry conception to a stage of live birth without foetal loss, followed by a greater survival rate of children. The process of transformation has helped to remove the aberrant demographic behavioural patterns, which prevailed when the estate population remained out of the orbit of development.

Policy implications

The 1994 International Conference on Population and Development in Cairo emphasized the need to improve the reproductive health status of men and women in developing countries. Sri Lanka was identified as one among them. However, as a first step, it is necessary to identify any disadvantaged groups among the population and serve such groups with specially designed policies and programmes, so as to improve their overall reproductive health and fertility behavioural patterns. As the above are strategies gaining currency today, it might be relevant that such special attention be given by the Government and agencies, mooting that such programmes provide coverage to include the estate population of Sri Lanka.

The deviant path taken by the fertility performance of the estate women since the 1940s unravels determinants of an unusual nature, which are outside the dictum of accepted demographic parlance for they are basically an outcome of negative factors. The estate sector of the population is engaged in an industry which forms the backbone of the country's economy. It is vital that they are provided with services not to keep them merely contented, but happy. Their deviant fertility performance has brought to light their attendant problems of living.

Amelioration programmes basically bent on their well-being have been under way since the 1970s with a view to uplifting their living conditions. It is heartening to note that the 1987 and 1993 Demographic and Health Surveys reveal that the total fertility rate of the estate sector is the highest (2.6), being higher than the urban (2.1) and rural (2.3) sectors of the population (Department of Census and Statistics, 1995 and 2001). This signals their higher nutritional levels resulting in an improvement in their reproductive capabilities consequent on the successful implementation of programmes directed at their

well-being. Nonetheless, it is necessary to enshrine and adopt policies of a consistent nature towards their betterment as there is still a disparity between the estate sector and others in the country in terms of provision of services and welfare measures. Adopting such policies would bring their literacy, health, nutrition and housing standards on a par with those of other sectors.

Until the 1970s, national policies of family planning, which targeted lowering fertility levels, seemed irrelevant to the estate population as their fertility levels were low and it was policies bent on providing better living that were deemed relevant. Having achieved the highest levels in fertility, it now becomes necessary to map out policies that would be aligned withthose outlined for the urban and rural sectors.

In this regard, it would be beneficial to adopt policies designed to disseminate and help enhance their knowledge and the consequent receptivity to contraception. Given the low literacy levels of estate women, which lag behind urban and rural sector women, this would be a step in the right direction. Achieving this objective would call for culturally accepted family planning programmes. Nonetheless, there could still be pockets among the population who are subfertile or infecund for reasons such as sexually transmitted diseases (STDs),repeated induced abortions and associated health and environmental problems. Under the present reproductive health policy, these groups need to be supported with special programmes to match their reproductive intentions.

Given the prevalent premarital sexual behaviour of the estate population, a vigorous programme of health education could be pertinent as it would tend to create the desired awareness relevant to reproductive health. In this regard, it needs to be emphasized that taking into account the subservient roles and attitudes of women in the estates, programmes involving active male participation would have a major positive impact on the overall reproductive health status of men and women in this subpopulation.

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Sexual Behaviour Related to HIV/AIDS: Commercial Sex and Condom Use in Hanoi, Viet Nam

Even though most of the respondents said they knew about HIV/AIDS, their risky behaviour is evidence that the community needs further HIV/AIDS knowledge advocacy

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Globally, 40 million adults and children were living with HIV (human immunodeficiency virus)/AIDS (acquired immunodeficiency syndrome) at the end of 2001. Of infected adults, 48 per cent were women. In 2001, the global

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adult HIV prevalence rate was 1.2 per cent. During that year, 5 million people were newly infected with HIV and 3 million died due to HIV/AIDS. In many parts of the developing world, the majority of new infections occurred among young adults, with young women being especially vulnerable. About one third of those currently living with HIV/AIDS are aged 15 to 24 years. Most of them do not know they carry the virus. Many millions more know nothing about the virus or too little to protect themselves (UNAIDS, 2001).

Since the first clinical evidence of HIV was reported in Ho Chi Minh City in December 1990, HIV has spread to over 61 provinces and cities in Viet Nam. According to a report released by the Viet Nam National AIDS Committee, 29,421 people had been infected with the virus by the end of February 2001. Of those infected, 85.8 percent were men aged 20 to 29. Of those infected, 4,835 people developed AIDS and 2,549 succumbed to the disease (Vietnam National Aids Commission, 2001). In reality, the estimates may be higher than those in the official report (Thanh Nhan, 2001). HIV infections occur not only among injecting drug users (IDUs) and commercial sex workers but also among other groups of people.

Injecting drug use presents particular risks for HIV transmission because it is a far more efficient mode of transmitting HIV than sexual intercourse (UNAIDS, 2000). Drug injection is often practised among networks of people, which can facilitate the sharing of needles. In Hanoi, there were 8,700 IDUs in 2001. Currently in Viet Nam, injection drug use accounts for approximately 63.8 per cent of HIV infections (Vietnam News Agency, 2002).

Another reason for the rise in HIV infections is an increased likelihood of people engaging in unprotected sex with multiple partners (McCoy and others, 1996). In Viet Nam, prostitution is illegal; therefore, sex workers are not officially managed and their health is not monitored. Perhaps this is the reason why the number of commercial sex workers infected with HIV has increased. According to the Ministry of Labour, War Invalids and Social Affairs, there are 36,800 commercial sex workers in Viet Nam. Of the 36,800 sex workers, 34.6 per cent are drug users, while 18.4 per cent of the drug users are HIV positive. In Hanoi's social assistance centre No. 11, about 30 per cent of supervised sex workers are drug users and half of them are HIV infected (Thanh Nien, 2001). HIV/AIDS prevention programmes in Viet Nam, therefore, should be linked with the issue of prostitution.

Injection drug use and its correlation with HIV/AIDS is one of the top concerns of the Government which has invested in a number of social measures and programmes to curtail drug use. Although the impact of unsafe sex on the increase of HIV infections is also recognized, issues related to unsafe sex and

HIV/AIDS are not documented. Since personal resources are limited, the author could conduct a study in one city only. However, the findings from this study can provide a general picture of sexual behaviour among men that focuses on commercial sex and condom use related to HIV/AIDS in other large cities of Viet Nam.

Methodology

There are three main questions examined in this study: (a) What is the current situation regarding commercial sex and who has access to it? (b) Why does a Vietnamese man feel the need to buy sex services? (c) Are the men aware of the risks associated with unsafe sex in relation to HIV/AIDS and do they know how to protect themselves when visiting commercial sex workers?

Research in the United States of America and Thailand suggests that socio-economic status is positively correlated with the person's age when intercourse is first experienced, and negatively correlated with sexual experience with commercial sex workers (VanLandingham and others, 1995). In Viet Nam, socio-economic changes are presumed positively correlated with both the person's age when intercourse is first experienced and sexual experience.

The transformation of the Vietnamese economy, known as Doi Moi, has opened a new window for young people to be connected with the Western world. Lifestyles and conceptions of life have changed among young and single men. Currently, they are more likely to want to know about females and sex (Nguyen Minh Thang and Gammeltoft, 1999; Khuat Thu Hong, 1998). At the same time, the socio-economic changes have created new opportunities for a number of middle-aged men in big cities to'be successfull in business. Many of them have obtained more political and monetary powers. In turn, these powers provide a favourable environment for exploring new sexual practices. Young men and high-income business people are, therefore, more active in multi-partner sexual activities, which include commercial sex.

Even though socio-economic development has started to change lifestyles in Viet Nam,a happy married life might be able to keep men away from commercial sex. If so, the Vietnamese traditional family can play an important role in the struggle against prostitution and other social issues related to HIV prevention.

Detailed information on sexual behaviour, condom use and knowledge of HIV/AIDS, including knowledge of modes of transmission, is always important for HIV prevention programmes. Educational level, the number of lifetime

sexual partners and knowledge about HIV/AIDS are significantly and positively associated with the use of condoms to prevent HIV infections (Messersmith and others, 1994). A survey onmale knowledge of reproductive health showed that Vietnamese men, especially young men, are not knowledgeable about HIV/AIDS (Population Research Consultants, 1998; Nguyen Minh Thang, 1999). It is important to find out whether people who live in large cities are aware of the risks associated with unsafe sex practices, and whether they know how to reduce the risks when visiting commercial sex workers. At present, the primary means for deterring the further spread of HIV/AIDS remain behavioural risk prevention interventions. Thus, developing and implementing interventions that focus onbehavioural prevention are of the utmost importance.

In our study, a quantitative approach was used. A survey questionnaire with 88 questions was designed to investigate AIDS-related knowledge and sexual experience, especially with regard to commercial sex workers, premarital and extra-marital sex. A limited number of in-depth interviews were conducted in order to gain further knowledge about sexual experience, the conditions under which the sexual experience occurred, the relationship between HIV/AIDS knowledge and patterns of sexual activity etc.

The population targeted in the survey was men aged 18 to 55 years. There were five target strata for this study: (a) university students, (b) factory workers, (c) government officials, (d) businessmen and service providers (including people working in hotels and restaurants) and (e) mobile workers (drivers and other mobile labourers). The field survey was conducted in Hanoi from January to February 2002, with support from Population Research consultants.

A self-weighted sample was designed for this study. A stratification sampling procedure was applied to determine the sample size for each of the five stratra. In each stratum, targeted men were selected by a random selection procedure. Data from the Census of 1999 were used as a sampling flame. A sample size of 493 men was selected, proportionate to the population size of the urban area of Hanoi. The participation of the men in this study was voluntary: 126 students, 176 factory workers, 67 government Officials, 75 businessmen and service providers, and 49 mobile workers took part in the survey. One third of the respondents were 25 to 34 years old; 83.9 per cent of the respondents had a high school education or higher; about half of them had never beenmarried; 53.5 per cent were born in rural areas; and more than 63 per cent do not follow any religion.

Table 1. Percentage of respondents who have sex with commercial sex workers

	Visited prostitute	
	Percentage	Number
Type of work		
Student	49.0	49
Factory worker	23.2	155
officers	29.8	57
Businessmen	39.7	68
Mobile worker	38.6	44
Age:		
20-24 years	42.9	56
25-34 years	37.1	132
35-44 years	29.3	116
45 and above	20.3	69
Education obtained:		
Middle school or less	29.4	34
High school	30.0	30
Graduated high school	34.2	197
College and above	31.3	112
Home village:		
Urban	27.6	196
Rural	37.9	177
Age at first intercourse:		
Under 20 years	70.8	24
20-24 years	38.3	141
25 and above (25-34 years)	24.3	208
Monthly income (dong):		
<100,000	25.0	72
100,000-300,000	30.4	227
>300,000	45.9	74
Happy married life:[a]		
No	42.9	28
Yes	23.2	220
Total	32.4	373

[a] "Happy married life" is only considered for those who are currently married and live with wife/partner. In this analysis, there are only 248 marriedcohabited men among the 373 men who ever had sex.

Findings

The study shows that 68 per cent of respondents indicated that commercial sex has become popular in Viet Nam. They also commented that prostitution was not strongly discouraged by members of the community and society: 23.9 per cent of respondents were firmly convinced that community members did not object to commercial sex and 58.4 per cent of them thought that prostitution was viewed as evil only by a few members of their community. Among the 493 men interviewed in this study, 373 reported that

they ever had sex with a woman. **Table 1** shows the percentage of these 373 respondents who have had sex with a prostitute, and those who visited a prostitute for their first sexual experience.

Students have the highest rate of experience with prostitutes, 49 per cent, followed by businessmen, mobile workers and government officers. Younger men are more likely to visit prostitutes than older men: 70.8 per cent of those who first had sex before the age of 20 experienced a sexual relationship with a sex worker. The rate was 38.3 per cent for those who had their first sexual experience between 20 and 24 years and 24.3 per cent for those aged between 25 and 34. None of the respondents had their first sexual experience after the age of 34. Higher educated men were more likely to visit commercial sex workers. However, men who graduated grade 12 and did not continue higher education were more likely to visit sex workers than those in other groups. Men who came to the city of Hanoi from rural areas were more likely to visit prostitutes than men who were born there, 37.9 and 27.6 per cent respectively. Income and the quality of married life were also important factors in understanding why men chose to buy services from sex workers.

A descriptive analysis of those who have had sex with prostitutes (n = 121) revealed interesting facts about their sexual behaviour (**table 2**). First, the age at which the first sexual experience occurred with a sex worker was quite young: 6.8 per cent of respondents reported that they had sex with a prostitute before reaching 20 years old. At age 24, the percentage increased to 40.7 per cent. This means that more than 50 per cent of men have had sex with sex workers before the age of 25. Students are more likely to have access to commercial sex at an early age.

Second, the visits are quite frequent. During the six months preceding the interview, more than 45 per cent of the men had had sex with a commercial sex worker more than five times. The most fiequent visitors are government officers (80 per cent), followed by businessmen (55.6 per cent). Even though students represent an important fraction of customers, their visits are less frequent than other groups.

Third, commercial sex clients do not always return to the same place. While 52.9 per cent of customers went back to the same place, 31.4 per cent went to a different place. But even when clients visited the same place, they did not meet the same girl. Only 11.6 per cent of the respondents reported having sex with the same girl in the six months prior to the interview. These figures suggest not only that commercial sex is widespread in Viet Nam but also that clients tend to choose a different partner each time.

Table 2. Sexual behaviour and practice with commercial sex workers

	Type of work					
	Student	**Factory workers**	**Officers**	**Business-men**	**Mobile workers**	**Total**
Age at first intercourse with sex worker:						
< 20 years	12.5	0.0	6.7	11.1	5.9	6.8
20-24 years	87.5	22.9	33.3	44.4	11.8	40.7
25-34 years	0.0	45.7	40.0	25.9	58.8	33.1
>34 years	0.0	31.4	20.0	18.5	23.5	19.5
Number of visits in the last 6 months:						
< 5 times	87.5	52.9	20.0	44.4	58.8	54.7
5 times and above	12.5	47.1	80.0	55.6	41.2	45.3
Where:						
Same place	50.0	58.3	35.3	48.1	70.6	52.9
Different place	37.5	27.8	29.4	33.3	29.4	31.4
Do not answer	12.5	13.9	35.3	18.5	0.0	15.7
Meet with the same girl	4.2	13.9	0.0	22.2	11.8	11.6
Accompanied by:						
Close friends	87.5	22.2	52.9	29.6	11.8	39.7
Friends	12.5	44.4	17.6	40.7	41.2	33.1
Acquaintance	0	16.7	17.6	7.4	23.5	12.4
On their own	0	16.7	11.9	22.3	23.5	14.8
Type of place visited for commercial sex (most recent visit):						
Karaoke, massage parlour	29.2	38.9	11.8	18.5	64.7	32.2
Barber shop	0.0	5.6	0.0	0.0	0.0	1.7
Restaurant	4.2	13.9	0.0	14.8	0.0	8.3
Bar, dancing club	8.3	0.0	0.0	3.7	0.0	2.5
Hotel, motel	45.8	22.2	35.3	51.9	17.6	34.7
On the street	0.0	13.9	0.0	0.0	17.6	6.6
Other	12.5	0.0	11.8	0.0	0.0	4.1
Do not answer	0.0	5.6	41.2	11.1	0.0	9.9
Duration of the most recent visit:						
Short	58.3	61.1	35.3	55.6	82.4	58.7
Over night	41.7	27.8	23.5	37.0	17.6	30.6
Do not answer	0.0	11.1	41.2	7.4	0.0	10.7
Payment for the most recent visit:						
<50,000 dong	16.7	30.6		3.7	35.3	18.6
50,000-l00,000 dong	75.0	66.7	78.6	85.2	64.7	73.7
>100,000 dong	8.3	2.8	21.4	11.1	0.0	7.6
Number	**24**	**33**	**17**	**27**	**17**	**121**

Table 3. Condom use when having sex with sex worker

	Type of work					
	Student	**Factory workers**	**Officers**	**Business-men**	**Mobile workers**	**Total**
Use of condom:						
Never use	0.0	11.1	0.0	0.0	17.6	5.8
Sometimes	4.2	8.3	17.6	25.9	11.8	13.2
Almost always use	0.0	25.0	11.8	25.9	17.6	17.4
Always use	70.8	27.8	29.4	22.2	35.3	36.4
Don't know	25.0	27.8	41.2	25.9	17.6	27.3
Condom use for the most recent visit:						
Use	91.7	77.8	76.5	81.5	64.7	79.3
Do not use	4.2	16.7	5.9	14.8	17.6	12.4
Don't remember	4.2	5.6	17.6	3.7	17.6	8.3
Attitude when suggested to use condom:						
Agree and comply	83.3	44.4	58.8	59.3	41.2	57.0
Use if think it is necessary	16.7	38.9	35.3	29.6	11.8	28.1
Do not feel concerned	0.0	16.7	5.9	11.1	47.1	14.9
Number	**24**	**33**	**17**	**27**	**17**	**121**

Finally, clients commonly visit prostitutes in the company of someone else. The survey revealed that only 14.8 per cent of men visit sex workers on their own. Among the rest, **table 2** shows that 39.7 per cent go with close friends, 33.1 per cent with other friends and 12.4 per cent with acquaintances.

Karaoke bars and massage parlours are common places for commercial sex, as are hotels and motels. Some hotels and motels serve as sex providers while some just provide a room for rent. Visits often take place under a short time span of an hour or so. Surprisingly, however, 30.6 per cent of respondents reported having spent the night with the sex worker during their most recent visit. The regular price for each visit ranged from 50,000 to 100,000 dong. The maximum payment reported in the survey was 250,000 dong (lUS$ = 15,270 dong).

The attitude and the practice of condom use among those who visited prostitutes are the other focus of this study (**table 3**). The study shows that only 36.4 per cent of those surveyed invariably use condoms when visiting sex workers, while 5.8 per cent reported never using condoms when having sex with prostitutes. The never-use-condom respondents were mobile workers and factory workers. Many people reported using condoms from time to time. For their most recent visit, 79.3 per cent used condoms, 12.4 per cent did not use any, while the rest did not remember whether they used one or not. The study

Table 4. Self-evaluation of the possibility of HIV infection and STDs for interviewed men

	Type of work					
	Student	**Factory workers**	**Officers**	**Business-men**	**Mobile workers**	**Total**
Ever anxious of being infected by HIV						
Never	71.4	71.6	73.1	76.0	65.3	71.8
Sometimes	26.2	25.0	25.4	24.0	32.7	26.0
Always	2.4	3.4	1.5	0.0	2.0	2.2
Possibility of HIV infection:						
High	3.2	0.6	3.0	0.0	0.0	1.4
Medium	2.4	2.3	1.5	1.3	2.0	2.0
Low	10.3	14.2	11.9	16.0	22.4	14.0
Cannot be	69.8	62.5	68.7	68.0	46.9	64.5
Don't know	14.3	20.5	14.9	14.7	28.6	18.1
Need treatment for STD	7.9	15.9	13.4	4.0	18.4	12.0
Number	**126**	**176**	**67**	**75**	**49**	**493**

also shows that 14.9 per cent of men do not heed advice to use condoms, and 28.1 per cent said that they might follow the advice if they thought it necessary.

Because of the risky behaviour involved, men might not feel comfortable answering questions about whether or not they are concerned about contracting HIV. Twenty-six per cent of the respondents reported that they were sometimes concerned about contracting HIV, and 2.2 per cent admitted that they were always concerned about contracting the virus (**table 4**). Mobile workers are more concerned about the risks than other workers. Even though 71.8 per cent of the respondents said they were not concerned, only 64.5 per cent of them were sure that they could not be HIV positive. Twelve per cent of respondents reported that they needed treatment for STDs.

Table 5 presents some relationships between visits to a sex worker and not using a condom, and the need for sexually transmitted disease treatment among the study group of 373 men who have had any sexual experience and the 121 men who have had sex with prostitutes. The survey data confirm a high risk of STDs among those who visit sex workers, especially those who do not use a condom when doing so. Of those who visited prostitutes, 19.8 per cent reported that they needed treatment for STDs, 11.1 per cent higher than those who never visited a prostitute. Since the data collected are from self-reporting with no clinical test, the actual estimate of the need for STD

Table 5. Percentage of respondents who need STD treatment (classified by ever having sex with sex workers and condom use when visiting sex workers in the six months prior to the interview)

	Need STD treatment		
	Yes	No	Number
Visit to sex workers:			
Never	8.7	91.3	252
Visited	19.8	80.2	121
Condom use when visiting sex workers during the six months prior tothe interview:			
Use sometimes	31.3	68.4	23
Almost always use	28.6	71.4	21
Always use	15.9	84.1	44

treatment might be higher. The concern is even greater when analysis reveals that 31.3 per cent of those who have had sex with prostitutes and just used condoms some of the time reported that they needed treatment for STDs. Even among those always using a condom when visiting a sex worker, there is still a 15.9 per cent'needfor STD treatment.

Discussion

"I think commercial sex has become popular now because the need for commercial sex is increasing. I thinkthat is normal. It is being human," said a medical doctor who works at Bach Mai Hospital. It is clear that commercial sex is not alarming in Viet Nam communities because of the massmedia. Commercial sex is more of a problem than Vietnamese society realizes. It is obviously an urgent issue in Viet Nam because of the high prevalence, frequency and duration of the visits to sex workers. People who visit prostitutes are not only mobile workers far away from home but also businessmen, government officers, factory workers, and especially students. Not only do wealthy people, but also poor people, visit sex workers. Education does not show clearly its influence on whether or not a man visits a prostitute. Even those who consider themselves as being happily married account for a small portion of customers.

At the early stage of Doi Moi, national socio-economic development might not have positively influenced commercial sex. But later, men with high incomes became more likely to visit prostitutes. More and more students and

young people are obtaining early access to commercial sex, sometimes, though not often, in order to discover the "strange taste," students said. Peer groups seem to be a major factor affecting visits to prostitutes. "Normally, on an occasion, we get together to drink.... When a little drunk, we feel we need something, then call for each other to go out to find girls. They are available in motels", said a student from Hanoi National Economics University. Karaoke bars, massage parlours and motels seem to be popular places for commercial sex. During Doi Moi, many rural men moved from their rural villages to big cities for job opportunities. In traditional villages, people are strangers to commercial sex. Houses are always open to visitors and villagers live close to relatives and neighbours. These conditions are not favourable to prostitution activities in general. Men accustomed to village living may be shocked when they fist experience the industrial lifestyle of urban areas. This may explain why people born in rural areas are more likely to visit prostitutes than those born in urban areas.

There are a number of reasons why men visit commercial sex workers. "It depends.. .some may want to find out how other people live. Some may go for funat the invitation of some friends. Some may go following a quarrel with their wife. Some may just seek new feelings or may simply need sex etc... . There are a thousand ways...", said an officer working for an import-export company. But respondents generally agreed that the main reason for visiting sex workers was the pursuit of new feelings or tastes.

A major concern is the fact that many men are not concerned with the risks associated with unsafe sex. Many of the respondents interviewed for this study do not use condoms when having sex with sex workers. A number of men think that having sex with expensive prostitutes, young girls and girls who live in remote areas is safe. The men who were interviewed did not seem to care much about condom use, even when prompted by friends. Younger people seem to take more risk than older ones. Even though education is not a positive factor with regard to preventing visits to prostitutes, it is a positive factor for condom use. Therefore, people with minimal amounts of education should be the target of information and communication campaigns for condom use related to HIV/AIDS.

Even though most of the respondents said they knew about HIV/AIDS, their risky behaviour is evidence that the community needs fiuther HIVIAIDS knowledge advocacy.

The study clearly shows interesting findings on sexual behaviour related to HIV/AIDS in the capital city of Viet Nam. But there is a need for further studies to expand the research objects and obtain nationwide estimates.

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Female Labour Migration to Bangkok: Transforming Rural-Urban Interactions and Social Networks through Globalization

Globalization dynamics form a new structural arena for internal migration in Thailand. The resulting economic, social and spatial transformations of social networks and rural-urban interactions are reflected in the biographies of female labour migrants in Bangkok

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Recent globalization processes have changed significantly the conditions and features of female rural-to-urban labour migration in Thailand, particularly in terms of social networks and rural-urban interactions. The Thai case is

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specifically interesting because the Thai societal model is often said to support female migration better than other cultures. Thai female migrants encounter globalization, especially when they search for employment in the industries of Bangkok and its vicinity, the site of condensing economic globalization. The "feminization of urban employment" and the "feminization of labour migration" actually represent two sides of the same coin.

Development in a globalized world comprises apparently contradictory trends,an encompassing networking at all levels on one side, and more rapid and unpredictable socio-economic changes, disconnections and disjunctures on the other. Likewise, the female migrant workers' experiences are somewhat caught between (a) their roles as cheap, flexible labour force; (b) a new environment of urban modernity, consumerism and social grouping; and (c) the traditional norms conveyed through relationships with their rural home. While moving between village and city, each migrant must negotiate shifts, not only in space but also in terms of personal identities and social relations: literally, the "good daughter" meets the "modern woman".

The resulting social networks and overall rural-urban interactions represent powerful vehicles and expressions of contemporary social-spatial dynamics. Women's mobility towards employment in Bangkok is asserted to be one example for continuity and change, as well as convergence and conflict of the people and the environment in present and future Thailand. Against this wide-ranging background, the key questions of the paper are outlined as:

1. What dynamic interrelationships exist between and determine the development of gendered rural-urban migration, industrial labour and globalization in Thailand?

2. What impacts do the migrants' social relationships with rural areas have on the geography of rural-urban circulation? Is female labour migration situated within a Bangkok-periphery divide or continuum?

Hence, the paper's key objective is to identifj, analyse and explain how socio-economic processes at the global and national levels are reflected in the practical experiences of Thai female labour migrants and their relationships with their rural families and communities left behind. The study investigates specifically rural-urban migration streams towards Bangkok and its vicinity and the target group of female migrant factory workers.

Migration is understood as a social, rather than a demographic process. Therefore, it is necessary to begin with understand the move from the periphery

to the city as a passage from a relatively traditional to a modem context (United Nations, 1993a). In this paper, the macro-level background of the national political economy and the Thai societal system are related to the micro- and meso-level network structures of migrants and the resulting processes in their rural-urban interactions.

Methodology

This article summarizes the findings of a larger paper which reported on a research carried out over a three-month period in Bangkok (from November 2000 to January 2001). A mixed research approach was chosen including (a) 14 problem-centred and focused expert interviews; (b) visits to six industrial areashade union centres where eight female migrant manufacturing workers in three groups were interviewed; plus (c) the analysis of related statistics and existing research results. To evaluate the qualitative interviews, all information was thematically structured in categories, compared and analysed for sets of female labour migrants' typical patterns of social behaviours. The quantitative analysis mainly relates to the first key question, whereas the qualitative research concerns the second key question.

The variety of data sources creates difficulties for comparisons, kspeclally regarding migration data, because sources employ varying d&iitions. However, the statistics are mainly used to illustrate overall trends and patterns. The available data sufficiently meet these expectations. Another problem is that most statistical sources use either regional or provincial classifications for analysis. Data in spatial categories that would fit the perspective of the paper, i.e. Bangkok Metropolis plus its vicinity against the four remaining regions of Thailand (the Southern, Northern, Central and North-Eastern Regions), are not available. The vicinity stands for the five provinces of Samut Prakan, Pathm Thani, Nonthaburi, Nakhon Pathom and Samut Sakhon which stllround Bangkok Metropolis and belong administratively to the Central Region. Because they are assumed to be mostly urban, the municipal areas of the Central Region are used as spatial category instead. In cases where the urban character is only relevant in sociocultural terms, i.e. the statistical differentiation is not important, "Bangkok" refers to the Mettopolis and vicinity.

The expert interview partners were selected by their institutional and personal backgrounds. They comprise (a) academic institutions (Mahidol University and Chulalongkorn University, Thailand Development Research

Institute (TDRI));(b) United Nations agencies (United Nations Population Fund, United Nations Development Fund for Women, United Nations Economic and Social Commission for Asia and the Pacific; and (c) five non-governmental organizations.

The interviews with the female migrant workers took place during field visits to industrial production areas and trade union centres. Culture and language barriers tied the author to other institutions for contacts with the female migrants. Thisdependency on NGOs and governmental bodies opened up doors -for supposedly more selective insights, especially as two cooperating NGOs approach the workers through trade unions only.

Migration and globalization in dynamic interrelationship: theoretical framework

Migration and globalization are tied together across many dimensions. Globalization jeopardizes and reworks the traditional ideas of geography and social actions within space. Generally speaking, globalization stands for ever-increasing worldwide networking that takes place simultaneously at various levels and dimensions (Beck, 1999; Cohen and Kennedy, 2000). Its major underlying component is a new, all-encompassing compression of time and space. Economies, cultures and societies are squeezed together towards increased mutual interaction. Consequently, peoples' biographies change. Particularly, mobile people encounter new ways of life. They have to face a new, disjunctive relation between space, place and cultural identity. Rural-urban interactions, asconstructed by migrants and their families left behind, are both part and result of these network structures over space and time. The wider social, political, economic and spatial contexts become interconnected with the practical experiences of migrants and their families.

Local cultures remain vivid but widen their reference points by adopting and adjusting "global" symbols and products. Individual lives, cultures and identities are caught in between different places, networks, the global, and the local. As a result, they redefine themselves - a process that is expected to bring about personal, familial and societal tensions and conflicts (Appadurai, 1996; Werlen, 2000).

The consequences of migration are closely interlinked with its initiation and perpetuation processes. Particularly significant for this study is the "new economics of migration" or "household survival" approach. It comes close to

a "meso-theory" that is appropriate for the chosen integrative research approach. The concept presumes that the decision to migrate is taken as a combined household strategy. Motivations are primarily the minimization of risks associated with unforeseeable market failures, resource diversification and in the second place, income maximization (Chant, 1998; Massey and others, 1993; Stark, 1991).

Economic globalization and female labour migration: the structural background

Thailand's "economic miracle" and its impact on the female workforce

Economic globalization in Thailand, as elsewhere, occurs in the form of political-economic interactions between global and national forces leading to an integration of labour, trade and capital markets. The outcomes are profound structural socio-economic changes, particularly in terms of altering employment patterns, regional disparities, migration and a policy shift towards family and community cohesion in place of macroeconomic goals.

Thailand entered the global economy as it is understood today after 1985, when the Government applied the industrializing strategy of labour-intensive export orientation which set off intensified local private and particularly foreign direct investment (FDI). Subsequently, the country experienced an economic boom. Gross domestic product (GDP) grew massively and relatively unexpectedly in 1987-1988 by 13.3 per cent, continuing at an average 9 per cent until 1995. The percentage of the population living below the poverty line fell from 32.6 to 11.4 per cent during the period from 1988 to 1996 National Economic and Social Development Board[1]; Skeldon, 1999). Thailand was quickly termed a "newly industrialized country" with economic globalization appointed to be the impetus and upholder of the boom. An expansion of FDI, particularly by Hong Kong, China; Japan; and Taiwan Province of China into Thailand has followed the appreciation of the yen since 1986. These processes caused exceptional growth in the merchandise exports of industrial goods, from 55.35 per cent in 1986 to 84.27 per cent in 1999 (TDRI, 2000b). The country entered the world trade market and joined the international division of labour. Many transnational corporations (TNCs) relocated their manufactures to Thailand because it offered the favourable factor conditions, specifically a large pool of unskilled, cheap female labour (Kraas, 1996a, 1996b; Sussangkom, 1997; Ogena and others, 1997).

However, in 1997-1998, globalization exposed its risks and in particular Thailand's dependency on foreign capital, in the form of a severe economic crisis. The GDP growth decreased to -10.8 per cent in 1997-1998, and the percentage of Thaisliving beneath the poverty line rose again to 12.9 per cent. The demand for goods fell, factories closed, employees were laid off, working hours and wages were cut (Gray, 1999; TDRI, 2000a). In 2000, GDP growth slowly recovered at 4.5 per cent but the socio-economic effects of the crisis are still visible.

Representing one factor condition in Thailand's global integration, Thai women became increasingly engaged as cheap, flexible and unprotected workers. This feminization of employment is most apparent in the five major export-oriented, labour-intensive industries, which are electrical machinery, electronics and computer parts; textiles and ready-made garments; chilled, frozen and canned food; precious stones and jewellery; and footwear. In 1999, the proportions of female workers varied from 55.44 per cent (precious stones and jewellery) to 75.94 per cent (textiles and ready-made garment) (GDRI, 2000).

The Thai women's labour force participation rate has always been and is still high at 60-70 per cent (16-17 per cent lower than the male rate in 1999-2000) (NSO,1999-2000). Yet, their traditional tasks were closely tied to unpaid family work. Nowadays, if a family expects the daughter to support it more successllly than the son, she is the one to work outside the household, even at the expense of migration. The proportion of economically active women who work as employees increased from 17 to 25.6 per cent between 1980 and 1990 (Phananiramai, 1996).

Thai female industrial workers experience higher socio-economic independence and "empowerment", which paradoxically take place in a gender segregated and biased labour market. The majority of Thai female workers face vulnerability and marginalization in terms of low wages, bad working conditions, health risks and insecure jobs. Generally, the higher the wages and education, the wider the gap between male and female workers (GDRI, 1999).

Growing disparities between Bangkok and the periphery

As a second major outcome, economic globalization especially the power of TNCs does not balance, but on the contrary widens local and regional dispqities. The outcomes are, on the winning side, new "marketplaces" of globalization - here, Bangkok and its vicinity - and, on the losing side, most of the remaining marginalized peripheral regions that have lost the contest:

since the 1980s, 75 per cent of all investment has been concentrated in Bangkok and its vicinity. The city's population totals about 16 per cent of the whole Thai population and 60 per cent of the urban population. Fifty per cent of the GDP was generated in Bangkok and its vicinity in 1998. Likewise, in 1999, 45.6 per cent of all establishments and 48 per cent of all manufacturing establishments were located in Bangkok, 7.2 and 13.5 per cent in the vicinity. With regard to employment structures in 1999, 41.5 per cent of all Thai employees (28.5 per cent of factory labourers) worked in Bangkok, 20.13 per cent (33 per cent) in the vicinity and 17.15 per cent (22.7 per cent) in the remaining Central Region[2] (TDRI, 2000b; Ministry of Labour and Social Welfare, 1989, 1999; Kittiprapas, 1999).

Thailand has one of the most concentrated patterns of industrial development worldwide. Bangkok faces the problematic situation of being jammed between national requirements and reverse-oriented international forces. Necessary national balancing policies collide with -and have so far failed against - the interests of the global economy. ecent policy shifts towards stronger regionalization and decentralization have not yet shown profound results (Wongsuphasawat, 1997; Kraas, 2000).

Summarizing, economic globalization operates as occupationally-selective in manufacturing, spatially-selective in Bangkok and its vicinity, and gender-selective for the female sex. These regional, sectoral and sexual disparities in Bangkok-periphery relations are reflected in human migration behaviour, to be discussed in the following.

Mobility patterns, migrants' socio-economic profile and links to factory workers

Rural-to-urban migration in Thailand is being feminized, accelerated and reinforced. In August 2000, 14 per cent of the Thai population aged 13 and over had changed their residence from one village or municipal area to another in the previous five years, 1.4 per cent more than in 1985 (aged 11 and over) (NSO, 1985, 2000). Male and female shares among migrants in Bangkok and the Central Region are consistently fairly equal. With regard to migration flows, however, female migrants usually dominate urban-ward and male migrants rural-rural migration (Pejaranonda and others, 1995). Interestingly, the 2000 Labour Force Survey data do not reflect the female dominance, with the exception of migrants in the Central Region. Percentages are also generally lower. Whether this is the beginning of a new trend or an exceptional situation cannot be said at this stage (NSO, 2000).

There are no official data on the proportion of migrants among factory workers. But according to the interview conducted, such workers comprised about 80 per cent of the workforce in the industrial areas visited. Census data in 1990 and Thonguthai and Pattaravanich's labour market survey (1993) revealed that factory workers typically comprised the largest proportion of young Thais (age 15 to 30), followed by rural-to-urban migrants and all migrants. Female rates usually exceeded male rates in this age group, except from female "all migrants", who surpassed men only at ages 10-14 and 15-19. In 1997, migrants, as well as the surveyed nzanufacturing workers, were more likely to be single than non-migrants, especially in Bangkok with 58 to 59 per cent singles (36 to 38 per cent of non-migrants). As a matter of fact, in industry, singles are often favoured over married workers because they offer the required "factor condition" of flexibility. Moreover, the majority of migrants had, in contrast to non-migrants, finished at least elementary schooling. Fewer women than men attended secondary school. Factory workers in Bangkok were generally better educated than the whole group of migrants, those employed in services and commerce, as well as non-migrants (NSO, 1997). Also, in 1992, the better educated the migrants the more likely they were to move towards Bangkok (Chamratrithirong and others, 1995). Matching this pattern, a disproportionately high number of migrants in Bangkok and the Central Region (40 to 60 per cent) worked in the industrial sector in 1997 (20 to 25 per cent non-migrants) (NSO, 1997). Accordingly, the female migrants' spatial concentrations followed the relocations of industries from the "full" Bangkok Metropolis (12.7 per cent migrants, August 2000) to the municipal Central Region (24.5 per cent migrants compared with 15.2 per cent in non-municipal areas) (NSO, 1999-2000).

Seasonal mobility in rural and urban areas is a common phenomenon in Thailand. However, it is more common among male than female migrants. Factory workers are typically permanent movers and forced to stay in Bangkok owing to their contract obligations (Chamratrithirong and others, 1995).

In terms of regional streams, the mobility processes establish a kind of regional economic migration system between Bangkok/ the urban Central Region and the North Eastern Region/ the rural Northern Region. The latter two regions, being largely neglected by industrialization, direct investment and tourism, provide the economic heartland of Bangkok and the municipal Central Region with relatively cheap labour (Parnwell and Rigg, 1996). Hence, the globalized Thai labour market determines the volume, direction, nature and type of female rural-to-urban migration in Thailand.

Analysing the impact of migration: how do social networks transform?

The following two sections summarize the findings of the qualitative research on migrants' network structures and processes of rural-urban interactions (key question two), supplemented by other investigations. Specific interview references are only given after direct quotes,[3] and additionally utilized literature is explicitly quoted.

Keeping up the link? Communicating material and immaterial goods

In analysis, (a) flows of material and social remittances and (b) sustained migration through networks are regarded as the distinguishing aspects for the dynamics of migrants' exchange networks. The interviews indicate that the major contact points of migrants and their rural origin are material remittances. Concisely, remittances consist of money and "special items" like seafood, clothes, television sets, refrigerators, rice cookers, radios and dried fruit. Gender-specifically, a higher percentage of women remit higher percentages of their salaries, often more than what they keep for themselves (at least at initial stages of migration).

Thai migrant women also transfer so-called social remittances, here ideas, patterns of behaviour, identities, attitudes, skills and practices to their family and/or community (Levitt, 1998). Firstly, the migrants were said to take back with them new habits and attitudes of urban "modern" lifestyle, possessions, consumerism and materialism. For explanation, the interview partners referred to the Thai Buddhist image of people possessing what they deserve[4] - in spite of sincere Buddhism actually rejecting all kinds of possessions. Eng (1997) and Mills (1997) infer that for young Thais, wealth determines social status: the purchase of "than samay", the modem lifestyle, has replaced religion at the centre of their social life. Secondly, migrants, particularly females, adopt new education targets. They learn in Bangkok that "opportunities are dictated by education". As a consequence they "send money back for the education of the children so that they, when they start to go to the job market, would have a better chance in life" (expert interviews 3, 8). Thirdly, some experts noted (while others denied) that retum migrants transfer new political ideas and take on initiatives for local political empowerment. The fourth kind of social remittances is the communication of expertise. Mentioned examples include the utilization of newly acquired sewing, computing, accounting or mechanic skills, and knowledge of how to open up businesses.

Importantly, migrants' exchange networks always stand for a two-way relationship in material and immaterial dimensions. The interviewed women stressed the emotional support the migrants receive from their parents while living in Bangkok (Curran (1998) and Mills (1999a)). Material support flows from the rural areas exist, too, although to a smaller extent than remittance streams.

Focusing on the family basis, interview partners often reason the existence of networks with Buddhist tradition: migrants pay back gratitude to their parents through material remittances.

> "They are not economic ties. Although they do still provide support to their parents and their siblings who need it. If they need it they give them support. It's an ethnic, it's a cultural trait to give money to your parents. You know you are supposed to return what you got from them" (expert interview 8).

Thus, children feel a sense of continuous obligation to their parents in reciprocity for their parents' care - in Thai called "bun khun". Gender-specifically, the traditional Thai societal model conditions that daughters are more committed to provide remittances than sons: "Daughters are usually the ones to take care of the parents [. .] the sons could go to the monkhood to pay debt of gratitude to their parents. But the girls cannot be a monk" (expert interview 1, see Pramualratana, 1992; Osaki, 1999). Both experts and interviewed workers emphasized that female migrants commonly support their parents plus their (male) siblings' education andor livelihood, even if they are migrants themselves. In this respect, Thai internal migration functions as a household survival strategy as posited by the "new economics of migration" theory.

Sustaining the migration chain: the human dimension of networks

The remittance flows create yet another form of linkage between migrants and their rural origin: migration chains which perpetuate mobility. Their mechanism was depicted thus:

> "A woman who is working in a factory or any employment in Bangkok goes home. She has got some money, she has got new clothes, she has seen the world, she knows Bangkok. And she tells her friends: if you come with me you can stay with me and I know that my factory is employing" (expert interview 9). So "when these women come back to the village they want to show that they are better off. [...].So they become role models for the other women

who want to migrate. Because they think this woman is successful" (expert interview 6).

Consequently, the urban migrants mobilize the remaining people in the rural areas and channel their movement to Bangkok. For example, seven interviewed workers came to the city following a relative, usually their sister, and two of them have asked younger sisters to join them.

The migrants' outer appearance and behaviour transmit an idea of the "than samay"lifestyle, associated with modernity and autonomy offered by the Bangkok surrounding. The rural women feel relatively deprived and follow their more experienced role models in search of the same "imagined identity". Importantly, the migrants' appearance and their real "than samay" experiences must not necessarily correspond. Any failure of migrants in the city is hidden because "all of the parents would like to see the progress of their children", which is equated with money, clothes and make-up (expert interview 5).

Thus, women's decisions to migrate reflect filial responsibilities and their independent ambitions for unique types of personality and material goals. Hence, "there is a great deal of both family and individual decision involved in migration. It's not so simple, it is a family decision". To the speaking expert, this applies specifically to Thais who, according to their (Buddhist) societal model, "are very individual within their families I think more than in other Asian cultures" (expert interview 9).

Moreover, the social networks facilitate adjustments and socialization of newcomers to Bangkok. Migration chains are tools to make the migration experience less risky and difficult. Almost all but especially female, movers have some personal contact net. Thonguthai and Pattaravanich (1993) discovered that 81 per cent of their surveyed female factory workers (compared with 69 per cent of male) relied on networks for information about job availability. Interestingly, factory owners were said to prefer the recruitment of friends and family of their trusted workers over recruiting agencies because it is cheaper and more effective.

Changes as the migration experience proceeds

The described exchange relations change as the migration experience proceeds. During the interviews, a wider understanding of changing behaviour was pronounced. The interviewed experts' assessment of changes varied. The two recurring themes were that (a) material remittance streams usually decline with time, and that (b) the migration chain may stabilize or may gradually be replaced by "ethnic" communities in Bangkok.

Remittances are "... much higher for recent migrants and taper off over time. So if you get migrants who have been in Bangkok for 5 or 10 years, then their remittances as a percentage of their salaries have gone down quite a lot. They don't remit as frequently" (expert interview 9). The interviewed migrants and Mills (1997) confirmed these observations. The numbers of households receiving support in 1992 declined from 10.3 per cent for recent migrants to 5.5 per cent for old-time migrants (moved more than two years ago) (Osaki, 1999).

With regard to migration chains "as you move along the way that's when you bring in members of the family to help you and also it changes the entire relationships in the sense that the more productive members at the place of origin are coming to the city and you are creating your own [. . .] networks [in Bangkok]" (expert interview 6).Through stabilizing migration chains and with time, the migrants create their own "ethnic" communities[5] in Bangkok, based on social capital in the form of solidarity through identical ethnic and regional backgrounds. Indicators are shared accommodation places, "ethnic" meetings at certain sites like Lumpini Park in Bangkok, and the organization of regional cultural festivals in Bangkok. "Ethnic" communities create many small "ethnic" clusters in the city which are hardly recognizable to an outsider.

Hence, traditional networks are reworked in the new Bangkok environment or, as one expert puts it "So in a sense it's a kind of a village home transplanted" (expert interview 9). The "ethnic communities" are equally part of urban life and a vivid connection to the rural areas. Like migration chains, "ethnic" communities serve as shields against vulnerability, offer hold and reduce homesickness: "With a dozen of your friends from the village around it's not like you are totally anonymous [..] you are really in a group" (expert interview 9).

On the whole, the findings suggest that networks of kinship obligation and of shared understanding are crucial for migration preparation, its realization and urban adjustments. The "ethnic" communities in the city play an essential role at a latter stage of life establishments.

New relationships at destination Bangkok

A third alternative of social support, besides retaining links with the rural areas and the creation of "ethnic" migrant communities, was defined. Some migrants are said to lead an "urbanized" way of life, including the construction of new, ethnically independent social networks. The research revealed,

however, that female factory workers do not necessarily create exclusive, long-lasting networks. As industrial workers, they obviously experience sectoral, spatial and sexual concentrations. Nonetheless, many migrants frequently shift their workplace and their social environments in search of ideal occupational conditions, more consumer culture and better social collectivity. Therefore female migrant factory workers' urban networks are distinct in some respect, but also share many characteristics with other occupational migrant groups. These include personal background and motivation to migrate, age, children, upward social mobility and job hierarchy, gender, generation, education, role within the household, experiences in Bangkok and the duration of the sojourn. The women's stage of life cycle, i.e. whether they are married or single, was ascribed particular importance.

In contrast to the exchange, urban workers' networks compriseboth informal and formal structures. Informal friendship networks are almost omnipresent and especially important for singles in matters of education, health, politics, entertainment, sports, religion, money or personal issues. At the factory, personal life and work are closely connected "The workers here work together, always. So we are friends. So our friends is like the workers here" (group interview 2). Their social closeness is facilitated by spatial closeness. For example, at one visited industrial site in Samut Prakan, most single female workers lived together in small dormitories or rented apartments. Other locations to socialize were the factory canteen and a food and shopping centre, which exist in most industrial areas.

Meanwhile, the social and spatial focal points of married women differ. Togetherwiththeir husbands they tend to move away from the industrial production area (e.g. into downtown Bangkok). Their social networks shift. Contacts with their new neighbourhood and immediate community are often more intense than with their colleagues in the industrial area. Married workers also tend to discuss family matters in their own circles.

With regard to formal organizations, trade unions, if they exist, take over many central functions in the workers' everyday life. In total, only about 2 per cent of the Thai private labour force is unionized and membership is risky. Therefore the following discourse may not be transferred to the situation in the entire Thai manufacturing sector. Formally organized groups are generally rare in Thailand. Thaisoften show a political passiveness and avoidance of conflicts which are rooted in a strict hierarchical patron-client system determining all social intercourse, behaviour and communication.

> "I think they are not political. They would not be concerned. They don't relate to the macro-level, only their own economic needs and that of their family [..] everything is micro for them" (expert interview 6) (Yoddumnern-Attig, 1992).

The two visited trade unions are, with 80 per cent worker' participation, exceptionally active organizations in the Thai context. They represent gathering sites of the labour movement and the locations for multiple activities, including education and training, saving groups, cultural activities, entertainment and sports, and shopping. The unions established tourist trips for the workers, a music band, and a shop offering special deals to the workers. In addition, the unions provided assistance in legal and health matters. They literally functioned as the workers' mediator to the world "outside" the industrial areas. And importantly, field observations suggested that the formal Thai trade unions bear significant informal functions. For instance, the visited workers informally gathered hours before an official union meeting. Their sense of familiarity and level of confidence seemed to be strongly developed, and they showed intense, frankand very private communication behaviour.

The above discussions may lead to the conjecture that urban workers' relations in Bangkok are based on social capital in the form of enforceable trust (in more utilitarian networks) and solidarity (in emotionally closer networks). Evidently, the workers' networks are part of life establishment in the city, hence of a later stage of the migration cycle.

Rural-urban interactions in transition

Thai women's localized identities and their expression in rural-urban interactions

This section explores how migrants' network formations shape rural-urban interactions. Thai female migrant factory workers' daily lives were identified to be positioned in between three different kinds of social networks which are representative of distinct spheres and locations (here: the factory environment in Bangkok, the urban "ethnic" community and the rural place of origin). How does each migrant woman deal with the different spheres: does she produce a continuum or a divide between her rural and urban existence?

There is no straightforward answer. Obviously, exchange and urban "ethnic" networks stand closer to each other, and somewhat in opposition to the urban workers' relations, since both are connected with the rural. In

general, however, the decision of any migrant to take on or not to take on her "bridging function" between Bangkok and the periphery is decisive for the resulting form of social networks, which again shape rural-urban interactions. Thus, rural-urban interactions are here understood as forms of socially constructed spaces in a globalized context. Characteristics pointing to the migrant's position between divide and continuum are (a) the nature and transformation of her social exchange networks, and (b) her personal localized identity, here her own perception of belonging and affiliation and where, in Bangkok or the periphery, these are located (Massey and Keynes, 1998). The qualitative research came up with three "typical" experiences of Thai migrants. These are by no means exclusive and may overlap.

Pattern one: the "modern woman" takes over

In this case, urban and exchange networks prove to be competing social spheres to the migrant. The women's traditional roles no longer fit their modern images. "Urbanized" identities of mobility, independence, sexuality, consumerism and self-assertion confiont established rural ideals of thrift, modesty, social harmony and familial responsibilities.

Following pattern one, the women find their identity, here their home, in the city. They "forget about it [the rural way of life] and lead an entirely different lifestyle" (expert interview 6). Friends and family who share their urban lives, participation in consumer culture and concentration on their own aspirations are focal points of their "than samay" life. Consequently, the migrants do not envisage or long for return migration and tend to change their official household registration to the city. As a result of these processes, one expert claimed, migration ''..has already changed the culture of the people. So they have no rural culture any more, they belong to the urban culture. So they fit to the [...] luxurious things in Bangkok'' (expert interview 11). Long-term movers, i.e. most factory workers, are more likely to undergo such diverging dynamics. Educational targets and marriage can also be influential factors (Ogena and DeJong, 1999).

Pattern two: filial obligation or the adventure of life

In pattern two, the migrants continuously regard their rural village as their home despite their city sojourn. They encounter the three social spheres in Bangkok in a harmonious way or show a clear preference for the rural-urban exchange and related "ethnic" networks. For example, two interviewed migrant workers uttered a relatively negative attitude towards their Bangkok existence:

> "During time of working they are thinking of it like a jail [..] they don't like [Bangkok] but [..] they have no opportunity, no choice because they try to work in order to send back money to their parents" (group interview 1).

Their filial obligation overweighs their personal interests. Bangkok life is viewed as an unfortunate necessity. Overall, their localized identity lies unmistakably with their rural origin. In the city...

> "...it's kind of weird, I don't think that they feel they have another home. Only that they have another friends, another surroundings, another new things here, but it's not home. It's something else but not home" (expert interview 14).

Migrants either develop some compromise between their urban and rural ways of life, or explicitly voice their unease through e.g. trade union membership (as in the case at hand). Their urban networks (formal and informal) are generally less dense for they aim at the migrants' practical survival and ultimate return (usually they do not change their household registration). Contradictory interview statements revealed, however, that they, despite their disapproving attitudes on the surface, adopt and take some "urban" concepts to the rural areas (see social remittances above).

Migrants may choose pattern two in the alternative context of the "adventure of life". Here the sojourn in the strange urban world is an individually motivated, temporary exciting encounter without familial pressure. One expert reported fiom her own research that such "adventurous" stay(s) had been the favourite way of life of most elderly rural people before they married and settled in the provinces. Their Bangkok experience had upgraded their personal, familial and community-wide status.

On the whole, the migrants who choose the second path establish continuous rural-urban interactions. Firstly, they live a continuum themselves, consciously or subconsciously, by mixing rural and urban attitudes within their personal identity. Secondly, they take on their bridging function by maintaining intensive linkages until their own return. Thirdly, migration in the "adventure of life" context always implies an individual choice factor. Its harmonizing effect favours the construction of a rural-urban continuum.

Pattern three: ambivalent feelings amidst reality and commitment

Pattern three is multi-faceted, more ambiguous and was most popular with the interview partners and in the literature. The women of pattern three manage an emotional and economic compromise between their traditional and

new economic roles. They consider that their rural and urban lives serve different purposes. Concisely,

> "they miss home and they would like to be home, I think. But the difficulty is most people will say in the same breath virtually: but, there is no money at home [..] and so there is probably an internal conflict. You can't have both" (expert interview 9).

In other words, the migrants' attachment and commitment are still in the rural areas, but their real life takes place in Bangkok because "there is no future in the village" (expert interview 10). Especially long-term migrants feel uneasy about the city's alien and alienating aspects; they still turn towards their rural home for advice.

> "When we stay here we are quite lonely but we have the friends. So this is like compensation. We can consult many topics with the friends but not exactly like we consult with the parents".

Positively, Bangkok offers the jobs, and "in our province life is backwards, no so modernized. But here we have everything. Modern. Everything is convenient here". Moreover, the work "makes us to have responsibility [..] for ourselves" and provides educational upgrading. Negatively, life in Bangkok also implies that "we need to fight for survival" whereas "when we go back to our hometown, it is quiet, smooth, peaceful" (group interview 2). As the quotes illustrate, migrants' life in Bangkok functionally represents the place for work, "than samay" lifestyle, and personal status accumulation whereas the rural origin is the emotional home and place of rest. The latter is related to the parents, the former stands for friendships.

When asked which place the female migrants identify themselves with, they stated "All of us think our home is still home, so but, because of the fact we have to work here and we work already a long time, so this is like second home" (group interview 2). The migrants' rural and urban existences are functional complements in one overall "system of life", hence they construct a rural-urban continuum. Migrants also take on their "bridging role", participate in exchange relations and create a connected space of exchanges. To one expert, these processes suggest that ''... maybe the cultural divide is not that great. .it could be valid that the people don't feel it" (expert interview 9).

Thai answers to the cultural divide and continuum: pragmatism and flexibility

Some specific features of the Thai people facilitate the migrants' lives across space and time and influence the migrant workers' overall perception of

their "problematic" situations. Essentially, Thai female migrants are likely to deal with conflicts differently from Western people. Even if they are aware of conflicts, they usually do not spend much time contemplating or discussing them. Believing in the Buddhist thought of "karma", Thais are generally less anxious and more accepting (Kraas, 1997). Pragmatismand flexibility are crucial Thai coping strategies that are particularly relevant to migrants, or put differently:

> "Thais are open [...] society here is very progressive, open. Because they just say, well, there are the breaks and you have to take the good and the bad, and the bad and the good. [...] So tolerant. And it is not our business. Very like this: Take the advantage of everything!" (expert interview 8).

How does such an attitude influence their assessment of problems? The interviewed female workers seemed aware of problems at the workplace but stressed only those issues which are commonly discussed at their trade union (the "typical Western" ideas of problems of equality, exploitation, and the lack of legal protection). Matters connected with gender roles or their migration experiences, e.g. disconnections were not tackled. Generally, the Thai labour movement is disproportionately exposed to "Western" attitudes because it is financially supported by NGOs. Through these channels a "Western" image of the problems of female industrial workers finds access into the Thai orbit - and into the present study: experts with an international background and those practising a gender-specific approach commonly supported the same "Westem" argumentation.

Importantly, the women's own problem-awareness might be essentially Merent: "It is so easy to say that these people are disadvantaged and marginalized and so forth. But you see this is relative. It is how the woman compares herself in this setting and in another setting and which is better. And my theory is women make choices as they move alone. They weigh you know the benefits and cost of each choice". Hence, a problem in Western thinking is not necessarily a problem from a Thai point of view.

Hence, labour migration can be defined as a way for Thai people to make the most of their opportunities. It contains advantages and disadvantages - "That is simply the way life is" (expert interview 9). The westernized approaches to problems of equality, exploitation and human rights issues are surely meaningful, yet they should consider that typical Thai attitudes, and thus the viewpoint of the people concerned, may be disparate.

The rural and the urban areas as safety nets? Social cohesion during the 1997 economic crisis

The circulation of goods, money, ideas and people has considerable potential to create a dynamic, wealthier economy and society in the interconnected rural and urban sectors. Rural-urban household and community links function as an informal, non-institutionalized social safety net. Migration then becomes crucial for poverty alleviation, especially since a formal "western-style" social safety system does not exist in Thailand (Skeldon, 1997).

Changes in social safety nets and migrants' social capital during and after the economic crisis are controversially debated. On the one side, Thai group dynamics were eroded as the provinces lacked the capacity to absorb the return flows of migrants, and adverse trends in educational enrolment, child care, suicides, divorces, crime and drug use as well as declines, although not a stop, in remittances declined were apparent (TDRI, 2000a; World Bank Thailand Office, 2000). On the other side, compared with the violent outbreaks that accompanied the crisis in many other Asian countries, the situation in Thailand remained relatively calm, thanks to the traditional, conflict-rejecting societal model, as well as the at least partially functioning social back-up systems (UNDP, 1999). Social capital also increased with people consulting and sharing with each other more and more. With respect to the Bangkok industrial production environment, the labour movement uprisings were viewed as a positive sign for an emerging new collective identity and political empowerment. Many female migrants have redefined their individual-centred images and now collectively challenge the customary avoidance of "macrolevel" affairs (Mills, 1999a). However, a female migrant worker who is actively engaged in urban-based movements may eventually abandon those in the rural areas. In this case, her family's dependency and reliance on her as a personal safety net are indeed destabilizing and risky (United Nations, 1993b).

In summary, the crisis has highlighted the risk inherent in diverging interactions in terms of fading social security between people from the periphery and from Bangkok. Therefore, as mentioned, the Government nowadays acknowledges and supports the social importance of traditional rural-urban interactions. Further, the crisis has introduced new forms of social cohesion and political participation. These alliances concentrate either in Bangkok or in the rural areas; rural-urban interactions are not important. Hence the crisis has intensified the existing rural-urban divide(s), and equally pushed counteractive trends (Kraas, 2000; Suwanraks, 2000).

Conclusion

Revisiting the role of globalization in socio-spatial transformations in Thailand

Economic globalization and industrialization produce the structural setting of sectoral, sexual and spatial disparities which trigger off and determine female labour migration from the rural provinces to Bangkok. The female workers simultaneously experience socio-economic empowerment and exploitation.

In this structural arena, female labour migrants' life in industrial Bangkok takes place in between three different socio-spatial environments which reflect their culturally determined, sex-specific family roles and personal, more utilitarian choices: firstly, networks of material, non-material and human exchanges with the rural origin; secondly, migrants' "ethnic" community networks in Bangkok; and thirdly, urban factory workers' networks. Depending on their relation in terms of collision, harmonious combination or coexistence, each woman produces a distinct pattern of Bangkok-periphery interactions. In what way are these dynamics interrelated with globalization?

Rural people encounter the "imagined worlds" of Bangkok, either through old-time migrants or media information flows. The globalized technology and communication systems reach every region of Thailand with the same intensity in contrast to economic globalization.ery. They spread the popular "than samay" images concerning the display of commodities and the meaning of progress - a possible explanation for their crucial role in exchange and urban networks (Mills, 1997; UNDP, 1999). As the migration proceeds, the advanced communication and transport systems facilitate rural-urban connections.

At least at initial stages of life establishment, many women are physically present in Bangkok but still participate in the socio-economic life of their rural homes. They can be said to lead a translocal life (Olwig, 1997). Thai female labour migrants define their cultural selves across a geographically fiagmented space which they link through social actions. They are not socially disconnected but belong to two places. Bangkok and the periphery become part of several socio-economic translocal migration systems based on family and friendship.

In the face of the increasing concentration of economic choices in the "global marketplace" of Bangkok, many Thai migrant women decide to carry on their translocal life as their migration experience proceeds. They create a

vivid rural-urban continuum. Each location fulfils specific functions, and together they shape a "system of life": the rural origin offers religion, emotional support and personal roots, whereas Bangkok provides opportunities for personal and familial socio-economic upgrading and future perspectives (pattern three).

In the long run, the "functional system of life" is possibly gradually replaced by the new, globalized orbit at the destination. In the Thai case, these processes happen in an ambivalent setting, as demonstrated by the example of the economic crisis: on the one hand, the recession intensified the familial safety net functions across space: on the other, the broadening of individual choices through globalization supported the individualized, as well as collective search for new, exclusively urban gender identities and collective urban safety nets. Circumstances like marriage or generation differences can also cause the "modern woman" to take over. Consequently, the image and way of life of a "good daughter" are rejected, rural-urban interactions are cut, and a rural-urban divide is produced (pattern one).

One needs to consider that many of the debated socio-spatial transformations began in Thailand alongside industrialization in the 1960s and 1970s. Globalization has undoubtedly deepened and reinforced the processes and their resulting structures, yet the Thai societal model, the family and the individual play an equally important role. For instance, some migrants reject themodernBangkoklife and regard their urban sojourn as an unfortunate family responsibility, or as a temporary adventure (pattern two).

To sum up, globalization in its various dimensions initiates spatial mobility and social networking across space and time in Thailand. It is also partially responsible for the intensification and acceleration of spatial mobility and increases circular migration. Specifically, it creates bridges of imagination for the migrants who themselves automatically work as driving mechanisms of globalization through the rural-urban connections they establish. National and global political economies in Thailand form the structural context of internal gendered labour migration. Meanwhile, the spatial and sociocultural dimensions of globalization are the major forces behind migrants' changing biographies and are at the same time reworked in a self-reinforcing process. These changes are particularly apparent in the transition of rural-urban interactions, but in fact reflect the modification of the entire Thai societal structure. Consequently, both rural-urban divides as well as continurn are produced. "In-between" categories increasingly replace stereotypical categories of "the" rural and "the" urban.

The impacts of globalization are always incorporated in local behaviours and norms. For instance, Thais' social traits of acceptability and pragmatism reduce potential instabilities that arise with globalization. Thus, migrants' actions across space and time are expressions of their lives in the local area and simultaneously in the global sphere.

Policy implications

The research on which this paper is based was not meant to extend to issues of government policy, nor was the paper intended to provide policy guidelines or recommendations. Nonetheless, the interviews with migrant workers and with United Nations and other experts on the subject led to a few policy implications.

In the majority of factories in which migrants work, labour union membership is far from universal. Even where membership is high, the union functions more as an employees' social club than as their representative in collective bargaining with management. The social function is extremely important at the factory level because most employees are migrants who are relatively new to Bangkok and whose stay is expected to be temporary. The labour union would benefit workers more, however, if it had a greater voice in determining working conditions and was involved in other worker protection systems, such as health insurance and pension schemes.

A number of workers who were interviewed explained that they had migrated because of the lack of opportunities at home in the rural areas. This situation points to the need for more effective regional and rural development. Roughly 70 per cent of the population of Thailand still resides in rural areas and about half of the labour force is employed in agriculture. In this situation, rural and agricultural development remains essential to national economic and social development. The Government should continue to encourage rural-urban linkages. One way to do so is by promoting industrial decentralization, which requires the appropriate tax and investment frameworks but also good infrastructure in rural areas. The Board of Investment provides tax incentives for manufacturing plants to locate outside of Bangkok. The non-governmental sector can also play a role. The Thailand Business Initiative for Rural Development (T-BIRD) encourages firms to locate plants in rural areas as a sound business decision. By doing so, the company can often attract more dedicated workers at lower wage levels.

The study has highlighted the importance of social infrastructure to economic growth. Rural-urban links stimulate economic innovations in the rural through the transfer of skills and capital. The networks could be used more efficiently if organized institutionally.

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Endnotes

1. Personal information, 2001.

2. It should not be forgotten, however, that the majority of Thais still works in agriculture. Moreover, the informal sector plays a significant role for migrants, but is excluded here.

3. Note: interviews are numerically listed.

4. In Buddhism, life is mainly an individual responsibility. Therefore merit-making ("tham bun") which aims at the collection of positive "karma", is an essential part in Thais' daily routine. As a consequence, living conditions, status and power justify themselves and are widely accepted as a manifestation of earlier actions (Richter and Yoddunmem-Attig, 1992; Weggel, 1997; Mulder, 1996).

5. The "Thai people" comprise many ethnically distinct groups. Some have sustained their own ethnic identity despite being "Thai", some have not.

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Adolescent Reproductive Health: What are the Lessons Learned from the Intervention Projects

By Yasmin Siddiqua and M. Kabir*

Adolescents aged between 10 to 19 years, are a large and growing segment of the population. At 1.05 billion, this is the biggest-ever generation of young people and their number is increasing rapidly in many countries (UNFPA, 1998a). The population of adolescents will continue to grow because of the growth momentum of age structure and the high fertility rate in the past. Globally, the largest share of adolescents is and will continue to be in Asia, which has 60 per cent of the world population (UNFPA, 1998b).

In recent years, adolescent reproductive health has become one of the most widely talked about and sensitive health issues among programme planners around the world. "Adolescent sexual and reproductive health refers to the physical and emotional well-being of adolescents and includes their ability to be healthy and remain free from too-early or unwanted pregnancy, unsafe abortion, sexually transmitted diseases (STDs)including HIV/AIDS, and sexual violence or coercion" (Senderowitz, 1995; WHO, 1998). However, in assessing commitments made since the International Conference on Population and Development in Cairo in 1994, adolescent reproductive health rights remain inadequately addressed. The Programme of Action of the Conference called for organizations to initiate or strengthen programmes to better meet the reproductive health needs of adolescents (United Nations, 1994). Numerous programmes have been developed to address adolescent reproductive health needs accordingly. Yet, five years later, there exist legal,

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religious and social barriers which prevent adolescents from receiving the services offered to them and still there is room for policy makers to concentrate their attention on the urgency of the issue (UNFPA, 1998b).

Early marriage and especially childbearing can have a profound and long lasting impact on a woman's well-being, education and ability to contribute to her community (Liskin and others, 1985; McCauley and others, 1995). Teenage childbearing is most common in developing countries, where one quarter to one half of women have their first child by age 18. Although some 10-19 years olds are beginning to experience the changes that come with puberty, many are entering sexual relationships or marriage (Alan Guttmacher Institute, 1998). Each year, about 15 million young women aged 15 to 19 give birth (PATH, Program for Appropriate Technology in Health, 1998). Early childbearing adversely affects the mother and the child. Teenage mothers face a higher-than-average risk of mortality compared with mothers in their 20s and their children have a higher level of morbidity and mortality. Because girls generally continue growing physically during adolescence, pregnancy and childbirth before attaining full growth results in a competition for nutrients between the growing adolescent and the growing foetus (=>foetus) (United Nations, 2000). Childbirth at an early age also has a negative impact in the sociocultural and demographic context. Compared with a woman who delays childbearing until her 20s, the woman who has her fmt child before age 17 is likely to obtain less education and fewer job opportunities. Moreover, childbearing and child-rearing become a burden when the mother is emotionally or physically immature to do so (Singh, 1998). Yet, complex physical, familial and cultural factors that are often poorly understood determine who will many when and who will begin childbearing during adolescence. Available data demonstrate that while the needs and experiences of adolescents vary around the world, there are similarities within the cross-national and regional boundaries.

The principal risk factors for adolescent reproductive health can be categorized under two broad names:

Biolopical factors	Social factors
• Incomplete physical growth • Increased nutritional requirement • Sexual maturity without being prepared for parenthood	• Lack of adequate knowledge about sexuality and reproductive need • Limited access to health and family planning services • Time gap between menarche and marriage • Employment • Poverty • Early marriage • Adolescent fertility

The above two categories of factors simultaneously contribute to one or more of the following consequences:

- Interrupted education and career
- Premarital/unsafe sexual activity
- Low contraceptive use
- Early and unwanted pregnancy
- Unsafe and illegal abortion
- STD/RTI
- HIV/AIDS
- Anemia and malnutrition
- Pregnancy-induced hypertension
- Difficult delivery (obstructed and prolonged labour)
- Foetal growth retardation and low-birth-weight baby
- Premature birth
- High infant mortality
- Prenatalmortality
- Maternal mortality

Sources: Liskin, L., N. Kak, A.H. Rutledge, L.C. Snit and L. Stewart (1985). "Youth in the 1980s: social and health concerns", *Population Reports* 13(5), Series MyNumber 9;McCauley, A.P., C. Salter, K. Khguand J. Senderowitz (1995). "Meeting the needs of young adults", *Population Reports* 23(3), Series J, No. 41 (Baltimore, Johns Hopkins School of Public Health, Population Information Program also available online at: www.jhuccp.org/pr/j41edsum.htm) and Senderowitz, J. (1995). "Adolescent health. reassessing the passage to adulthood", World Bank ***Discussion Paper*** No. ***272.***

Note: RTI = reproductive tract infection.

As modernization occurs within the bounds of traditional systems, it is difficult to adopt any change; while young people face challenging lifestyles, the older generations' attitudes remain unchanged. If it is required to promote safer sex, for instance, information on safer sex and contraception should be given, and relevant health services provided. Yet, sex education for adolescents, even social interaction and often dialogue between the sexes, are not acceptable in many cultures. Cultural attitudes in many Asian countries, stemming from the adolescents and their parents, favour norms of premarital chastity. As such, there still exists a disturbing picture of teenage abortion seekers in South Asia and the Pacific region, comprising both married and unmarried girls (Jejeebhoy, 1996a). Adolescents are acutely sensitive about gender discrimination. Owing to a lack of access to education and a lack of exposure, young girls' economic dependency on men has, to a large extent, contributed to their being submissive and not making decisions about their own lives (Mensch and Lloyd, 1998).

Focusing on adolescent reproductive health is a challenge and opportunity for healthcare providers as well. Unlike adults, adolescents often lack basic reproductive health information, skills in negotiating sexual relationships and access to affordable confidential reproductive health and family planning services. Many do not feel comfortable discussing sexuality with parents or other key adults with whom they can talk about their reproductive health concerns (PATH, 1998). Likewise, parents, healthcare workers and educators are frequently unwilling or unable to provide complete, accurate,

age-appropriate reproductive health information to young people. This is often due to their own discomfort and the false belief that providing the information will encourage increased sexual activity (Baldo and others, 1993). On the contrary, studies deny the belief that sexual education contributes to earlier or increased sexual activity in youth. Rather, it causes a delay in the onset of sexual activity or a reduction in overall sexual activity (Baldo and others, 1993; Grunseit and Kipax, 1993).

This review attempts to investigate the type of interventions that are being offered by different agencies for improvement of the reproductive health of adolescents in Bangladesh and tries to assess the impact of these programmes in terms of some reproductive health indicators, comparing recent Bangladesh Demographic and Health Survey (BDHS) data, such as the 1996-97 BDHS and 1999-2000 BDHS.

Needs of the adolescents

Roughly, one in five people in the world is an adolescent. Like many other groups, adolescents all over the world have specific concerns and problems. Their circumstances and needs vary tremendously depending on individual characteristics such as age, sexual activity, schooling and employment status, as well as their position within the range of adolescent years. Since adolescence is a period of rapid physical, emotional, social and sexual maturing, adolescents need a full range of quality reproductive health care, as well as information and counselling (Alan Guttmacher Institute, 1998; McCauley and others, 1995).

Today's adolescents are the next generation's parents, workers and leaders. To fill these roles to the best of their ability, they need the guidance and support of their family and community, and the attention of a government committed to their development. As economic modernization, urbanization and mass communication change the expectations and behaviour of adolescents, adaptation to new ways is likely to be inconvenient and at times, painful. But adaptation is inevitable and inescapable (Alan Guttmacher Institute, 1998). Most countries recognize the necessity for and value of education for young women. Education contributes to the health of women's children and families and facilitates her use of information and services (Liskin and others, 1985; McCauley and others, 1995; Senderowitz, 1995; Jejeebhoy, 1996b; Alan Guttmacher Institute, 1998). Government and other social institutions, therefore, must find new ways to enable families to enrol girls in school and to encourage young women to stay in school and complete their basic education.

Young children and teenagers often learn about sexual matters from peers, siblings, parents and the media (Hong and Nam, 1989; Lema, 1990) but the information they obtain through these channels is usually limited and may

be erroneous (Ogutu-Ohwayo, 1991; McCauley and others, 1995). Formal instructions tailored to the age and background of the adolescents involved, is an important source of accurate information about sexuality, pregnancy, childbearing, contraception and STD prevention, Comprehensive sex education programmes not only cover biological facts but also provide adolescents with practical information and skills regarding sexual relationships and contraceptive use. Although programmes encounter religious or political opposition, most studies show that they do not encourage sexualactivity; rather, they are associated with the postponement of early sex and, among sexually active adolescents, with the use of contraceptives (Baldo and, 1993; Grunseit and Kippax, 1993; Haider and others, 1997).

In addition to STD and pregnancy risks, many young people who are sexually active have been forced into sexual relationships, either through violence or for economic reasons (UNFPA, 1997; Hossain and others, 1998; PATH, 1998; Alan Guttmacher Institute, 1998) and are in need of counselling, information and contraceptive services. Married adolescents who become pregnant may not encounter the same social risks as their unmarried counterparts, but they face the same complications from STDs and the health risks of early pregnancies. Along with increased exposure to STDs and unintended pregnancy, adolescents who engage in sexual activity outside of marriage may face social stigmas, family conflicts, problems with school and the potential need for unsafe abortion (McCauley and others, 1995).

Governments, along with NGOs and even the media, have a role to play in improving the adolescents' ability to protect themselves against unwanted pregnancies and STDsSpecial efforts are needed to educate and motivate men to cooperate with their sexual partners in the use of contraceptives to prevent unwanted pregnancies and diagnose and treat STDsAdolescent women require access to a range of contraceptive services (Liskin and others, 1985; UNFPA, 1997).

Privacy and confidentiality are important aspects of service provision for adolescents, who may be uncomfortable discussing sexual matters or may fear condemnation from their families or communities if they reveal their sexual activity (McCauley and others, 1995; PATH, 1998). Care provided specifically for adolescents must be sensitive to young women's limited access to transportation and their often-meagre financial resources. The degree to which the service environment welcomes adolescents will determine the extent to which adolescents avail themselves of reproductive health care.

The situation of adolescents in Bangladesh

Adolescents comprise 25 per cent of the total population in Bangladesh, the number being approximately 33 million in the year 2001. Among them,

Box 1. Selected socio-economic characteristics of female married adolescents in Bangladesh, 1999-2000

Mean age at marriage (years)	16.9
Rural inhabitants (per cent)	75.6
Islam follower (per cent)	92.3
Not educated (per cent)	27.4
Unemployed (per cent)	88.6
Mass-media exposure (television, radio, newspaper) (per cent)	4.4
Not allowed to go to health facility (per cent)	76.5

Source: Bangladesh Demographic and Health Survey, 1999-2000.

about 48 per cent were females and 52 per cent males. Box 1 shows some selected characteristics of female adolescents in Bangladesh. This large group of adolescents is a major social concern because they will exert a high population momentum effect on the future increment of population in Bangladesh. The annual growth rate of the adolescent population is 4.33 per cent, compared with 1.7 per cent for the total population. The absolute size is expected to rise to 35million by the year 2010 (Barkat, 2000).[1]

In Bangladesh, social norms and mores strictly support premarital chastity. Further, sexual encounter is supposed to occur only within marriage. The current section deals with the description of Bangladeshi adolescents reproductive health on the basis of information collected from two nationally representative surveys for married female adolescents. Since adolescents are vulnerable to many reproductive health hazards owing to their physical and mental immaturity, it would have been worthwhile to compare some of the important reproductive health indicators for both married and unmarried adolescents in this section, including their health-seeking behaviour. Since sexual relationships for any unmarried adolescents are socially regarded as promiscuity, any broad-scale study failed to collect such information apart from few small sample quantitative or qualitative studies. These study findings indicate that, though a substantial proportion of adolescents become sexually active before marriage (Haider and others, 1997), they do not admit it for a fear of social harassment and probable obstacles in future marriage (box 2). This section also covers the health-care utilization by the married adolescents in terms of antenatal care, tetanus toxoid coverage, delivery at a health facility and seeking treatment for pregnancy-related complications. Information on health-seeking behaviour for unmarried adolescents is also rare (box 3), as social restrictions hinder them from admitting their sexual activity outside marriage; they also do not feel comfortable seeking family planning or STD services from nearby clinics and pharmacies. They perceive that providers would be judgmental and unfriendly to them (Bhuiya and others, 2000).

Box 2. Premarital sexual behaviour among adolescents

One study in Bangladesh with adolescents from urban and rural areas revealed that nearly one fourth of the unmarried females and 29 per cent of the married females have had any sexual contact by age 19. By contrast, 61 per cent of unmarried and 69 per cent of married male adolescents reported some premarital sexual encounter by age 19, with a mean difference of 6-8 years for urban and 3-4 years for rural areas. For adolescent women, sexual partners before marriage were mostly their "future" husbands (Haider and others, 1997). Another small-scale baseline survey reported that 127 males and only 3 females out of 2,626 unmarried adolescents had premarital sexual exposure, with 15 years as the mean age at first sexual encounter. Of these males, 52 had sex with commercial sex workers and did not use a condom (population Council, 2001).

Box 3. Health-care utilization by unmarried adolescents

A clinic-based intervention found that a total of 4,580 adolescents, with 94 per cent girls visited the satellite and fixed clinic August 2000 and December 2001. Among those, 57 per cent were unmarried visiting the clinic for immunization, RTI/STI services and very few also came for problems related to menstruation and general health problems. (Population Council, 2002)

Notes: STI = sexually transmitted infection; RTI = reproductive tract infection

Table 1 shows some selected reproductive health indicators of adolescents derived from the 1996-1997 and 1999-2000 BDHS data (Mitra and others, 1997, 2001). We also investigated what changes occurred between the two surveys. The information indicates that there was little change in terms of fertility, proportion never married, use of contraception and met need for contraception. Box 4 provides information on the proportion never married among adolescents in 1999-2000. Similarly, there has not been much change in infant mortality. However, there was a dramatic decline in child mortality, which declined from about 44 per 1,000 births to about 29 per 1,000 births. Surprisingly, the proportion of adolescent mothers who were pregnant increased from 14.7 to 15.9 per cent between the two surveys. About 52 per cent of adolescents were never married at the time of the survey and the percentage who were married by age 15 was 28.5. Because of the censoring effect, the age at marriage for the 15-19 age group could not be estimated, i.e. all of them will not be married by age 19.

The level of HIV/AIDS knowledge has changed significantly since 1996. Knowledge of HIV/AIDS increased from 17 to over 30 per cent among ever-married adolescents between the two surveys. As part of the HIV/AIDS prevention programme, the mass media are playing a greater role to create awareness among the general public. Adolescents reported that television was the most important source of information about HIV/AIDS (20.1 per

Table 1. Reproductive health situation of female adolescents in Bangladesh, some selected indicators, Bangladesh Demographic and Health Survey, 1996-1997 and 1999-2000

Indicator		Situation	
		1996-1997	1999-2000
A.	**Fertility and requlation**		
1.	Current fertility (births per 1,000 women)	147	144
2.	Child ever born per woman	0.39	0.37
3.	Children living	0.35	0.33
4.	Who have began childbearing (percentage)	35.6	34.7
5.	Pregnant at the time of survey(percentage)	14.7	15.9
6.	Percentage never married (15-19 years)	49.8	51.9
7.	Contraceptive prevalance rate	31.0	30.5
8.	Unmet need for family planning (percentage)	19.0	21.0
B.	**Infant and child mortality**		
1.	Perinatal mortality	..	71.6
2.	Neonatal mortality rate	70.2	72.2
3.	Post neonatal mortality rate	35.9	31.4
4.	Infant mortality rate	106.1	103.6
5.	Child mortality rate	43.6	29.2
6.	Under five mortality rate	145	129.5
C.	**Maternal and child health**		
1.	Recipients of tetanus toxoid (per cent)	79	85.5
2.	Received antenatal check-ups	29.3	39.9
3.	Delivery at health facility (per cent)	3.4	6.7
D.	**Nutritional status**		
1.	Short stature mothers (per cent) (<145 cm)	19.0	18.4
2.	Acutely malnourished mothers (per cent) (BMI<18.5 per cent)	50	50.5
E.	**HIV/AIDS**		
1.	Ever heard of HIVIAIDS (per cent)	17.2	30.2
2.	Sources of knowledge - radio	7.6	11.7
3.	Sources of knowledge - televisions	11.7	20.1
4.	Sources of knowledge - friend/relatives	6.8	11.5
5.	Unknown to any valid way to prevent HIV/AIDS		19.3
6.	Perception of HIVIAIDS - a healthy person can have HIVIAIDS		66.4
7.	Perception of HIVIAIDS - healthy person cannot have HIVIAIDS		13.5
8.	Communicate with spouse about HIV/AIDS prevention		18.4
9.	Knowledge of STIs		8.5

Note: Two dots (..) indicate that the data arenot available.

cent). The other important sources were radio (10 per cent) and friend relative (11.5 per cent) (Mitra and others, 2001). The recent BDHS covered some other aspects regarding HIVIAIDS knowledge among adolescents. Relevant information from the table indicates that only about 19 per cent of them did not know any proper way to prevent HIV/AIDS. The distressing situation is that only 8.5per cent of the married female adolescents were found knowledgeable about sexually transmitted infections.

Box 4. Proportion of never-married adolescent girls in Bangladesh, 1999-2000

Current Age (in years)	Proportion never married
15	70.7
16	58.6
17	46.2
18	40.9
19	30.7

Source: Bangladesh Demographic and Health Survey, 1999-2000.

Information on matemal and child health indicates that the percentage of adolescents who had tetanus toxoid during pregnancy increased between the two surveys. For instance, according to the 1999-2000 BDHS, 85.5 per cent of teenage mothers reported receiving TT, as against 79 per cent in the 1996-1997 BDHS. There was also a 10-percentage point increase in the antenatal check-up recipients between the two survey periods, although no change was found in the delivery of births that took place in the health facility. The proportion of adolescent mothers receiving antenatal care rose from 29.3 per cent in 1996-1997 to about 40.0 per cent in 1999-2000. However, both the surveys reported only about 4 to 7 per cent births that were delivered at health facilities.

The nutritional status of the adolescents did not change at all between the two surveys. Adolescent mothers' nutritional risk was measured in terms of mean height (in cm), which can be used to predict the risk of difficulty in delivering children, given the association between height and size of pelvis. Also, the risk of giving birth to low-weight newborn is highest among women of small stature. The survey data on nutritional status indicate roughly one in five teenage mothers were shorter than the cut-off point of 150 cm About 50 per cent of teenage mothers are acutely malnourished (body mass index (BMI) 48.5).

Table 2 shows the percentage distribution of teenagers (15-19) who were mothers or pregnant with their first child according to the 1996-1997 and 1999-

Table 2. Adolescent pregnancy and motherhood in Bangladesh, Bangladesh Demographic and Health Survey 1996-1997, 1999-2000

Age	Percentage who are				Percentage who have begun childbearing	
	Mothers		Pregnant with first child			
	1996-1997	1999-2000	1996-1997	1999-2000	1996-1997	1999-2000
15	8.5	11.6	5.5	4.3	14.1	15.9
16	23.5	22.2	5.2	3.8	28.4	26.0
17	32.6	30.8	3.7	5.7	36.4	36.5
18	43.2	39.0	4.7	6.0	48.0	45.0
19	54.6	52.5	3.1	4.8	57.7	57.3
Total	**31.0**	**29.8**	**4.6**	**4.9**	**35.6**	**34.7**

Box 5. Percentage of female adolescents reporting their last child as mistimed according to current age, Bangladesh, 1999-2000

Current age	Percentage
17	1.1
18	0.8
19	1.9

Source: Bangladesh Demographic and Health Survey, 1999-2000.

Box 6. Proportion of adolescents who knew about menstrual regulation and used the procedured by place of residence, Bangladesh Demographic andHealth Survey, 1999-2000

Place of residence	Knowledge	Use
Urban	76.5	2.7
Rural	71.1	1.7
Total	72.4	2.0

2000 BDHS. The information reveals that 31 per cent adolescents were mothers in 1996-1997 and another 5 per cent were pregnant with their first child. The comparable figures for the 1999-2000 BDHS were about 30 and 5 per cent respectively. Thirty-five per cent of adolescents have begun child bearing in 1999-2000. In 'the same period, a small proportion of the adolescents also reported that their last child was mistimed (box 5). There has been a slight decline in this proportion since the 1996-1997 BDHS, which showed that 36 per cent of women aged 15-19 had begun child-bearing.

This section further investigates another reproductive health indicator, such as knowledge and use of menstrual regulation of the married adolescents on the basis of information collected from the BDHS 1999-2000 (box 6). The data suggest that slightly over 72 per cent of adolescents reported knowledge about menstrual regulation (both unprompted and prompted).

Health-care utilization by the adolescents

Pregnancy, particularly in adolescent age, is associated with many life-threatening risks. In the past, these aspects were not studied in any survey. The Bangladesh Maternal Health Services and Maternal Mortality Survey, 2001 shows detailed information on the knowledge of adolescents about these life-threatening issues associated with pregnancy and their health-care utilization. **Table 3** shows knowledge of pregnancy or delivery-related complications that might cause death and health-seeking behaviour for those life-threatening conditions of married adolescents (National Institute of Population Research and Training, 2001). Overall knowledge was high

Table 3. Percentage distribution of married females aged less than 20 according to their knowledge of maternal complications and their health-seeking behaviour, 2001

Indicator		Situation 2001
A.	**Knowledge of life-threatening conditions during pregnancy**	
1.	Knowledge of any life-threatening conditions during pregnancy/delivery	79.2
2.	Knowledge of severe headache/ high blood pressure	5.2
3.	Knowledge of edema/pre-eclampsia	5.4
4.	Knowledge of convulsion/eclampsia	17.1
5.	Knowledge of excessive vaginal bleeding	11.6
6.	Knowledge of tetanus	43.3
7.	Knowledge of baby in bad position	18.3
8.	Knowledge of prolonged labour	10.9
9.	Knowledge of obstructed labour	27.8
B.	**Type of assistance sought for complications**	
1.	Did not seek assistance	45.1
2.	Sought assistance, but not at health facility	30.5
3.	Went to a facility/doctor for assistance	24.4
C.	**Type of health facility visited for complications**	
1.	Government hospital/Thana Health Center/Maternal and Child Welfare Centre	44.4
2.	Satellite/Expanded Programme for Immunization clinic	5.2
3.	NGO and private health facility	16.2
4.	Private doctor	18.6
5.	Traditional doctor/other	15.5

Source: Bangladesh Maternal Health Services and Matemal Mortality Survey, 2001 (preliminary report).

but specific knowledge of life-threatening conditions was low. The information suggests that over 43 per cent knew about tetanus a life-threatening conditions during pregnancy or delivery. About 29 per cent of females reported knowledge about retained placenta and above a quarter (27.8 per cent) about obstructed labour. From 10 to 18 per cent of the females knew about prolonged labour, excessive vaginal bleeding, convulsion/eclampsia or bad position of the baby. Only about 5 per cent knew about severe headachehigh blood pressure or ededpre-eclampsia that might threaten the life of the mother during pregnancy or delivery.

The health-seeking behaviour of the adolescents who had complications shows somewhat alarming conditions, as nearly half of the adolescents did not seek any type of assistance for maternal complications and another one third opted for some non-facility assistance. Yet, a little less than one fourth of the adolescents went to a facility/doctor for their pregnancy or delivery-related complications. Further, among women who went to a facility for treatment, the most commonly mentioned place was government hospital facilities (44.4 per

cent), followed by private doctor (18.6 per cent) and NGOs and private health facility (16.2 per cent). A sizeable proportion of these adolescents also sought assistance from a traditional doctor or other for their complications.

Adolescent programmes and interventions currently in operation in Bangladesh

Since the Declaration of the International Conference on Population and Development in 1994, a good number of NGOs as well as government agencies in Bangladesh have introduced adolescent reproductive health programme in their project activities. The directory published by the Population Council, Dhaka indicates that more than 100 NGOs were working in the area of adolescent reproductive health and their welfare (Hossain and others, 1998). Recently, UNICEF compiled the types of interventions these NGOs are providing (UNICEF, 1999).

The general objectives of these NGO programmes include:

- Illiteracy eradication
- Empowering adolescents
- Promotion of individual development and support for the betterment of future life
- Exposure to reproductive health matters

The activities taken under the programmes are as follows:

- Group formation
- Skill development training
- Literacy/non-formal education
- Micro-credit/income-generation activities
- Adolescent family life education
- Sex education
- General health education
- Reproductive health services
- Leadership training
- Legal support, e.g. regarding violence and abuse
- Advocacy with families and community members to obtain support for programmes

Concerns about the current reproductive health programmes

Although many interventions have been provided over the last few years, very little is known about the impact of these interventions on the reproductive health of the adolescents. Before replication of the impact of these interventions, it is necessary to assess the correlates of these interventions. The

Government's programme

Government's intervention	Programme	Programme component	Target group	Remarks/ impacts
Education programme	Secondary Education Scholarship	1. Nationwide stipend 2. Book stipend	Girls in class VI to X in rural area	Increase in female enrolment in school
Health pro gramme under the Health and Population Sector Pro-gramme	Essential Services Package	1. Health services 2. Health education 3. Health and hygyenic environment	Students in class V to X	
	National Nutrition Project	1. Monitoring girl's height, weight 2. Educationsession on nutrion, personal hygiene and reproductive health care 3. Micronutrient supplements 4. Counselling	Unmarried in- and out of school girls	
Directorate of Health and Family Planning	Essential Services Packages	1. Education 2. Nutrition 3. Clinical treatment 4. Behavioural Change Communication (BCC) about reproductive health	BCC for girls aged 12+ and boys aged 13+	

interventions introduced by both the Government and local and international NGO, raise some valid and crucial questions, such as:

- What is the experience from the Government's secondary education scholarship programme and those of various NGOs? Is there any evidence that completion of secondary education increased age at marriage beyond 18 years and, if so, what is the age at marriage of girls who completed secondary education under the project?
- How many girls having completed secondary school are able to continue higher secondary education so that it really has an impact on age at marriage and on reproductive behaviour?
- Do the girls who completed secondary education after being enrolled in the Government's secondary education scholarship programme have any means to continue higher education? Do they have access to employment opportunities? If not, what will their parents do in the given cultural setting? One logical option is that they may be married off. It is also expected that education usually expands employment opportunities and educated women may delay marriage and child earing to earn income. Women's education is also associated with

NGO programmes

Name of NGO	Programme area	Programme component	Target group	Remarks/ impacts
Population Council	1. School 2. Community	1. Education programme 2. Friendly clinical service 3. Inform through telephone and print media	1. Boys and girls in class VIII and IX in school 2. Out-of-school, aged 13-19, working or non-working	1. Improved reproductive health knowledge 2. Increased clinic visitation by unmarried for counselling 3. Increased antenatal care recipients 4. Positive attitude towards reproductive health behaviour
International Center for Diarrhoeal Diseases Research, Bangladesh	School Community Workplace	1. Booklet 2. Adolescents friendly clinic services Adolescent Development Package 1. Health education 2. Health services 3. Credit and skill training programme Peer approach health services	Students of grade VIII, IX and X in school Adolescents aged 13-15 and 16-19 years from all categories Female garment workers aged 13-19 years	
Bangladesh Women's Health Coalition	1. School 2. Community	1. Adolescent family life education 2. Club based in the community	Girls in grade VIII and IX in schools in urban and rural areas and school dropout adolescent girls from the community	
Bangladesh Rural Advancement Committee	Adolescent reproductive health education	1. Formal school 2. Non-formal school 3. Club and skill training	Adolescents aged 11 to 14 years	
Under-privileged Children's Educational Programmes	Schooling opportunities	Education	Poor urban working/street girls 10+ and boys 11+	
Center for Mass Education in Science	School	Life-oriented non-formal education	Girls aged 11 to 19 years	

better child health. Women with some formal education are more likely to obtain care during pregnancy, immunize their children and take appropriate action when a child becomes ill.

- What is the experience from the existing health programme of Government and NGOs regarding the reproductive behaviour of the adolescents? Have any specific indicators of adolescent reproductive health been identified at the national level? Does the programme suggest any positive change in the reproductive health indicators of the adolescents? If so, what are those indicators?
- The adolescent family life education programmes raise important questions: which curricula are more effective in changing risk-taking behaviours, either by delaying or reducing sexual activity or by increasing the use of protection? What are their characteristics?
- What is the impact of additional programme components, such as parent programmes, peer programmes, afier-school discussion sessions and individual counselling? Are programmes more or less effective when teachers teach them or peers or outside experts? Are these appropriate and acceptable ways to teach adolescents so that they receive instruction more relevant to their personal experiences?
- What is the impact of the programme location (school-based or school-linked) and the location of its sponsor (school, clinic or other community agency)? How can school-based programmes be reinforced by community-wide efforts and vice versa?

On the basis of the review of Bangladesh adolescent programmes, it is not possible to identify successful programmes that can be replicated.

Lessons from programmes of other countries

Experiences from programmes of other countries on adolescents reproductive health suggest that a combination of approaches is often most effective in reaching adolescents, but very few have been rigorously evaluated for impact, making determination of best practices a challenge (PATH, 1998). It is therefore inevitable to assess the nature of these programmes and to ascertain the successful experiences that are feasible and can be replicated in other countries with a similar cultural context.

A wide variety of youth-oriented services and programmes have been found to operate in both developed and developing countries, differing according to the group of adolescents to which they belong. Adolescents in different settings are reachable in a varying manner. For those who are in school, school-based clinics are available in some developed and developing countries. Unlike developed countries, in developing countries school-based

services are often limited by restrictive policies, personnel shortages, lack of private areas for counselling and poor links to resources outside the school. Yet, some school- based clinical programmes in some developing countries show some extent of success. The Nepalese school-based AIDS/STD awareness programme by the B.P. Memorial Health Foundation (BPMHF) uses a peer education model (UNFPA, 2000) as its programme tool. In Jamaica, such a programme enabled adolescent girls to continue their schooling during pregnancy; to return to school after the birth of their child; and to avoid another pregnancy during adolescence. The programme also helps adolescents to continue their education and thus to delay first pregnancy, and offers them family planning information and services, skill-building on childcare and other life-planning services (Bamett and others, 1996). An evaluation of the Jamaican programme found that less than 2 per cent adolescents reached by the programme had a second pregnancy before graduating or starting work (UNFPA, 1997), which shows that providing a supportive environment where pregnant girls can continue their education can make a significant difference in their futures. This programme found the combination of education, information and services to be the key to pregnancy prevention.

In some Western and Latin American countries, youth-oriented clinic services are available to provide a wide range of clinical and social services such as pregnancy and STD prevention, counselling and testing (Pathfinder International, 1998). Such adolescent friendly health clinics are also available in other parts of the world. For example, one intervention programme in Thailand aims to be a friendly one-stop health clinic, which is accessible, convenient, confidential and culturally as well as socially sensitive to youth's sexual and reproductive health problems and needs. The youth-friendly clinic and educationalheoreational centre in Belize, called Planet Youth, reaches out to both students and young adults who are no longer in school and uses music and theatre to provide pertinent sexual and reproductive health information in the form of positive entertainment (RHO, Program Examples, 1997-2002).This programme suggests that reproductive and sexual health programmes designed for adolescents, particularly those who are not in school, benefit from meeting youths in their own environment. The programme also indicated that commitment from staff, donors, parent, and the young people themselves has been the key to programme success.

It is often revealed that owing to adolescents' cultural, social and geographic diversity, reproductive health programmes based in schools and health facilities cannot reach all segments of the adolescent population. Hard-to-reach adolescents such as those not attending school, working or living on the streets, who have been sexually abused or exploited, indigenous groups or newly-wed couples can better be reached under the community-based programmes. Community-based outreach programmes in different countries

such as El Salvador, Indonesia, Mexico, Thailand and Viet Nam are especially important for groups such as out-of school youth, "street" youth, and girls who have limited freedom to leave their community. These commmity-based projects have a variety of formats to reach youth where they congregate for work or play.

Trained peer leaders in a programme in Thailand facilitates young women living in the workplace to learn and practice skills such as negotiating, planning and sexual health, like using a condom (Cash and Anasuchatku, 1995). In Mexico, gang members are trained to reach out-of-school adolescents (PATH, 1998). In El Salvador, the peer education approach for gang adolescents suggests that programmes must provide information appropriate to the level of knowledge and skills of the community, as well as use the language of youth. The El Salvadoran approach also indicates that programmes should target young women emphasizing negotiation skills so that they can say "no" to unprotected sex and reinforce their self-esteem. Moreover, programmes must make condoms available to youth, so that availability is not an excuse for not using acondom during a sexual act. The experience from the Indonesian programme on street outreach workers indicates that involving gay youth in the overall programme builds trust among the gay community, fmding the selection, training and supervision of outreach workers to be the key to the programme's success.

Special approaches to reach the adolescents and to meet their needs are also being carried out in some other countries. For example, the Urban Life Network, Life Net program, in Thailand, a new approach to meet youth reproductive health needs, by bringing skills and strengthening relationships, reveals that reproductive health education materials should be adapted into formats that are engaging and entertaining to youth, using language and terminology that youth understand (RHO, Program Examples, 1997-2002). Programmes also involve people other than youths such as parents, religious leaders, health officials, and community members to raise community awareness and advocacy regarding the importance of adolescent educational reproductive health needs.

In Kenya, where the Government restricts discussion regarding reproductive health issues, the Kenya Scouts Association showed that it is possible to reach out-of-school youth with family life skills through scouting programmes, and working with homogeneous groups (either in school or out-of-school)works best. The programme also recommended that involving all stakeholders (parents, teachers, scout leaders and the management) in planning and implementing the project helped to address potential concerns and build support for the project. In Uganda, the media approach to address adolescent concerns about sexual and reproductive health demonstrates that it is possible

to openly address sexuality in the African context if the material is tasteful, well-written, scientifically accurate, and based on adolescents' questions (RHO, Program Examples, 1997-2002).

Until now, we have discussed some specific interventions that are in operation around the world. However, the lack of analytical studies to assess the impact of interventions has led to our inability to identify specific successful interventions that could be recommended for replication. One of the weaknesses of these experiences is that it does not tell the sample size and methodology of the data collection. It is important to have a mixed safer-message because adolescents areat different ages and at different points in their sexual development. It is unfair to over-promote condoms to adolescents who want to abstain fiom sex and, conversely, to over-promote the value of abstinence to adolescents who are already sexually active. There must be a message for every adolescent, where they are on the safer-sex continuum.

Limitation of study evaluation

Not surprisingly, the quality of the research methods employed and the strength of the resulting evidence for the impact of the programmes vary greatly from study to study. For example, to minimize selection biases, some studies used random assignment of adolescent to the intervention or comparison conditions, whereas others did not. Some studies involved large sample sizes to ensure adequate statistical power in detecting statistically significant results, while others used relatively small samples, reducing the chance of fiding programmatically significant differences. Some measured programme effects for only three months, while others measured long-term impacts of up to 24 months. And finally, some used more rigorous statistical analyses, while others failed to control statistically for design limitations. Because of those variations in quality, the strength of the evidence from each study should be considered with caution. Additionally, the strengths of any conclusion about the impact of programmes are confiied by the limitations of both individual studies and all studies as a group.

Implications and conclusions

Although as many as 100 NGOs are working in Bangladesh for the improvement of adolescent reproductive health, none of these interventions has been tested or evaluated to claim success of the programme. Consequently, none could be recommended for replication. Programmes recognizing that adolescents can engage in healthy, fulfilling sexual relationships, rather than focusing only on the negative outcomes, may go far in reaching young people with important information. Programmes to improve adolescent reproductive

health must understand the risks they face and consider the many influences on adolescents' lives. Such factors as whether adolescents have initiated sexual activity, are married, in school or working, are important. The impact of poverty, gender inequities, legal restrictions and various cultural expectations must also be addressed. Adolescent sexuality is a sensitive subject in all cultures. Programmes that offer reproductive health services to adolescents can expect to encounter some resistance from their community.

Among the programmatic challenges for adolescent interventions, the most important is to opt for the appropriate way to reach the huge number of adolescents in Bangladesh and to provide them with reproductive health services. The mechanism and strategy to provide friendly and acceptable services to the vast number of adolescents adding every year to the existing number need to be decided. Moreover, the barriers prevailing in the society make adolescents reluctant to visit the reproductive health service centres. This situation has facial programme planners with the challenge of adopting ways to overcome the barriers and thereby create a supportive environment at the community level in which the process of maximizing sexual reproductive health service utilization by the adolescents will be accelerated (Nath and Barkat, 2000).

Rapid population increase and urbanization place pressure on national health, education and social infrastructures, further reducing access to basic needs. On one hand, it necessitates the expeditious implementation of an effective programme, and on the other, the traditional and cultural norms prevailing in Bangladesh hindered the acceptability of new ideas and strategies. Strategies like sex education in schools and easy availability of contraceptives still pose a question of acceptability in the socio-cultural setting of Bangladesh. The health-seeking behaviour of adolescents in Bangladesh indicates that they are more likely to consult non-medical persons (kabiraj/religious and traditional healers/canvasser) for reproductive health illness, owing to their negative attitude towards service providers. Whether education will change adolescents' health-seeking behaviour as well as induce a positive attitude of adolescents towards service providers is another important programme aspect.

Successful programmes provide necessary counselling and clinical services and aim to help adolescents develop skills to make healthy life choices. These programmes respect the needs, concerns and insights of young people by including them in the design and implementation of activities. Working together with parents, community leaders and health professionals can create programmes that address young people's needs and help them to enjoy a healthy adolescence and become healthy and responsible adults (UNICEF, 1998). With the need for adolescent health services growing fast, it is important that new and expanded programmes build upon successful experience.

In order to address young people's reproductive and sexual health concerns, there need to be more researches and age-specific data to highlight the seriousness of youth's unmet needs for reproductive and sexual health information and services. Whenever possible, programmes should be monitored, evaluated and documented to ensure that their challenges are understood and their successes replicated.

In Bangladesh, the annual age-specific fertility rate for adolescents aged 15-19 according to the 1999-2000 BDHS, is 144 per 1,000 females, which accounts for about 22 per cent of the total annual age-specific fertility rates. This implies that at least one fourth annual fertility could be avoided by increasing the female age at first marriage to 20 years and beyond. Whether the current secondary education programme would help to increase the age at first marriage of adolescents beyond 20 years remains to be seen. The future rests heavily on the welfare of adolescent women, on how well they fulfil their roles as mothers, as contributors to the economy, as teachers of the next generations and as sources of strength for their communities and countries. As they work towards claiming their full and legitimate place in the world, young women face hardship and challenges. But the challenges for communities and countries to give young women the helping hand they need and deserve is even greater.

Endnote

1. Author's estimate based on current population size, annual growth rate of the overall population and "momentum effect" on population increase.

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