The Path to Below Replacement-Level Fertility in Thailand

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The Path to Below Replacement-Level Fertility in Thailand

By Charles Hirschman, JooEan Tan, Aphichat Chamratrithirong and Philip Guest

In one generation, from 1970 to 1990, average fertility in Thailand declined from six or seven births per woman to below replacement-level fertility. Even in an age of rapid fertility transitions, the Thai case is exceptional. A comparison of data from seven different censuses and surveys over this period shows a consistent pattern of fertility decline. The primary evidence that the Thais reached below-replacement fertility in the late 1980s comes from time-series estimates of fertility for the early and mid-1980s, calculated from the 1990 Census and supported by the 1987 Demographic and Health Survey. Most demographers underestimated the pace of Thailand’s fertility decline and did not expect replacement fertility until late in the 1990s.

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The first signs of fertility declines in the countries of the developing world were evident in the late 1960s and early 1970s. These early declines were, however, limited to a few small countries in Asia and Latin America, and there was considerable uncertainty about when the larger and poorer developing countries would also experience fertility declines.¹ Many scholars were doubtful that the demographic transitions experienced by the industrial countries in the early decades of the 20th century would be imminent in the developing world. Problems of data quality, the lag from data collection to publication, the difficulties of distinguishing a trend from short-term variations, and the lack of theory to predict the timing of fertility transitions reinforced the conventional caution among demographers against drawing strong conclusions about the pace of demographic change in the less-developed regions of the world.

Two decades later, clear and compelling evidence exists of substantial fertility reductions in many (though not all) developing countries.² Although modern fertility transitions are well along their historical path, deep uncertainty remains about their future course. Several influential articles have drawn attention to a slowdown of fertility declines in the last decade.² The only developing countries to have achieved replacement-level fertility are the newly industrialized nations of East Asia—Hong Kong, Singapore, South Korea and Taiwan. The distinctive attributes of these countries in terms of their compact size, rapid economic growth and Confucian cultural heritage make them unlikely models for the larger and more populous countries in Asia and the rest of the developing world. The largest country in the world, China, has proceeded very far along the path to low fertility, but with a heavy dose of state coercion that is unlikely to be replicated elsewhere.

In this article, we report annual fertility rates for Thailand for the 1980s that suggest that below replacement-level fertility was reached by the end of the decade. Although Thailand has experienced very rapid economic and social development in recent years, it remains a developing country with a per-capita income of less than US $1,500 and with over 75% of the population still living in rural areas.³ If such low levels of fertility can be attained (and so quickly) with only moderate socioeconomic development, Thailand’s experience may be a possible harbinger of future demographic changes in other developing countries, particularly in Asia.

Thailand has an exceptional history of censuses and population surveys that allows for careful measurement of fertility levels and trends. The new data for the 1980s are based on fertility estimates from the 1985–1986 Survey of Population Change (SPC) and the 1990 Census of Population. The fertility trends from these two sources are consistent with each other and also with time-series data estimated from the 1987 Thailand Demographic and Health Survey (TDHS). We do not claim that the new fertility estimates are absolutely accurate or that it is possible to arrive at a precise estimate of current fertility. But even with generous allowances for error, the conclusion that replacement-level fertility has been reached seems to be well justified.

The findings from Thailand reinforce the observations by Ronald Freedman that demographers (like most other scholars) tend to underestimate the pace of social change.⁵ Empirical data from the TDHS, published in 1988, provided tentative evidence that replacement-level fertility was close at hand by the mid-1980s, but data inconsistencies and scientific caution led the analysts to be skeptical of the results. This caution has been reflected in all subsequent international calculations (United Nations and World Bank) and domestic estimates of Thai fertility: Replacement-level fertility was not expected until the late 1990s or later.⁶

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Fertility Trend, 1960–1990

Thailand’s “reproductive revolution” has been one of the most rapid and pervasive fertility transitions of any developing country.\(^7\) Figure 1 shows trends in period total fertility rates (TFR) from seven different sources for the three decades from 1960 to 1989.\(^8\) In spite of the wide variations in data sources, methods of estimation, and data corrections and adjustments, there is remarkable consistency in the levels and trend of fertility. In the early 1960s, fertility was quite high with TFR estimates ranging from 6.5 to 7.4 births per woman. During the late 1960s, fertility began to decline, and all sources confirm that Thailand’s TFR was about six or less by 1970.\(^9\) The 1970s witnessed a dramatic reduction in Thai fertility, with a 40% decline from 1970 to 1980.\(^10\)

In the early 1980s, there was uncertainty about the continuation of the Thai fertility decline. Several fertility surveys, conducted in the late 1970s and the early 1980s, seemed to suggest a reduction in the rate of decline.\(^11\) Different sampling procedures across surveys may have been responsible for the uncertainty in measuring the trend. Some surveys allowed missing households (where repeated callbacks did not lead to a contact) to be replaced by another one in the same area. The substituted households (which had someone at home) were probably more likely to have small children than the missed households. After reviewing these measurement problems, Knodel and colleagues presented a consistent series of annual estimates (two-year moving averages) based on the TDHS,\(^12\) and concluded that there had been a continued decline in fertility without any signs of a stall in the 1980s.

In spite of the downward trend in Thai fertility and an estimate of a TFR of 2.1 to 2.2 for the most recent survey period (Thai mortality levels require a replacement-level TFR of 2.25 births per woman), the authors of the TDHS report were nonetheless skeptical that Thai fertility levels were really this low.\(^13\) The primary reason for their skepticism was that TDHS fertility levels were somewhat below those from other recent data sources.\(^14\) The most significant comparison was between the TDHS fertility estimates and vital registration data for the early and mid-1980s. The fertility rates from the TDHS and the registration data were almost exactly the same, but the registration of births was estimated to be only 88% complete.\(^15\) This implied that the TDHS fertility estimate was too low.

Our view that the TDHS estimates are accurate is based on the remarkable correspondence between the TDHS time-series and the comparable time-series from the SPC and the Population Census, as shown in Figure 1.\(^16\) While correspondence of fertility estimates from different sources does not ensure accuracy, it does reinforce the conclusion that Thai fertility was approaching two children per woman in the mid-1980s. Although it is not possible to fully reconcile the survey and census fertility rates with the adjusted vital registration estimates, the possibility exists that the population denominators, as well as the births in the numerators, were biased downward in the vital statistics series.
The TFRs for the late 1980s, based on the own-children estimates from the 1990 Census,* show that fertility dropped below two births per woman. In spite of our initial skepticism that fertility could really be this low, the results are perfectly consistent with the prior trend. Moreover, the 1990 census-based estimates are aligned with those from the other sources for earlier years.

Still, there is not universal agreement that the Thai TFR is below two births per woman. Data from the more recent 1991 SPC yielded TFR estimates of 2.4 and 2.2 for 1989 and 1991, respectively.17 The most likely reason for the higher fertility estimates is the same one mentioned for the difference between the TDHS and other fertility surveys conducted in the early 1980s. The standard practice in most national Thai surveys, including the 1991 SPC, is to substitute a nearby household for a selected household that does not yield a contact after several callbacks. Households with a person at home during the day are more likely to contain a baby or small child than households with no one at home during the day. This problem does not arise in the census where coverage is universal (or intended to be) and there is no substitution of households.

The TDHS was unusual in that the standard method of substituting available households for missing households was not done. In the following sections of this article, we review the sources of data and the methods used to arrive at the estimates of Thai fertility in the 1980s. We also present a more detailed comparison of the 1990 Census and the 1987 TDHS fertility estimates, and conclude that there seems to be little reason to reject the 1990 Census estimates as too low.

Can the Rates Be Believed?
The first step in our evaluation of the recent trend in Thai fertility is to examine the internal consistency of the fertility rates estimated from the 1985–1986 SPC and the 1990 Population Census. The age-specific fertility rates (ASFR) calculated from these sources for the decade of the 1980s are shown, along with the summary TFRs, in Table 1. These rates are estimated by the own-children method.

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<tr>
<td>1980 Census</td>
<td>2.942</td>
<td>57</td>
<td>162</td>
<td>154</td>
<td>100</td>
<td>70</td>
<td>34</td>
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<tr>
<td>1981</td>
<td>2.872</td>
<td>55</td>
<td>158</td>
<td>147</td>
<td>103</td>
<td>62</td>
<td>38</td>
</tr>
<tr>
<td>1982</td>
<td>2.775</td>
<td>59</td>
<td>159</td>
<td>146</td>
<td>95</td>
<td>56</td>
<td>29</td>
</tr>
<tr>
<td>1983</td>
<td>2.447</td>
<td>48</td>
<td>139</td>
<td>131</td>
<td>87</td>
<td>47</td>
<td>28</td>
</tr>
<tr>
<td>1984</td>
<td>2.307</td>
<td>46</td>
<td>130</td>
<td>127</td>
<td>81</td>
<td>45</td>
<td>24</td>
</tr>
<tr>
<td>1985</td>
<td>2.204</td>
<td>44</td>
<td>128</td>
<td>122</td>
<td>74</td>
<td>40</td>
<td>24</td>
</tr>
<tr>
<td>1986</td>
<td>2.055</td>
<td>42</td>
<td>120</td>
<td>108</td>
<td>72</td>
<td>41</td>
<td>20</td>
</tr>
<tr>
<td>1987</td>
<td>1.928</td>
<td>37</td>
<td>115</td>
<td>109</td>
<td>68</td>
<td>33</td>
<td>16</td>
</tr>
<tr>
<td>1988</td>
<td>1.763</td>
<td>35</td>
<td>102</td>
<td>100</td>
<td>59</td>
<td>32</td>
<td>18</td>
</tr>
<tr>
<td>1989</td>
<td>1.845</td>
<td>35</td>
<td>109</td>
<td>104</td>
<td>66</td>
<td>33</td>
<td>15</td>
</tr>
</tbody>
</table>

*Rates are estimated using own-children method, based on children aged 0–9.** Rates are estimated using own-children method, based on children aged 0–5. Note: The rates are adjusted for non-matching of children and the mortality of children and women.

1990 Census and the SPC. A fundamental problem for the comparison of data between sources is the allocation of births to calendar years. The reference date of the 1990 Census was April 1, 1990 (although actual data collection continued for some time beyond that date), so the birthdays of infants less than age one in the census occurred from April 1, 1989, to March 31, 1990 (assuming no errors of measurement). In Table 1, infants less than age one in the census are labeled as births in year 1989 (those age one were assigned to 1988, and so on).

Age in the 1985–1986 SPC was indexed as of Round Nine, which was conducted primarily in July, August, and September of 1986. Infants less than age one in the SPC are assigned to 1985, those age one are assigned to 1984, and so on. (This assignment increases the overlap of census and SPC estimates.) Because ages and years do not correspond exactly in the two sources (and neither is centered on calendar years), there is unavoidable slippage in the comparison of birth rates for specific years in Table 1.

Even with this limitation, there is a rather consistent picture of monotonic annual fertility declines during the 1980s. TFRs decline by 0.1 to 0.3 of a birth during each year in the 1980s except for the slight rise in 1989 (relative to 1988). The exceptional decline of more than 0.3 of a birth from 1982 to 1983 in the census series is observed in the SPC series from 1981 to 1982 (slippage in the assignment of births to calendar years may be partially responsible for this discrepancy). While the consistent pattern of year-to-year decline does not guarantee accuracy of the underlying data, the trend corresponds to what might be expected from a diffusion process. The close correspondence of point estimates and annual changes between the census series and the SPC series lends credibility to the data.

Another dimension of internal consistency is the shape of the ASFR curve. To provide some basis of comparison, the 1989 ASFRs of Thailand are graphed in Figure 2 with those from three other populations with below replacement-level fertility—Singapore (1988), Taiwan (1987) and the United States (1985).18 For the years represented, the measured TFRs were 1.70 for Taiwan, 1.84 for the United States, 1.85 for Thailand and 1.97 for Singapore. Slightly different age profiles of low fertility are represented. In Taiwan, fertility peaks among women in their late 20s and is very low after age 30. In Singapore, fertility is very low before age 25 but rises to moderately high levels from age 25–34. Thailand and the United States are the most similar, with fertility concentrated among women in their 20s. Nothing from these international comparisons suggests that the data from Thailand are suspect or fall outside the normal range. All in all, these comparisons reinforce the conclusion that the Thai fertility data are of good quality.

Estimation of Births
Before presenting a detailed comparison of fertility estimates from the 1990 Census and the 1987 TDHS, we will review the sources of data, potential biases and adjustments to these figures. The 1987 TDHS collected complete birth histories from all ever-married women in the sampled households. With a few assumptions, reconstructing fertility rates for previous years is a fairly straightforward process. In the subsequent comparisons, we draw

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Figure 2. Age-specific fertility rates in Thailand and selected comparison countries

While we have no direct estimate of the degree of underenumeration of children, this potential problem may be partially compensated for by the underenumeration of women who would be in the denominator for calculations of fertility rates. Any bias would result from the differential underenumeration of children relative to that of women of reproductive ages.

Comparing Fertility Estimates

The levels of the estimated fertility from the TDHS and the 1990 Census, as reported in Figure 1, were in surprisingly close agreement. To provide another comparison, Table 2 shows age-specific fertility rates for three intervals for which overlapping estimates can be computed. The TDHS report published fertility tables for three periods: 12 months, 24 months and 60 months prior to the survey. The fact that fertility was lowest for the most recent period is an encouraging indicator of high quality data, because of the reputed measurement bias of survey respondents to bring births forward in time.

The fieldwork of the TDHS was conducted from March 17, 1987 to June 6, 1987. So the 12-, 24- and 60-month recall periods do not refer to the same time interval for every respondent. The reference date of the 1990 Census (April 1) falls within this interval, so there should be a fair degree of overlap of the ages and birth dates for the two sources. Specifically, we matched the 12-month period prior to the TDHS (1986–1987) with those aged three in the 1990 Census, the 24-month period prior to the TDHS (1985–1987) with those aged three and four in the 1990 Census, and the 60-month period prior to the TDHS (1982–1987) with those aged 3–7 in the 1990 Census.

Given the differences in data sources, methods of estimation, data adjustments and loose alignment to years, the consis-

Table 2. Comparison of total fertility rates and age-specific fertility rates from the 1990 Thailand Census and the 1987 TDHS, by age-group and time period

<table>
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<tbody>
<tr>
<td></td>
<td>TDHS</td>
<td>TDHS</td>
<td>TDHS</td>
</tr>
<tr>
<td>15–19</td>
<td>2.06</td>
<td>2.11</td>
<td>2.13</td>
</tr>
<tr>
<td>25–29</td>
<td>108</td>
<td>110</td>
<td>115</td>
</tr>
<tr>
<td>30–34</td>
<td>72</td>
<td>65</td>
<td>73</td>
</tr>
<tr>
<td>35–39</td>
<td>41</td>
<td>42</td>
<td>41</td>
</tr>
<tr>
<td>40–44</td>
<td>20</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>45–49</td>
<td>9</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>TFR</td>
<td>2.06</td>
<td>2.11</td>
<td>2.13</td>
</tr>
</tbody>
</table>
Table 3. Total fertility rates of women, aged 15–44, by background characteristics and source

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>1990 Census</th>
<th>1987 TDHS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>2.64</td>
<td>2.08</td>
</tr>
<tr>
<td><strong>Residence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>1.85</td>
<td>1.40</td>
</tr>
<tr>
<td>Rural</td>
<td>3.06</td>
<td>2.27</td>
</tr>
<tr>
<td><strong>Region</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North</td>
<td>2.34</td>
<td>1.88</td>
</tr>
<tr>
<td>Northeast</td>
<td>3.59</td>
<td>2.56</td>
</tr>
<tr>
<td>Central</td>
<td>2.25</td>
<td>1.74</td>
</tr>
<tr>
<td>South</td>
<td>3.55</td>
<td>2.72</td>
</tr>
<tr>
<td>Bangkok</td>
<td>1.68</td>
<td>1.25</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>3.38</td>
<td>2.85</td>
</tr>
<tr>
<td>Primary</td>
<td>3.04</td>
<td>2.26</td>
</tr>
<tr>
<td>Secondary</td>
<td>1.94</td>
<td>1.61</td>
</tr>
<tr>
<td>Higher</td>
<td>1.60</td>
<td>1.29</td>
</tr>
</tbody>
</table>

Sources: 1990 Population Census of Thailand, reference 7; and reference 13, p. 38.

Tendency of 1990 Census and TDHS fertility estimates in Table 2 is rather amazing. The TFRs estimated from the TDHS and the census are within 0.15 or less of a birth of each other, and the estimated ASFRs, with a few exceptions, differ by only about 0.05 of a birth. The degree of consistency lends further credence to the very low levels of Thai fertility in the 1980s. Moreover, these figures reinforce the conclusion that there was no lull or stagnation in Thailand's fertility decline in the 1980s.

Subgroup Patterns
Thai TFRs for the 1980s are shown in Table 3 by three population characteristics: urban vs. rural residence, region (the four major regions and Bangkok) and the educational attainment of women. The TDHS estimates for 1981–1983 and 1984–1987 are taken directly from the published report. The 1990 Census-based estimates were constructed to parallel the two time periods from the TDHS and to include the additional period of 1988–1989.

The alignment of the 1990 Census and the 1987 TDHS estimates for subgroups is not quite as close as the population age-specific rates in Table 2, but the estimated TFRs for the subgroups are rarely more than 0.2 or 0.3 of a birth apart. These variations in the estimated fertility rates by geographical areas (rural vs. urban and region) for the earlier time periods could differ because of migration between the dates of the interviews (1987 and 1990) and because of measurement differences between the two sources.

Both data sources indicate that rural fertility was slightly less than three births per woman and urban fertility was below the replacement level in the early 1980s. By the mid-1980s, fertility edged further downward in urban areas and dropped sharply to just above replacement in rural areas. According to the 1990 Census, fertility continued to decline in the late 1980s and was well below the replacement level in both rural and urban areas. The differential between rural and urban areas was only 0.7 of a birth.

Convergence is also evident across the regions in Thailand. Only the Bangkok metropolitan area had a TFR below 2.0 in the early 1980s. The central region had a TFR of 2.3 to 2.4, while the less developed South and Northeast regions averaged 3–4 births per woman. The census estimates for the late 1980s show very low fertility rates in Bangkok and also in the Central and North regions. The remaining areas in the South and Northeast had approximately replacement-level fertility by the late 1980s.

Own-children estimates of fertility across regions and urban and rural areas are not exactly comparable between the two data sources because the census was conducted on a de jure basis of assigning individuals to their usual place of residence; the TDHS followed a de facto convention. Comparisons of fertility levels between areas may also be biased by differential patterns of migration of mothers and children. The census estimates of own-children for Bangkok may be biased downward if young mothers migrate to Bangkok and leave their children behind in villages with relatives. The adjustment for unmatched births should push own-children fertility rates in other regions upward, though not to the extent that Bangkok is reduced (the number of children whose mothers migrate is a much smaller fraction of children in sending areas than of children in Bangkok). Moreover, the TDHS estimates for Bangkok, which do not suffer from the matching problem, also show a very low level of fertility in Bangkok.

The low level of fertility in Bangkok is of considerable significance. The population of Bangkok is about 10% of the total population of Thailand, and the city is the national hub of all governmental, industrial and commercial activities. The congestion of people and traffic in Bangkok combined with the high cost of living that requires multiple workers per household has undoubtedly taken its toll on domestic life. A recent survey showed that the average commuting time in Bangkok for workers employed outside the home was 50 minutes one way, although the average distance commuted was only 11 kilometers. In addition to the economic costs of raising children in Bangkok, the burdens of managing everyday life may discourage childbearing in the city.

The final cross-tabulation in Table 3 shows fertility by the educational level of women. In the early 1980s, a fairly sharp distinction existed in fertility between women with low levels of education (none or primary schooling) and high levels of education (secondary schooling and higher). By the mid-1980s, the educational differentials had narrowed and the fertility of women with only a primary education was approaching the replacement level. By the late 1980s, the fertility of women at all educational levels was at the replacement level or below.

Conclusions
If any demographer in 1960 (or in 1970) had predicted that fertility in Thailand would drop below two children per woman before 1990, the professional response would have been incredulity, if not ridicule. Indeed, fertility levels in the United States were high enough in the late 1960s to spark national debate and a Presidential commission was appointed to study the problem. The widespread assumption was that low levels of fertility in developing countries could only be attained in the near term by coercion. Yet, below replacement-level fertility (a decline from more than six children per woman to less than two) was achieved in Thailand in less than a generation with only a voluntary family planning program. The pace of economic and social development in Thailand has been extraordinarily rapid, especially in the 1980s, but the country remains classified as a low-income country.

Relative to other social phenomena, the measurement of human fertility rests on a fairly solid foundation. Nonetheless, problems of sampling and measurement error preclude precise measurement. These problems are compounded with indirect techniques (such as own-children methods of estimating fertility) that require multiple adjustments. The dilemma is that important theoretical and empirical questions about the beginnings and
culminations of fertility transitions are based on fairly small absolute changes in fertility. Almost any technique will detect a large change or major trend, but fairly small changes (e.g., a few tenths of a birth in a TFR) are certain to be within the margins of error in any data source.

Our primary method has been to compare fertility estimates across different data sources. The estimates of both levels and trends in Thai fertility are in surprisingly high agreement. The greatest variation in fertility estimates is for the period of high fertility in the 1960s. By the late 1960s, several data sources (survey and census estimates) confirmed that the Thai fertility transition was under way. There is even closer agreement that the Thai fertility decline continued throughout the 1970s and 1980s.

The evidence of below replacement-level fertility for the late 1980s largely rests on the 1990 Census own-children estimates. Although the Census estimates for these years are lower than most demographers had expected, confidence in the estimates is enhanced by a high level of agreement with survey estimates for the early and mid-1980s. In particular, a detailed comparison of estimates from the 1990 Census and the 1987 TDHS shows an amazing correspondence. This correspondence is remarkable given the very different measurement of fertility and means of reconstruction of rates in the two sources. The fertility estimates for the 1980s show a rapid convergence of low fertility across all geographic and social categories of Thai society. The only question mark in this story is the 1991 SPC, which still shows a TFR of 2.2. Although we think the 1991 SPC estimates are biased upward because of sampling procedures, acceptance of the SPC fertility estimates would modify our conclusions only slightly. The estimated trend in fertility rates from the 1991 SPC is still downward, and below-replacement fertility is still on the horizon. Moreover, the 1991 SPC reports TFRs below two births per woman for all regions of Thailand except the Northeast and the South.

In spite of the conventional wisdom that fertility transitions are supposed to lead to low fertility, there is a generalized reluctance among demographers to predict the course of fertility trends or to anticipate the attainment of below replacement-level fertility in developing countries. This general scientific caution is partly founded on the uncertainty of measurement, especially when the quantities under scrutiny are almost microscopic. In addition, assumptions about the future, based on the past, have often proved to be erroneous.

A few years ago, Ronald Freedman advised that humility would be the best guide to demographers (and others) who wish to speculate about the future course of fertility.21 Chastened by the frequent arrival of new data, demographers have internalized a reluctance to make predictions or broad generalizations from current patterns. The remarkable history of the fertility transition in Thailand over the last 30 years, however, does stimulate some thoughts (or speculation) on the implications of below-replacement fertility for Thai society, and by extension, for other Asian countries with comparable socioeconomic and demographic trends.

Most social, economic, and cultural institutions reflect, in part, the demographic metabolism of a society. Until very recently, only a small fraction of the Thai population was elderly, but a large proportion was dependent children. In such a setting, the reverence and deference given to the elderly was balanced by their relative infrequency in most households. Family life, especially the roles of women, was organized around childbearing and childrearing.

The reproductive revolution of the last generation has changed the composition of most Thai families, but the social and normative fabric of Thai society is still in the process of adjustment. Among the changes that might be expected are greater social and economic investment in individual children, more time for nonfamily activities (especially for women), and increased demands to care for elderly parents. These social changes, intertwined with a phenomenal economic transformation over the last two decades, will reverberate across the cultural and normative framework of Thailand (and many other Asian countries) in the coming years.

References


12. Ibid.


15. Ibid., p.151.


a niveles de paridad más elevados), independientemente de las condiciones socioeconómicas.

Résumen
Les données provinciales de la Chine servent à l'examen des corrélations entre le développement socio-économique, la planification familiale et l'évolution des probabilités d'agrandissement des familles entre 1979 et 1984, par l'analyse factorielle et l'analyse de régression multiple. Les résultats indiquent qu'au niveau provincial, le déclin des probabilités, de la première à la deuxième naissance (signe d'acceptation de la norme familiale de l'enfant unique), dépend largement du niveau de développement socio-économique de la province. Par contre, le programme de planification familiale exerce sa plus grande influence sur le déclin des probabilités entre la deuxième et la troisième naissance (de même, probablement, qu'aux rangs de parité ultérieurs), et ce indépendamment des conditions socio-économiques.

Resumen
En una generación, de 1970 a 1990, la fecundidad media de Tailandia bajó, de seis o siete nacimientos por mujer a menos del nivel de reemplazo. Inclusiva en una época de rápidas transiciones de fecundidad, el caso de Tailandia es excepcional. Una comparación de los datos de siete censos y estudios diferenciales a lo largo de ese periodo demuestra un perfil constante de disminución de la natalidad. La prueba primaria de que los tailandeses alcanzaron una fecundidad por debajo de reemplazo a finales de los años 1980 deriva de cálculos de series temporales de la fecundidad correspondientes a comienzos y mediados de la década, calculados a partir del censo de 1990 y respaldadas por la Encuesta Demográfica y de Salud de 1987. La mayoría de los demógrafos subestimaron el ritmo de la disminución de la fecundidad de Tailandia y no esperaban alcanzar el nivel de reemplazo sino hasta fines de los años 1990.

Résumé
En l'espace d'une génération, de 1970 à 1990, la fécondité moyenne, en Thaïlande, a baissé de six ou sept naissances par femme à un niveau inférieur à celui de remplacement. Même à une époque de rapide évolution de la fécondité, le cas de la Thaïlande est exceptionnel. La comparaison des données de sept enquêtes et recensements distincts effectués pendant la période révèle un déclin de fécondité constant. La preuve majeure de l'accès des pays à un niveau de fécondité inférieur à celui de remplacement vers la fin des années 80 provient des estimations de séries chronologiques de la fécondité du début et du milieu de la décennie, calculées à partir du Recensement de 1990 et confirmées par l'Enquête démographique et de santé de 1987. La plupart des démographes avaient sous-estimé le rythme du déclin de la fécondité en Thaïlande et ne s'attendaient à atteindre le niveau de remplacement que vers la fin des années 90.