



THE AUSTRALIAN NATIONAL UNIVERSITY

E P R E S S

# Out of the Ashes: Destruction and Reconstruction of East Timor

## Abstract for chapter 2

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In 'From province to nation: the demographic revolution of a people' aspects of demographic change are reviewed to identify how problems of definition arise and how they might be interpreted by those with responsibilities of caring for and responding to the citizens of the new nation of East Timor.

The approach to an estimate of the number of true ethnic Timorese living in the province is to divide census and survey populations according to whether the head of the household was born in East Timor or not. The difficulties of producing demographic rates to describe the situation of East Timor can be overcome to some extent by referring to three measures of family structure: average number of children ever born to women; the average number of these children surviving to the time of the enumeration, and the calculation of the proportion surviving.

While fertility and mortality are the most important determinants in the growth of most national populations, the greater factor setting population numbers in East Timor will be migration.

### *Keywords*

census, demographics, diaspora, fertility, health services, Indonesia, migration, mortality rates, Timor Timur

## From province to nation: the demographic revolution of a people

*Terence H. Hull*

### *Estimating populations of a changing polity*

When the history of East Timor comes to be written, the transition of the region from a colony to a province of Indonesia, and finally to an independent nation will stand out as a major political and social transformation in South-east Asia. However, historians will encounter serious difficulties as they attempt to describe the social and personal changes of the people of East Timor because the political manifestations of change carry with them important but confusing redefinition of who the Timorese are, where they live, and the size and structure of the population. In this chapter some aspects of demographic change are reviewed to identify how important problems of definition arise, and how they might be interpreted by those with responsibilities of caring for and responding to the citizens of the new nation of East Timor.

The story to be told here is one that poses many difficult conundrums. While we know something of the demographic changes that shaped the populations of East Timor between 1975 and 1999, we know too little to be definitive in the statement of numbers. In particular it is difficult to say with total precision how many Timorese were living in the former colony of *Timor Portugues* at the time of Indonesia's takeover in 1975 because the statistical collections were

often limited in their scope, and lacking in methodological rigour. Nor can we say definitively how many died from violence, hunger, or illness in the turmoil that followed. Such records as may have been kept are unreliable, often unpublished, and in any case are subject to controversy.

TABLE 1: *Population estimates and projections for the colony, province and nation of East Timor, 1920-2000*

<i>Year</i>	<i>Males</i>	<i>Females</i>	<i>Total</i>	<i>Implied intercensal growth rates</i>
Colonial estimates for Timor Portuguese				
1920	215 916	181 959	397 875	
1930	249 257	222 964	472 221	1.71
1946	217 354	185 878	403 232	-0.98
1950	232 018	210 360	442 378	2.31
1960	267 783	249 293	517 079	1.56
1970	316 446	293 031	609 477	1.64
1973	340 128	306 207	646 155	1.95
Province of Timor Timur estimates				
1980	283 280	272 070	555 350	-0.93
1990	386 761	360 796	747 557	2.97
Nation of Timor Loro Sa'e estimates and projections				
1995	426 879	412 840	839 719	2.33
1999	a	a	539 719	-
2000 Low			689 719	-3.94
2000 High			764 719	-1.87
2005 <sup>b</sup>	520 900	512 200	1 033 100	8.08

*Notes:* a It is not possible to estimate the sex ratios of the refugees and remaining population without more detailed data from the Indonesian government.

b Projection for 2005 from the BPS (1998) provincial projections for Indonesia.

*Sources:* Colonial figures: Ranck (1977:62), reprinted by Kevin Sherlock in a collection of population data in 1981. Provincial figures from Indonesian Central Bureau of Statistics. National estimates and projections based on the latest Indonesian figures, and speculation about likely population changes post-independence.

The top section of Table 1 shows the growth of the colonial population from 1920 through 1973 according to the most reliable official figures available. The population growth was not remarkably fast between 1930 and 1960, being under half a per cent per annum on average over the three decades. This was due in part to the large and lasting impact of depression and war on numbers during the period. However, by the 1970s the growth rate was picking up substantially, and in the years prior to the withdrawal of the Portuguese was reaching an annual average growth of two per cent per year. If sustained this would have led to demographic doubling in 35 years.

Such doubling did not come to pass because of the impact of the conflicts that began in 1974 and continued in waves thereafter. Many people were lost to the population. The validity of the numerical estimates of population loss became a major focus of debate in the 1980s (see Arndt 1979). Attempts were made to estimate deaths of Timorese from the demographic figures published before and after 1975. One calculation compared an unofficial count in 1974 of 688 769 with an Indonesian Army count in 1978 of 329 271 to raise the question 'where are the missing 359 498 people?' The difficulty in validating such calculations lies in the fact that neither the Portuguese nor the Indonesian enumerations were of sufficiently high quality to simply apply demographic calculations to estimate the number of people missing. The most detailed work on this issue was done by Patsy Thatcher at Monash University in the early 1980s. After tracking down as many of the diaspora as she could identify in various international records, and making adjustments for Timorese living in other provinces of Indonesia, and Indonesians moving into Timor, Thatcher projected the 'might-have-been population' for 1980 of 718 095. This is the population that might have been living in Timor had the 1960-70 growth rate continued uninterrupted by revolution and invasion. Such a calculation indicates as many as 162 745 missing Timorese in 1980. Subtracting the approximate number of 13 000 deaths attributed to the civil war of 1974-75 implies that as many as 150 000 Timorese had left the province, died, or had not been born as a result of the invasion.

Such exercises are of rapidly decreasing value as time passes, and the population responds to other changes in social and economic events. Over the years that *Timor Timur* was the 27th province of Indonesia, many Timorese left their land to live elsewhere, either as

part of the large but vaguely defined diaspora in Portugal, Australia, Macau or other nations, or as migrants within the Indonesian nation. Many were seeking education or employment in other provinces. The population of the province came to include a mixture of peoples. This was not new since during colonial times, Portuguese had lived in the colony filling posts in the administration, military, police, schools and the Catholic church, but the scale of non-Timorese mixture into the population changed radically. In 1970 only 1.6 per cent of the population was classified as being non-Timorese. Of these, there were just over 6000 Chinese, around 2000 'mestizos' and 1500 Portuguese. As a province, *Timor Timur* found people coming from Java, Sulawesi, and other islands of Eastern Indonesia to fill many of the posts in the bureaucracy and economy. The new migrants were particularly prominent in expanding the school and health systems and building and managing shops.

Under the Indonesian statistical system it is difficult to estimate the numbers of non-Timorese living in East Timor since the main variables used to identify ethnic background were citizenship, language, and place of birth. The migrants from other provinces of Indonesia were all Indonesian citizens, and many spoke Indonesian at home. Migrants from West Timor often spoke Tetun or other local languages common to East Timor. East Timorese shared such characteristics. Moreover, in the two decades following 1976 many newcomers settling into the province established their families in Timor, so the place of birth of their children was given as *Timor Timur*.

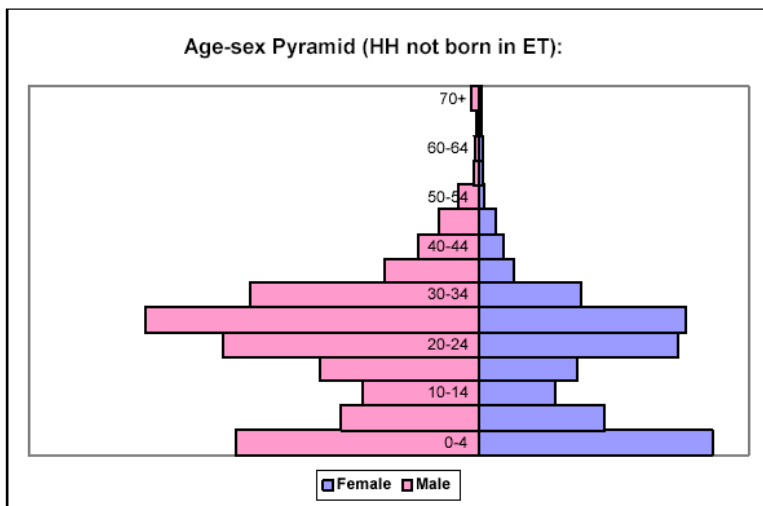
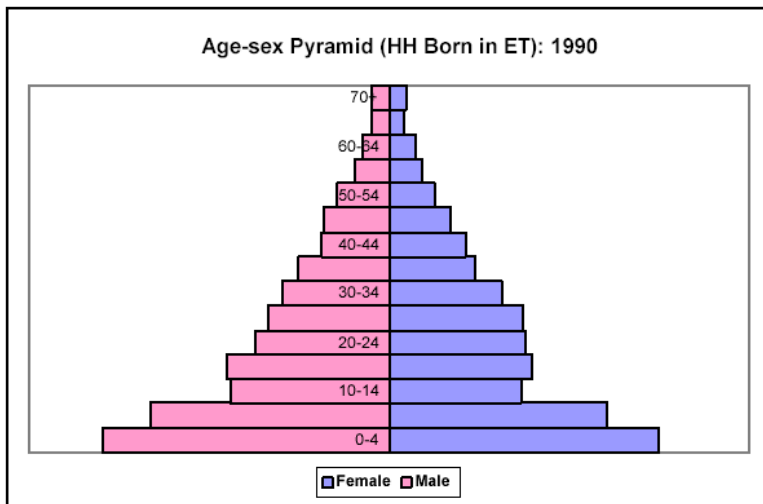
The best way to approach an estimate of the number of true ethnic Timorese living in the province is to divide census and survey populations according to whether the head of household was born in East Timor, or not. This is not a totally accurate way to identify indigenous East Timorese since there may be a number of ethnic Timorese, particularly in the western part of the territory, who were born in the province of East Nusa Tenggara, but have long lived in East Timor. However, for the purposes of rough calculations the method is very robust.

In 1990 there were 684 202 people living in households where the head of household was East Timor born. In contrast there were 63 355 people in households headed by somebody born elsewhere. If this breakdown can be regarded as a measure of non-Timorese presence, then 8.5 per cent of the 1990 population were non-

Timorese, a large change from the Portuguese period.

The populations of Timorese and non-Timorese were very

FIGURE 1: *Population pyramids for East Timor in 1990, according to where the head of household was born*



different in their structures, as indicated in the two pyramids in Figure 1. In the upper panel the pyramid of the Timorese shows the broad base of a rapidly growing population, but with a serious deficit of 10-30 year olds of both sexes. Such a deficit can be caused by birth deficits in the period between 1960 and 1980, selective out-migration of young people, or the failure to record the young people in the census. Each of these factors is likely to have operated, but it is not possible to say how much. In contrast, the people living in households headed by a non-Timor born person had a very unusual pyramid, indicative of highly selective migration (see lower panel of Figure 1). Males in particular were heavily over-represented in the 20-34 age range. This was the pattern to be expected from a practise of transferring young men to the province to take up military, bureaucratic or other short-term work. The young men were matched by a smaller but still significant number of young women of similar ages indicating a substantial number of young married couples, with the complementary finding of large numbers of very young children (aged from 0-4).

The contrast in the shapes of these two pyramids is moderated when we remember that the number of non-Timorese was small in relation to the total population. Thus when the two groups are combined to form a single pyramid for 1990 the demographic structure to emerge is still a pyramid with a broad base and a significant deficit in the 10-20 year olds.

One useful analysis that can be made is to match the numbers of people living in households headed by East Timor born Heads of Household in 1990 with the same cohorts registered as electors in 1999.

This is done in Table 2. The years of birth taken to define cohorts for comparison are copied from the announcements of the UNTAET Human Rights Unit responsible for compilation of the electoral rolls. The numbers show that people in the cohorts born before 1929 (i.e. age 70 and over in 1999) had a low ratio of voter registration. Some of them had undoubtedly died in the nine years between the census and the election, but others were probably too frail to undertake the difficult registration procedures. Overall, though, from three-quarters to four-fifths of the people aged 10 to 50 at the time of the census survived and registered to vote in 1999. Given the difficult conditions and social disruption in East Timor in 1999 this would seem to be a very creditable rate of registration.

TABLE 2: Comparison of cohort numbers from the 1999 Voter Registration with the 1990 Population Census

Year of birth recorded in voter registration	Male		Female		Total		Ratio
	1990	1999	1990	1999	1990	1999	1999/1990
>1909	504	43	444	41	948	84	.088
1910-1919	1 965	451	1 908	283	3 873	734	.190
1920-1929	7 735	3 386	7 269	2 865	15 004	6 251	.417
1930-1939	17 116	10 964	16 347	10 296	33 463	21 260	.635
1940-1949	28 314	21 133	27 938	20 489	56 252	41 622	.740
1950-1959	41 157	33 449	42 115	33 579	83 272	67 028	.805
1960-1969	56 164	48 651	60 867	49 287	117 031	97 938	.837
1970-1980	79 319	66 544	69 906	60 826	149 225	127 370	.854
1981-1982	19 273	6 235	17 096	6 365	36 369	12 600	.346
1983-1999	97 230	NA	91 535	NA	188 765	NA	NA
Total >1983	251 547	190 856	243 890	184 031	495 437	374 887	.757
Total >1999	348 777	NA	335 425	NA	684 202	NA	NA

*Sources:* The figures for the 1990 Census are based on special tabulations for people living in households headed by a Timor-born resident, according to age groups corresponding to the birth cohorts in column one. Figures for the Voter Registration were provided by the UNTAET Human Rights Unit.

In examining the numbers in Table 2 it is important to remember that the 1990 Census was a sample enumeration subject to potentially large errors in the estimation of numbers of very old people. The data are not robust enough to justify calculations of interenumeration mortality rates because migration and non-sampling errors would heavily affect the estimates, and hence such calculations are not undertaken here.

### *Fertility and mortality levels*

The province of *Timor Timur* was routinely included in the various data collections of the Indonesian Central Board of Statistics, so we have much better information on Timor now than was ever the case in the days of colonial rule. Nonetheless, as is the case of Indonesia as a whole, the vital statistics for East Timor were not based on registration of births and deaths, but rather a series of indirect



demographic estimation procedures subject to problems of sampling and reporting errors.

The first reasonably reliable estimate of fertility in *Timor Timur* came out after the 1990 Census, and gave a total fertility rate (TFR) of 5.73 (BPS 1994). This can be interpreted as the number of children women on average would bear if they continued reproducing at the same rate as the reference fertility rates throughout their reproductive lives. The reference fertility rates for this particular measure are based on the experience of women over the period from 1986 to 1989. The TFR was calculated using the 'own-child' method. Using a slightly different calculation method, the BKKBN was able to estimate the TFR for the year 1990, which they found to be 4.86 (BKKBN 1993). These calculations support the notion that fertility was very high in *Timor Timur*, but that it had begun to fall, perhaps due in part to the impact of the family planning program. Such a speculation was reinforced by the results of the 1994 Indonesian Demographic and Health Survey (DHS) that gave a TFR for *Timor Timur* of 4.69 while the 1997 DHS produced a TFR of 4.43. After examining this apparent trend the BPS projected a TFR for Timor in the year 2002 of 3.51, still higher than any other province in Indonesia, but substantially down from the estimates in the 1980s.

The apparently steady decline in fertility is slower than other provinces of Indonesia because the adoption of contraceptive methods has been more recent and slower as well. In 1997 the DHS found that only 27 per cent of women in Timor were using some method of birth control, compared to a nationwide average of 57 per cent and a level of nearly 40 per cent in neighbouring East Nusa Tenggara where the cultural and economic environment is most similar to East Timor. Almost all of the users were receiving the three-monthly contraceptive injection, and a few had the contraceptive implant. Methods such as the pill, IUD, sterilisation, and the various traditional methods all had less than two percentage of women as current users, while there were no recorded users of condoms or vasectomy or withdrawal. Such patterns indicate that when health services are reconstructed some thought will need to be given to the way contraceptive services are provided. There is obvious scope for efforts to broaden the range of options available to include methods such as the pill and IUD, and to deepen the efforts to promote responsible family planning, particularly among men.

TABLE 3: *Average number of children ever born (CEB) and children surviving (CS) by age of mother, 1995*

<i>Age group</i>	<i>Head of household born in East Timor</i>			<i>Head of household born outside East Timor</i>		
	<i>CEB</i>	<i>CS</i>	<i>Proportion surviving</i>	<i>CEB</i>	<i>CS</i>	<i>Proportion surviving</i>
15-19	0.1	0.1	.96	0.0	0.0	1.00
20-24	0.8	0.8	.93	0.4	0.4	1.00
25-29	2.1	1.9	.91	1.4	1.3	.96
30-34	3.6	3.1	.87	2.2	2.1	.98
35-39	4.1	3.5	.86	3.0	2.9	.98
40-44	4.3	3.5	.80	4.3	4.0	.94
45-49	4.3	3.3	.78	4.9	4.7	.96

Mortality estimates have shown similar trends. The 1990 Census produced an estimate of infant mortality for the year 1986 of 85 per 1000 live births. Using a different estimation method the figure for 1994 was 46 per 1000. Perhaps as a sign of concern over the possible errors of these estimates, the BPS projections assumed much higher levels of infant death, with figures of 90 per 1000 for 1997 and 73 per 1000 for 2002. It needs to be stressed that the variety of estimates in the BPS publications is not an indication of political manipulation of data, but rather the real difficulty of ascertaining mortality levels for small populations when using indirect demographic methods of estimation.

The difficulties of producing demographic rates to describe the situation of East Timor can be overcome to some extent by referring instead to three measures of family structure that can easily be tabulated from censuses and surveys. These are the average number of children ever born to women (tabulated in five-year age groups), the average number of these children surviving to the time of the enumeration, and the calculation of the proportion surviving. Table 3 sets out these measures for women in households headed by Timor born and non-Timor born people in 1995. What is clear from the figures is that the Timorese have only slightly larger families, both ever-born and surviving, than the non-Timorese in the age groups under 40, but this is in a situation where the proportion of children surviving is consistently lower.

If these figures were converted into infant mortality rates (IMR) they would indicate that the Timorese had an IMR of 78, while the non-Timorese had a rate of 29 per 1000 live births on average over the decade preceding the 1995 survey.

### *Restoring and projecting the population of Timor Loro Sa'e*

While fertility and mortality are the most important determinants in the growth of most national populations, over the foreseeable future the greatest factor setting population numbers in East Timor will be migration. The events of 1999 have already shown the power of migration in changing the demographic landscape. From as early as January 1999 when President Habibie announced that Indonesia would co-operate with a referendum on the future of East Timor, there were reports of departures by teachers, traders and government functionaries returning to other provinces of Indonesia. Concern about the escalating violence and the outcome of the referendum encouraged them to pack up their belongings, and prepare to evacuate. A trickle, then a flow, culminated in a flood of people moving out as the aftermath of the referendum unleashed forces of violence, anxiety and anger. Movements of this type are virtually impossible to monitor, with the result that it is difficult to estimate the numbers of people who remained in East Timor. However, by October various Indonesian and United Nations officials were estimating the number of Timorese refugees in West Timor to be in the order of 250 000 people, or 30 per cent of the 1995 population. Assuming that virtually all the members of households headed by non-Timor born people (something over 50 000) also left, gives the rough estimate of the population of Timor Loro Sa'e of 539 719 in late 1999 (see Table 1). This is a population approximately equal to the level of the late 1970s.

However this low population number changed rapidly as people who moved out of East Timor in September 1999 began to make decisions about their futures. According to UNHCR (in *Jakarta Post*, 5 October 1999) 60 per cent of the 250 000 East Timor refugees in Nusa Tenggara Timor wanted to return to their homeland. If this had been effected immediately then by 1 January 2000, the young nation would have had a population of 689 719. At the same time some Indonesian leaders estimated that the number wishing to return was more like 10 per cent, implying a potential restoration of only

25 000 people. This assumption has been invalidated by the fact that 150 000 people had returned home by the middle of January 2000, leaving 100 000 refugees in West Timor, some of whom were still intending to return if peace and security could be assured. The assumption of some independence leaders was that the number of people who wanted to return was more realistically given as 90 per cent of all those who had fled or been transported out in September. Depending on the desires of refugees and the options available to them, the population in 2000 could reach as much as 764 719 Timorese, plus the number of foreigners recruited to work with peace-keeping and development assistance activities. The best guess for 2000 lies between the conservative assumption of a 60 per cent rate of immediate return of refugees, and a somewhat larger return that is still in process. The former still implies an annual -3.9 per cent per annum decline of population compared to the 1995 estimates while the decline for the latter is just -1.87 per cent.

The actual population will depend on many factors, including the co-operation of the Indonesian government in allowing easy access of cross-border traffic, the scale of humanitarian relief efforts, and the numbers of peace-keeping and aid personnel recruited to the task. Obviously any attempt to deal with the highest priorities of development – that is the education of children and the provision of health services for all – will require the recruitment of large numbers of teachers and health workers to fill the gaps left by departing Indonesian professionals. It was estimated that 11 000 teachers, including 7500 primary teachers, left the province before the referendum. Some of these were ethnic Timorese and they may intend to return once the situation stabilises. However, most teachers and university lecturers were from other provinces of Indonesia, and it is hard to imagine them returning to East Timor in the near future, if ever. Estimates of the number of personnel to be recruited are only possible once the basic structures are decided upon. But before the teachers must come the curriculum, and before that must come the issue of a national language. When the schools and universities open, though, there will be a need for between 10 000 and 15 000 teachers and lecturers.

While it is tempting to suggest that doctors and nurses can be recruited in advance of the establishment of a health service, it would soon become clear that delivery of health implies a reliance on systems

of logistics, structures of referral, and systems of priority that do not come easily. If East Timor is not to be totally dependent on the random benefits of ongoing charities, government will need to create a health service that balances the needs of primary, domiciliary, and specialist care in a sustainable fashion. Throughout the time of Indonesian rule there were difficulties recruiting skilled people to fill these roles. In 1992 there were just on 190 doctors and dentists in the province including seven specialists. Most direct services to patients were provided by 660 nurses and 200 midwives. Many of the latter groups are probably still in East Timor, but few of the doctors remain or are likely to return. With 10 hospitals, 70 clinics and 250 sub-clinics running before 1999, the need for medical personnel is clear, but equally there is a need to recruit staff who have both the skills (including linguistic skills) and the dedication to serve the people.

If skilled professionals can be recruited to serve the new nation, and if an open and stable relationship can be formed with a democratised Indonesia, the potential for rapid population growth is certainly embedded in the current demographic structure. In Table 1 the projection for the year 2005 is based on the most simple assumption of 'no population loss' in comparison with what trends were showing at the end of the 1990s (BPS 1998:117-120). Had fertility and mortality continued to fall in the 1990s, and had net migration intake of two per 1000 people per year (the experience of the five years from 1990-95) been maintained, then the population could be expected to pass the 1 million mark in the year 2004. The disruptions of 1999 will probably push that landmark off a few more years, but the young age structure of Timorese means that rapid population growth will be the immediate result of any return to stable political conditions. The 'baby boom' embedded in the age structure will be a major challenge to the planners of health and educational services, and a substantial encumbrance to young women who want to participate fully in the task of rebuilding their nation.

Timor Loro Sa'e could recover many of the Timorese who moved out of the province in 1999. An independent nation could draw home some of the diaspora and attract people from the region (including West Timor) who want to participate in the development of a new country. If so, the projection for 2005 in Table 1 could be the edge of a blueprint to the future population. But if less enticing scenarios unfold, the population of Timorese in 2005 could, like the

population today, be the story of demographic divisions with a scattered and growing diaspora. It is against the stark contrast of such futures that the project of building Timor Loro Sa'e is set.

### *Acknowledgments*

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