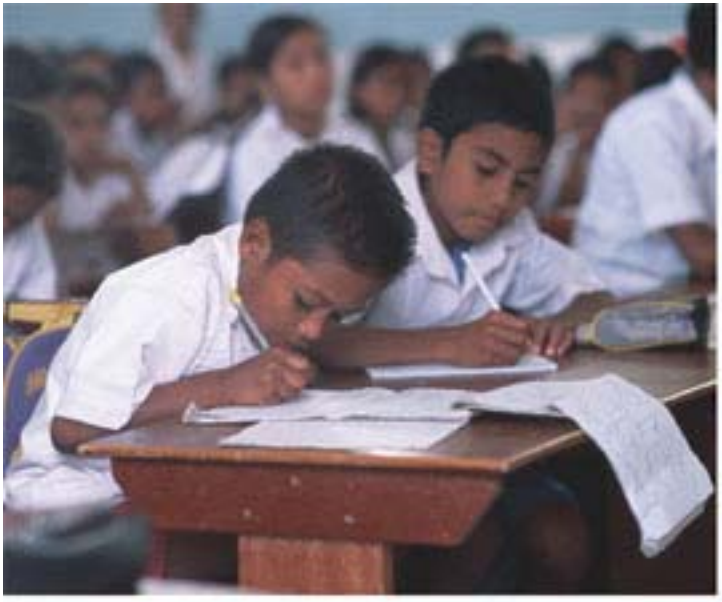

TIMOR LESTE

Poverty in a New Nation: Analysis for Action

Timor-Leste

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May 2003







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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
CFET	Consolidated Fund for East Timor
DPT	Diphtheria, Pertussis, Tetanus
ETTA	East Timor Transitional Authority
GDP	Gross Domestic Product
JICA	Japan International Cooperation Agency
MDG	Millennium Development Goal
MICS	Multiple Indicators Cluster Survey
MoPF	Ministry of Planning and Finance
NDP	National Development Plan
NGO	Non-Government Organization
PNG	Papua New Guinea
PPA	Participatory Potential Assessment
PPP	Purchasing Power Parity
PTA	Parent Teacher Association
SUSENAS	Indonesian Socio-economic Household Survey
TLSS	Timor-Leste Living Standard Measurement Survey
UN	United Nations
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
UNMISET	United Nations Mission of Support in East Timor
UNTAET	United Nations Transitional Administration in East Timor

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PREFACE

This report lays out the challenge of poverty reduction in Timor-Leste. It is based on the first nationally-representative household survey collected during August to December 2001. This work was conducted by the Poverty Assessment Project, a partnership between the Government of Timor-Leste (with the Ministry of Planning and Finance providing overall guidance), the World Bank, the Asian Development Bank (ADB), the Japanese International Cooperation Agency (JICA), the United Nations Development Program (UNDP), United Nations Children's Fund (UNICEF) and United Nations Mission of Support in East Timor (UNMISET). The Poverty Assessment Project was launched to provide up-to-date information on living conditions after the violence in 1999 as input into the National Development Plan. The Poverty Assessment Project comprised three data collection activities on different aspects of living standards, which taken together, provide a comprehensive picture of well-being in Timor-Leste on the eve of independence:

- *Suco Survey* – This is a census of all the 498 sucos in the country and provides an inventory of existing social and physical infrastructure, and of economic characteristics of each suco, in addition to aldeia level population figures. It was completed between February and April 2001, and the report, written by the ADB, was published in October 2001.
- *Participatory Potential Assessment*: This qualitative community survey assisted 48 aldeias to take stock of their assets, skills and strengths, identify the main challenges and priorities and formulate strategies for tackling these within their communities. The field work took place between November 2001 and January 2002. This activity was managed by UNDP and the report was finalized in May 2002.
- *Household Survey*: The Timor-Leste Living Standards Measurement Survey is a nationally representative survey of 1800 households from 100 sucos covering one percent of the population. This comprehensive survey was designed to diagnose the extent, nature and causes of poverty and analyze policy options for the country. Data collection was undertaken between end-August and November 2001.

This report, written in two volumes, was a collaborative effort of the members of the Poverty Assessment Project, with the World Bank taking the lead in the analysis. The objectives of this report are modest – to set a baseline for the new country on the extent, nature and dimensions of poverty; to assist the decision making of the newly elected government and its efforts in formulating, implementing and monitoring its Poverty Reduction Strategy. The objective was not to lay out the elements of the poverty strategy but rather to present evidence on the basis of which the Timorese can define and refine their own poverty reduction strategy. We hope this is just the start of a series of analysis to consider the effects of government policies on different groups of people, especially the poor.

The preliminary analysis from the household survey was presented at a workshop in Dili in February 2002. The early results fed into the National Development Plan presented by the Government at independence. Sector analysis for health, education and agriculture were also presented at the workshop and in more detailed discussions with the relevant

Ministries. The full report was discussed with the Government in January 2003. A series of seminars was organized by the Ministry of Planning and Finance during January 13-24, 2003. The dissemination took place before the Ministries embarked on the prioritizing and sequencing of the National Development Plan for the FY2004 budget. Seminars were held at the Council of Ministers and several Ministries (Education, Health, Agriculture, Labor and Solidarity and Finance and Planning). A large workshop in Dili and three regional workshops in Baucau, Ainaro and Maliana were organized for Government officials from the center and districts, civil society representatives, including the Church, women's, students and youth groups, NGOs, Chefe de Sucos, and development partners. The results from the UNICEF sponsored Multiple Indicators Survey (MICS) were also presented by their staff and consultants at these workshops, and at the Council of Ministers and the Ministry of Health seminars. The report was revised in light of the comments received and the health section was updated using the MICS results.

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This report is a result of a highly collaborative process between the Government and our donor partners, ADB, JICA, UNDP, UNICEF and UNMISET. The Poverty Assessment Steering Committee chaired by Ms. Emilia Pires, Advisor, Ministry of Planning and Finance (MoPF), provided overall guidance. We are very grateful to the Steering Committee members for their strategic guidance. The Steering Committee members included Emilia Pires, Robin Boumphrey (ADB Resident Representative), Gwi Yeop Son (Deputy Resident Representative, UNDP), Sarah F. Cliffe (Chief of Mission, World Bank) and Mr. Takehara Masayoshi (JICA). Following the change of donor representatives in Dili after Independence, the Steering Committee members were Meeja Hamm (ADB Resident Representative), Shoji Katsuo, (Resident Representative, JICA), Haoliang Xu (Deputy Resident Representative, UNDP), Mr. Yoshi Uramoto (Special Representative, UNICEF) and Elisabeth Huybens (Country Manager, World Bank). We are very grateful to Emilia Pires for her leadership, constant support, and enthusiasm throughout this project. We would also like to express our thanks to Ms. Aicha Bassarewan, Vice Minister, MoPF, for her leadership during the dissemination of the Poverty Report.

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This report was written by Benu Bidani and Kaspar Richter with superb overall assistance from Martín Cumpa. Background papers were written by Kin Bing Wu with inputs from Deon Filmer, Kathleen Beegle and Martín Cumpa on Education, Jean Foerster with analysis by Martín Cumpa on Agriculture, Janet Nassim with analysis by Martín Cumpa on Health, Kathleen Beegle and Martín Cumpa on Labor Markets, and by Kaspar Richter on the Welfare Profile, Disadvantaged Groups, and Food Security. Taranaki Mailei provided assistance with the task and the production of the report. Walter Meza-Cuadra also helped in formatting the report. Santi Sugiarti Santobri handled the logistics for printing the document. The peer reviewers were Pierella Paci and Lant Pritchett.

This Report was prepared under the overall guidance of Homi Kharas (Chief Economist and Sector Director, EASPR), Klaus Rohland (Former Country Director), Xian Zhu (Country Director) and Tamar Manuelyan Atinc (Sector Manager, Poverty). The team greatly benefited from advice and guidance from Tamar Manuelyan Atinc. We are also very grateful to Sarah Cliffe (Chief of Mission) and Elisabeth Huybens (Country Manager) for their consistent guidance and great support in the field and to Sanjay Dhar (Lead Economist) for his advice in headquarters. We benefited greatly from the extensive comments received from the participants at the dissemination seminars, and the detailed written comments from the Ministry of Health, Pierella Paci and Lant Pritchett (peer reviewers), Sofia Bettencourt, Elisabeth Huybens, ADB (Meeja Hamm and Craig Sugden), UNDP reviewers, Sam Rao, Caritas and Oxfam.

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EXECUTIVE SUMMARY

Timor-Leste emerges from a legacy of violence as the first new nation of this millennium.

1. Timor-Leste became the first new nation of this millennium on May 20, 2002 following a quarter century of occupation and conflict. The country experienced a fundamental social and economic upheaval after its people voted for independence from Indonesia in a referendum in August 1999. The bulk of the population was displaced in the weeks following the ballot results and most of the physical infrastructure was destroyed or rendered inoperable. Soon after the violence ceased, it began rebuilding itself with the support from UN agencies, the international donor community and NGOs.

It faces the challenges of nation-building and poverty reduction.

2. Timor-Leste has achieved enormous progress in rehabilitating its economy, reconstructing its infrastructure, reintegrating its refugees and building the key elements of a sustainable political process in an environment of internal peace. It now faces many challenges of nation-building and of overcoming the deprivations affecting the lives of the poor. On the eve of independence, the government presented its vision for the year 2020 and its strategy for achieving this vision in its National Development Plan. The National Development Plan lays out a strategy for the next five years (2002-2007) with two overriding objectives:

- To reduce poverty in all sectors and regions of the nation; and
- To promote economic growth that is equitable and sustainable, improving the health, education and well-being of everyone.

Report sets a baseline for the implementation and monitoring of the Government's Poverty Reduction Strategy.

3. The Government's Poverty Reduction Strategy has four main elements: (i) promoting opportunities for the poor; (ii) improving their access to basic social services; (iii) enhancing security, including reducing vulnerability to shocks, and improving food security (iv) and empowering the poor. The main objective of this report is to support the Government's efforts in implementing and monitoring its NDP. It sets a baseline of the pattern, extent, and nature of poverty, which can be used to translate the broad elements of the poverty reduction strategy into prioritized action plans consistent with the medium term expenditure framework.

Welfare Profile

Poverty, affecting two in five persons, is predominantly rural, and higher in the West than the East.

4. Poverty is a complex phenomenon involving multiple deprivations. We use an economic definition of poverty, in which an individual is deemed poor if she is unable to attain a minimal standard of living. Based on this definition, two in five people in Timor-Leste are poor. Economic well-being varies across the country. Urban areas, especially Dili / Baucau, are better off than rural areas. While one in seven are poor in Dili / Baucau, over four in ten are in rural areas. And, poverty is concentrated in rural areas. Three quarters of the population lives in villages but six in seven

of the poor, or 280,000 people, reside there. Poverty also increases from East to West. The three western districts (Oecussi, Bobonaro and Covalima) are home to one fifth of the population but account for a quarter of the poor. In contrast, the three eastern districts (Baucau, Lautem and Viqueque) account for a quarter of the population but less than a fifth of the poor.

Education lowers poverty.

5. More human capital through better education leads to lower poverty. For example, close to one in two persons are poor in households where the household head has not completed primary education. This compares to less than one in seven where the head has at least senior secondary education. Demographics matters too – larger households and families with a higher share of children and elderly are poorer.

Poverty decreases with larger land size and larger livestock holdings.

6. Assets are an insurance against economic uncertainty and a way for preparing for future expenses. They are held primarily in the form of housing, land and livestock. The incidence of poverty decreases with larger land size, both in urban and rural areas. For families in villages and cities more livestock is associated with less poverty.

Urban-rural divide exists in access to infrastructure.

7. Secure access to infrastructure services, ranging from safe water, sanitation and electricity, is essential for escaping poverty. Nationwide three in four persons live without electricity, three in five persons without safe sanitation and every other person without safe drinking water. There is a vast urban-rural divide. In urban areas, 70 percent have access to each of these services. In rural areas, the shortfall is 25 percentage points for drinking water, 37 percent for sanitation and 61 percent for electrification. Persons without infrastructure are in general poorer than those with access to infrastructure. For example, while only one in seven urban dwellers with electricity are poor, almost one in two without electricity live below the poverty line.

8. Inequality as measured by the Gini coefficient is 37 and it is higher in cities than in villages. Accounting for geography, gender, age and education of the household head explains at most one-third of overall inequality. There is a need to better understand the determinants of inequality.

In 2001, the population felt vastly more empowered compared to Indonesian times, and the majority of the least well-off had higher economic status.

9. It is also remarkable that despite the tragic events of 1999, people's overall subjective assessment of how their lives had changed in late 2001 was positive. In 2001, the population felt substantially more empowered compared to Indonesian times and economic well-being had improved primarily for the bottom-third of the population. People believed themselves to be powerless in 1999, with six in ten placing themselves on the lowest category of a nine-step ladder, and almost no one ranking themselves on the top four steps. In 2001, the situation was substantially different. Only one in twenty people believe they are on the lowest step, and close to three in ten ranked themselves on the top five steps. In terms of economic status the vast majority considered themselves as

disadvantaged in 1999, with two thirds locating themselves on the two lowest steps. In 2001, more than half of the least well-off improved by one or two categories, boosting the shares at the second and third lowest steps.

Opportunities

Enabling environment for the economic participation of the poor is essential.

10. The National Development Plan focuses on creating an enabling environment to generate opportunities for the economic participation of the poor. The main elements are improving productivity in agriculture and the informal sector; providing an enabling environment for private sector development; provision of infrastructure and pro-poor public expenditure policies. Ensuring a conducive environment for private enterprises, which includes business regulations, land and property legislation, trade policy, labor legislation, and infrastructure issues, especially related to power and transport, is essential for employment generation. Improved security and job creation are urgent priorities on the Government's agenda.

Diversification out of agriculture into non-farm activities, and improved crop mix, are key drivers for higher rural living standards.

11. In *rural* areas, agriculture is the dominant employer, accounting for four-fifths of all employment. But it only contributes one quarter of non-oil GDP due to low output per worker. A key driver for higher rural living standards is diversification out of agriculture into non-farm activities. Among agricultural households, incomes are linked to the level of assets. Poor rural households have half the land per capita, half the value of livestock assets, and less education than the non-poor. Higher land per capita translates into greater production of crops per capita for the non-poor than the poor. The non-poor are more likely to produce higher paying crops (such as coffee, fruits and vegetables) and produce significantly higher amounts of these crops and of the main staples (rice, maize and cassava).

Low productivity in agriculture is linked to low use of inputs, quality of land, and access to markets.

12. Low productivity, overall, and especially among the poor, is linked to the limited use of key complementary inputs, the quality of land, and access to markets and other infrastructure. For example, while irrigation is limited overall, the non-poor have larger irrigated land holdings per capita (0.13 ha) than the poor (0.04 ha). Among agricultural households, only 3 percent use fertilizers, manure or pesticides, and almost all of the usage is among the non-poor. The lack of availability is reported as the primary reason in late 2001.

Major urban areas are marked by coexistence of high unemployment and high wages.

13. *Urban* labor markets are characterized by both high wages and high unemployment. A fifth of the working age population in Dili / Baucau is unemployed. Females have higher unemployment rates than males. Unemployment declines sharply with age: the unemployment rate among the youth (15-24) is 43 percent, and it drops to 17 percent for the 25-34 year olds and nine percent for the over 35 year olds. The jobless are poorer than those in employment. The bulk of the unemployed in Dili and

Baucau are young educated males. In spite of high unemployment, wages are high. The wages for workers in Timor-Leste are two to three times higher than wages in Indonesia. The influx of expatriates during the transition to independence fuelled a service sector boom in the major urban centers, with attendant high real wage levels, urban concentration, and misallocated investment in the service industry. There is a difficult adjustment ahead as declining demand and high unemployment rates are expected to put downward pressure on urban wages. As painful as this transition may be, this correction needs to take place for the benefit of long term growth prospects of the economy. Evidence from 2003 shows that private sector wages are falling. As the service sector starts downsizing, it will be crucial to provide a conducive private sector environment for sustainable job creation.

Improved Basic Services

Government budget reflects emphasis on social sectors.

14. The National Development Plan gives priority to the delivery of basic social services, especially primary and secondary education and primary health care, including preventive programs such as immunization and public health. An important vehicle for achieving national development goals is government spending. Public spending in the post-independence period broadly supports service delivery functions, with education accounting for one quarter of government spending, and health for another 10 percent in 2002. Government spending (CFET) in 2002 reached US$19 per capita in education, and US$7 per capita in health. These levels are substantially higher than most low income countries, but lower than middle income countries. Total spending, which includes donor and bilateral support, was US$58 per capita in education and US$32 per capita in health. These high overall costs reflect capital expenditures to set up education and health systems. These levels are higher than middle income countries but are closer to the levels of spending in some post-conflict countries immediately following the conflict.

Intra-sectoral resource allocation and sustainability are main concerns.

15. The main issues lie in the allocation of these funds for priority services that reach the poor and in ensuring sustainability in the future. Both health and education allocate a large share to tertiary services. In health, half of CFET spending in FY2002 goes towards tertiary care. This has declined to 41 percent, more in line with the health policy objective of 35-40 percent. Since poor households are more likely to visit primary health facilities than public hospitals, public hospital spending is regressive, benefiting the richer households. In education, only primary education is progressive and receives about half of the CFET education spending, whereas overall education spending is regressive. As donor support phases out and operating costs shift towards the budget, ensuring the sustainability of social expenditures will be important. This will likely involve cost recovery for tertiary education and health services for the non-poor.

16. In education, impressive accomplishments to date are the rebuilding of the school system and the sharp increase in enrollment rates, especially for the poor, girls and rural children, partly due to the reduction in the cost of schooling. Net enrollment rates increased from 65 percent in 1998 / 99 to 75 percent in 2000 / 2001. The increase for girls was larger than for boys.

School reconstruction and increased enrollments are main achievements.

17. Nevertheless, education still faces several challenges. The education sector is only now developing a policy framework for the sector to guide its decisions in the implementation of the NDP. This policy needs to deal with three issues. First, the school-age population is large and growing, and illiteracy high, with over seven in ten persons over the age of 30 never having attended school. Second, the internal efficiency of the education system is low, with a vast number of overage children in the school system, which is manifested in the large divergence of the net (75 percent) and gross (113 percent) primary enrollment ratios. The repetition (20 to 30 percent) and drop out rates (10 percent) in primary school are high. At the current level of internal efficiency, only two thirds of those enrolled into first grade would reach Grade 4, and only one half would complete grade six. The cost per student for six years of primary schooling is about US$300, but the cost per graduate is about twice as high because of the high repetition and drop out rates. Finally, despite the increase, school enrollment remains low, with a quarter of 6-18 year olds having never attended school. Improving education outcomes is linked to both demand and supply side factors (availability of qualified teachers and other inputs, language of instruction). The education sector faces a challenge in formulating and implementing its strategy, in prioritizing actions and costing them to achieve objectives in education within the medium term expenditure framework. In preparing education action plans, tradeoffs between expanding access, increasing quality and providing free schooling will need to be taken into account.

Developing a policy framework, large school age population, high adult illiteracy, low internal efficiency and low primary school enrollment are main challenges.

18. Health outcomes in Timor-Leste are among the lowest in East Asia. Immunization is one of the most cost-effective, equitable health interventions available. Once immunized, every child, rich or poor, is equally protected for life. Yet, only one in ten children under the age of 12 months received full DPT vaccination in 2001, and a year later this share was still no more than one in five. Health utilization rates are also low, but not because of lack of need. Fewer than one in ten people seek health care when sick. Many stay away from health facilities because they are located only at far distances, especially in rural areas. There is a large urban-rural divide in the choice of health facility. Community health centers are the main provider of health services in rural areas, reaching half of the population. Public hospitals and private facilities play an important role in cities, with over two-fifths using private or church facilities for outpatient care. Outpatient care does not come for free. A third of the population pays for transportation and medical services. On

Low health service utilization prevails with large rural-urban gaps in access and choice of provider.

average an individual visiting a health facility spends just under US$2 per month for outpatient services and medications. The poor pay half the amount paid by the non-poor, but this represents a higher share of expenditures for them.

Equitable provision of basic health services is main priority.

19. Providing affordable, accessible health services especially for the rural poor will be important. Another challenge is to constrain the use of hospitals for services more appropriately offered in health centers, and to resist the demands of urban populations for more hospital resources at the expense of primary health care in rural areas. The Ministry of Health developed a sector-wide policy framework from the outset and embedded the reconstruction effort within it. As a result, despite a slow start, it is well placed to achieve improved service delivery.

Household Security

Vulnerability is an important dimension of poverty.

20. The National Development Plan outlines the main elements of a social safety net for the vulnerable. Key areas of concern include: disadvantaged groups, such as widows and orphans of the resistance; improving food security for households; and improving security of livelihood caused by the lack of recognition of ownership and tenancy of agricultural land, or lack of access to forests or other community lands. This part focuses on two of these issues: disadvantaged groups and food insecurity.

Female-headed households and children without a father or mother are more deprived.

21. The analysis on disadvantaged groups focuses on gender and parentless children. Male-headed households are consistently better off than female-headed households in terms of education, health and subjective well-being, but not so based on consumption poverty – but we lack information on intra-household distribution. For example, while one in two children under 6 are immunized against measles in male-headed households, less than two in five are in female-headed households. Fatherless children experience higher poverty, with poverty being 6 percent higher than for children with living fathers. And parentless children (without a father or mother) have worse education and health indicators than those living with both parents.

Widespread food shortages during November to February, between rice and maize harvests, are linked to higher poverty.

22. Subjective assessments of food adequacy suggest that food insecurity is widespread. Close to nine in ten persons experience inadequate food provision at some point during the year. Food security is closely tied to not having enough rice and maize. Food availability is aligned with the harvest cycle at the national and regional level. Food shortages are highest during November to February, at the end of the rice harvest and before the maize harvest. Food insecurity during lean seasons is also associated with higher poverty. The major urban centers typically have access to enough food all throughout the year, while other parts of the country face greater fluctuation in food availability. Households have multiple ways of dealing with food insecurity, which may lower vulnerability in

the short term at the expense of higher vulnerability over the longer term. Almost all households either change their diet or skip meals when faced with insufficient food. The striking result is that children appear to take the brunt of this adjustment. If the situation required further adjustment, then households would undertake distress sales of livestock and other farm assets.

23. These results point to the need to develop a policy response to deal with group-specific and seasonal vulnerability. It should be aimed at helping poor people manage risk better by reducing and mitigating risk and lessening the impact of shocks. Possible interventions range from support to traditional community structures, to targeted support for schooling and health care, and to improving access to productive resources and remunerative employment.

The Development Challenge

Timor-Leste is among the poorest countries in East Asia.

24. Despite the progress since 1999, Timor-Leste faces daunting social challenges and remains one of the least developed countries in East Asia. Poverty is high and human and physical capital are depleted. One in five persons live on less than the international poverty line of US$1-a-day. At US$1-a-day, Timor-Leste is the fourth poorest in East Asia with only Lao PDR, Cambodia and PNG showing greater deprivation. Life expectancy is only 57 years. Timor-Leste is not just a new nation but one of young people, with one in two Timorese below the age of 15. This nation of over 800,000 people will grow rapidly as large young cohorts move through the reproductive ages, creating pressures on basic social services to ensure a healthy and productive life of an expanding population and to generate jobs for the economically active.

Despite a lack of overall growth poverty is projected to decline modestly by 2007 due to expansion in agriculture.

25. While the social agenda is challenging, Timor-Leste has the solid prospects of future flows from the country's natural resource wealth and can benefit from the support of the international donor community. Economic growth is a necessary condition for poverty reduction. In Timor-Leste, about one seventh of the population lives within 10 percent of the poverty line, suggesting that poverty is responsive to growth. Illustrative projections show that the impact of economic growth on poverty depends crucially on agriculture, broad-based participation of the population in the opportunities of an expanding economy, and modest population growth. The first scenario is based on the growth rates of the NDP with 2 percent average annual GDP growth over the plan period (2002-2007) and agriculture growing at close to 6 percent. Given current population growth rates, this translates into an average per capita growth rate just below zero over the plan period. In spite of this contraction in per capita GDP, due to strong agricultural growth, the poverty rate at the national poverty line drops from 39.7 percent in 2001 to 29.5 percent in 2007, about five percent below the Millennium Development Goal (MDG) target of

halving poverty within 25 years. Given past agricultural growth rates, and cross-country experience, it may be unlikely for agriculture to grow so strongly over the five year period. Simulating slower economic growth, through lower agricultural growth of 3 percent over the plan period, would endanger progress towards achieving this goal, as would a widening in income inequality in agriculture. In these scenarios, poverty would stay above or just reach the MDG target. Finally, strong population growth can hamper progress in the reduction of the absolute number of poor. Assuming the population expands by 3.2 percent annually rather than 2.4 percent as in the baseline scenario, an additional 46,000 persons will live below the poverty line by 2007.

Enhancing human capital, promoting non-farm activities, encouraging production of high value crops and expanding basic infrastructure lower poverty.

26. Using a statistical model we highlight some of the key determinants of pro-poor growth. These results are merely illustrative and should be interpreted with caution as this approach suffers from many limitations. Notwithstanding the caveats, the results confirm some important messages of the report. Boosting male and female human capital, promoting non-farm activities, encouraging the production of high-value crops, developing services like irrigation, expanding sanitation and electricity infrastructure, creating a favorable business environment for private employers and improving market networks raise per capita incomes and lower poverty.

Allocating aid and off-shore wealth towards high priority development objectives is critical.

27. The National Development Plan emphasizes that allocating aid and off-shore wealth towards high priority development objectives will be critical. Public expenditure decisions should be driven by policy priorities on poverty, and policy choices in turn have to be disciplined by resource and implementation realities over the medium term. A medium term expenditure framework can help link policy priorities with the resource envelope.

Poverty Monitoring

A poverty monitoring plan is critical to assess progress on implementing the NDP.

28. Timor-Leste has many varied data sources that present a coherent picture of poverty and provide a baseline for monitoring progress in poverty reduction according to the objectives of the National Development Plan. The key challenge lies now in formulating a poverty monitoring plan that includes both quantitative and participatory elements, and lays out the institutional arrangements for data analysis and reporting to ensure that the collected data inform policy making and program design.

Timor-Leste at a Glance: Social Statistics 1999 and 2001

	Timor Leste 2001		Timor Leste 1999	Indonesia		East Asia & Pacific		Low Income Countries
Population								
Population *(millions)*	0.83		0.91	210		1,855		2,460
Population density *(people per square km)*	55		60	116		116		76
Urban population *(% of total population)*	24		11	41		35		32
Population ages 0 - 14 *(% of total population)*	49		41	31		27		37
Population ages 15 - 64 *(% of total population)*	49		57	64		67		59
Population ages 65 and older *(% of total population)*	2		2	5		6		4
Dependency ratio *(% of dependents to working-age)* *	93		77	54		50		70
Life expectancy at birth *(years)*	57	a /	56	66		69		59
Female	59	a /	58	68		71		60
Male	56	a /	54	64		67		58
Poverty								
(%)								
Population below $1-a-day	20		..	8	b /	12	b /	..
Population below $2-a-day	63		..	58	b /	44	b /	..
Population below national poverty line	40		..	20		..		..
Rural	44		..	22		..		..
Urban	25		..	18		..		..
Inequality								
(%)								
Gini index **	37		..	31	b /	..		..
Inequality ratio *(ratio top to bottom quintile)*	658		..	..		..		..
Bottom quintile	7		..	..		..		..
2nd quintile	11		..	..		..		..
3rd quintile	15		..	..		..		..
4st quintile	22		..	..		..		..
Top quintile	45		..	..		..		..
Child Health								
Infant mortality rate *(% per 1,000 live births)*	88	c /	86	46	d /	35		77
Under 5 mortality rate *(% per 1,000 live births)*	125	c /	159	58	d /	43		107
Immunization, DPT *(% of children under 12 months)*	9		13	64		70		82
Immunization, measles *(% of children under 12 months)*	6		24	71		83		64
Use of bednets last night *(% of children under 5 years old)*	48	c /	..	..		..		..
Education								
(% of official school-age population)								
Net primary enrollment *(children of official primary school age)*	75		65	99		99		76
Net secondary enrollment *(children of official secondary school age)*	30		27	43		67		51
Gross primary enrollment *(population regardless of age)*	113		90	113		107		91
Gross secondary enrollment *(population regardless of age)*	38		34	48		69		..
Literacy								
Youth literacy rate *(% of population ages 15 - 24)*	77		79	98		97		76
Adult literacy rate *(% of population ages 15 and older)*	48		48	87		86		62
Gender								
Ratio of girls to boys in primary and secondary school *(%)*	97		83	91		93		..
Ratio of young literate females to males *(% of population ages 15 - 24)*	96		97	98		97		..
Reproductive Health								
Births attended by skilled health staff *(%)*	24	c /	27	57	d /	..		..
Contraceptive prevalence *(% of women ages 15 - 49)*	7	c /	21	57		52		24

	Timor Leste 2001	Timor Leste 1999	Indonesia	East Asia & Pacific	Low Income Countries
Labor Force					
Labor force activity rate *(% of population ages 15 - 64)*	60	61	75	85	77
Unemployment rate *(% of total labor force)*	6	..	6	..	..
Infrastructure					
Access to an improved water source ***	50	66	76	75	76
Rural *(% of rural population)*	44	62	65	66	70
Urban *(% of urban population)*	69	93	91	93	88
Access to piped water or pumps	42	30	..	..	..
Rural *(% of rural population)*	35	24	..	..	..
Urban *(% of urban population)*	64	81	..	..	..
Electrification of household	26	35	80	..	..
Rural *(% of rural population)*	11	28	..	..	..
Urban *(% of urban population)*	72	83	..	..	..
Livestock					
Holdings in rural households *(% population)*	90	80	..	..	..
Holdings in rural households *(2001 US Dollars per capita)*	96	222	..	..	..
Holdings among rural livestock-holder households *(2001 US Dollars per capita)*	107	242	..	..	..
Housing					
Damaged in violence 1999 *(% of households)*	30	..	..	..	..
Rural	27	..	..	..	..
Urban	38	..	..	..	..
Damaged totally in violence 1999 *(% damaged)*	83	..	..	..	..
Rural	89	..	..	..	..
Urban	69	..	..	..	..
Rehabilitated *(% damaged)*	68	..	..	..	..
Rural	71	..	..	..	..
Urban	60	..	..	..	..
Rehabilitated totally *(% rehabilitated)*	35	..	..	..	..
Rural	35	..	..	..	..
Urban	36	..	..	..	..

Note: Timor-Leste data are calculated for 2001 from the TLSS, and for 1999 from the 1999 SUSENAS, the Indonesian Household Survey.
Unless otherwise specified, the remaining statistics are the latest numbers from the World Bank's SIMA database. International comparisons have to be treated with caution because of differences in concepts, data collection, survey sources, and estimation methods.
a/ UNDP (2002). *b/ World Bank (2002a).*
c/ UNICEF (2002). *d/ Indonesian Demographic and Health Survey 1997.*
** The dependency ratio is the ratio of people younger than 15 and older than 64 to those between the ages of 15 to 65.*
*** The Gini index increases with inequality. A Gini index of zero indicates perfect equality, whereas an index of 100, perfect inequality.*
**** Access to improved water source refers to access to uncontaminated water, such as from springs, private wells, or piped water.*

1 A New Nation

1. A NEW NATION

INTRODUCTION

1.1 Timor-Leste became the first new state of the 21st century on May 20, 2002 following a quarter century of occupation and conflict. The country experienced a fundamental social and economic upheaval after its people voted for independence from Indonesia in a referendum in August 1999. Over two-thirds of the population were displaced in the weeks following the ballot results and an estimated 70 percent of the public infrastructure was destroyed or rendered inoperable. Soon after the violence ceased, Timor-Leste began rebuilding itself with the support from UN agencies, the international donor community and NGOs.[1]

1.2 Timor-Leste has made enormous progress in rehabilitating its economy, reconstructing its infrastructure, reintegrating its refugees and building the key elements of a sustainable political process in an environment of internal peace. But Timor-Leste still faces many challenges in building the nation. Limited human resources, embryonic institutions, a stagnant economy, widespread poverty on the one hand, and high expectations about tangible progress in people's livelihoods on the other hand, give rise to social and political tensions. On the eve of independence, the government presented its vision for the year 2020 and its strategy for achieving this vision in its National Development Plan (NDP). The NDP lays out a strategy for the next five years (2002-2007) with two overriding objectives – to promote rapid, equitable and sustainable economic growth and to reduce poverty. In January 2003, the Government announced a Stability Program highlighting the immediate priority areas of the NDP, covering governance, job-creation, and service-delivery for poverty reduction.

POVERTY ASSESSMENT PROJECT

1.3 An important input into the preparation of the National Development Plan was the Poverty Assessment Project. Formulating a national plan and poverty reduction strategy required data on poverty and living standards. Given the profound changes in the lives of people in 1999, new data collection had to be undertaken to accurately assess the living conditions of the people in Timor-Leste. The Planning Commission of the Timor-Leste Transitional Authority undertook the Poverty Assessment Project in close partnership with the World Bank, the Asian Development Bank (ADB), the United Nations Development Programme (UNDP) and the Japan International Cooperation Agency (JICA), United Nations Children's Fund (UNICEF).[2] Most importantly, the Poverty Assessment would not have been possible without the collaboration of the people of Timor-Leste, who shared detailed information about their lives with the survey teams. This project comprised three data collection activities on different aspects of living standards, which taken together, provide a comprehensive picture of well-being in Timor-Leste:

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[1] Rohland and Cliffe (2002).

[2] The Japan International Cooperation Agency was a partner in the household survey data collection activity. The results of UNICEF's Multiple Indicator Cluster Survey (MICS) were disseminated jointly with those of the household survey.

- *Suco Survey*: This is a census of all 498 sucos[3] (villages) in the country. It provides an inventory of existing social and physical infrastructure, and of the economic characteristics of each suco, in addition to aldeia (hamlet) level population figures. It was completed between February and April 2001.
- *Household Survey*: The Timor-Leste Living Standards Measurement Survey (TLSS) is a national representative sample of 1,800 households from 100 sucos, covering over one percent of the population. The survey was designed to diagnose the extent, nature and causes of poverty, and to analyze policy options facing the country. It assembles comprehensive information on household demographics, housing and assets, household expenditures and some components of income, agriculture, labor market data, basic health and education, subjective perceptions of poverty and social capital. Data collection was undertaken between the end of August and November 2001.
- *Participatory Potential Assessment* (PPA): This qualitative community survey assisted 48 aldeias in the 13 districts of the country to take stock of their assets, skills and strengths, identify the main challenges and priorities, and formulate strategies for tackling these within their communities. Data collection started in November 2001 and was finished in January 2002.

1.4 The information on poverty and living standards collected by the Poverty Assessment Project became an integral part of the National Development Plan. The outputs were shared and discussed with the Planning Commission, its eight sectoral working groups, NGOs, and civil society at large. A two-day workshop in Dili in February 2002 presented the preliminary results of the household survey. The Suco Survey Report was submitted in October 2001, and the Participatory Potential Assessment Report was finalized in May 2002. An earlier draft of this report was widely disseminated and discussed at a series of seminars organized in January 2003 by the Ministry of Planning and Finance. Seminars were held for the Council of Ministers, and several Ministries. A large workshop in Dili and three regional workshops in Baucau, Ainaro and Maliana were organized for Government officials from the center and districts, civil society representatives, including the Church, women's, students and youth groups, NGOs, Chefe de Sucos, and development partners. The results of the UNICEF sponsored MICS were also presented at these dissemination workshops and seminars. These seminars preceded the Ministries' prioritizing and sequencing exercise for the FY2004 budget process. A composite report, which distils the main messages of these documents, was also completed in March 2003.

THE NATIONAL DEVELOPMENT PLAN

1.5 The Government's National Development Plan, presented at the eve of independence, was prepared following a broad participatory approach.[4] The Government launched a country wide consultation – in which about 38,000 people participated in meetings to articulate the 20 year vision and discuss national priorities. Within the Government, eight cross-sectoral

[3] The total number of sucos is based on interviews with suco chiefs all over the country. According to Internal Administration there are 446 sucos in the country.

[4] East Timor National Development Plan, Planning Commission, Dili, May 2002.

working groups were established and led by Ministers. These groups were responsible for the formulation of thematic visions, development goals, guiding principles and strategies. Based on these extensive consultations, Timor-Leste's vision for 2020 was defined (see Box 1.1). In 2003, the Ministries undertook a prioritization and sequencing exercise, informed by the priorities of the Stability Program. These are being linked to the medium term expenditure framework and annual budget process and these ministerial plans have been integrated into a Road Map for the implementation of the NDP over the period FY04-07.

1.6 In achieving this vision, the NDP presents a strategy for the five year period with two overriding goals:

- To reduce poverty in all sectors and regions of the nation; and
- To promote economic growth that is equitable and sustainable, improving the health, education and well-being of everyone.

Box 1.1: Timor-Leste's Vision for 2020

- Timor-Leste will be a democratic country with a vibrant traditional culture and a sustainable environment;
- It will be a prosperous society with adequate food, shelter and clothing for all people;
- Communities will live in safety, with no discrimination;
- People will be literate, knowledgeable and skilled. They will be healthy, and live a long, productive life. They will actively participate in economic, social and political development, promoting social equality and national unity;
- People will no longer be isolated, because there will be good roads, transport, electricity, and communications in the towns and villages, in all regions of the country;
- Production and employment will increase in all sectors – agriculture, fisheries and forestry;
- Living standards and services will improve for all East Timorese, and income will be fairly distributed;
- Prices will be stable, and food supplies secure, based on sound management and sustainable utilization of natural resources;
- The economy and finances of the state will be managed efficiently, transparently, and will be free from corruption; and
- The state will be based on the rule of law. Government, private sector, civil society and community leaders will be fully responsible to those by whom they were chosen or elected.

POVERTY REDUCTION STRATEGY

1.7 Economic growth is seen as a precondition for sustained poverty reduction, with citizens and the private sector as the driving force and the Government as facilitator. To ensure that economic development has a significant impact on poverty reduction, the National Development Plan proposes this Poverty Reduction Strategy with four elements:

- **Opportunity**: Create an enabling environment to generate opportunities for the economic participation of the poor, improving their productivity and enhancing incomes;
- **Basic Social Services**: Provide and/or encourage and help others to provide basic social services to the poor on affordable terms;

- **Security**: Provide or help to provide security of person and property, and protection from unforeseen shocks and disasters (vulnerability), including food security at both the household and national level;
- **Empowerment**: Empower the poor and other vulnerable groups through popular participation in decision making, managing village development and at all levels of the administration.

OBJECTIVES AND ORGANIZATION OF THE REPORT

1.8 The objective of this report is to support the Government's efforts in implementing and monitoring the Poverty Reduction Strategy. This document, jointly with the other outputs of the Poverty Assessment Project, sets a baseline for the extent, nature, and dimensions of poverty. A good understanding of the pattern and sources of poverty will help Timor-Leste to focus effort and resources in achieving its development goals. Sound poverty diagnostics will be one of the building blocks for translating the broad elements of the poverty reduction strategy into prioritised action plans, which fit into the medium term expenditure framework. The effectiveness with which aid and offshore wealth will be channelled towards building the human capital base will be critical for sustainable poverty reduction.

1.9 However, this report, and the Poverty Assessment Project as a whole, cannot aspire to be a comprehensive analysis of poverty in Timor-Leste, or a full policy review, or a detailed strategy for poverty alleviation. While the coverage of the poverty issues is broad, our focus is on providing a baseline for benchmarking progress in poverty reduction in the future. A number of important gaps remain, resulting from lack of data or the desire to avoid duplication. In particular, there is no separate chapter on the fourth component of the Poverty Reduction Strategy, empowerment, dealing with the institutional framework for decentralization and civil society and community participation.[5] Infrastructure has strong links to poverty reduction, yet our analysis on opportunities concentrates on employment and agriculture. We also discuss only briefly the issues in setting up a poverty monitoring system. These omissions underline that this study is only the beginning of a deeper understanding of poverty alleviation in Timor-Leste.

1.10 This report aims to assist the decision making of the newly elected government. To facilitate the use of this report as an input into the debate around anti-poverty policies in Timor-Leste, the evidence presented is linked to policies and strategies at two points. At the beginning of most chapters, a box summarizes the main strategies from the NDP and the corresponding messages from our analysis. At the end of these chapters, we highlight the key results of the findings, draw out policy implications, and emphasize issues that deserve attention in future research. Furthermore, the last chapter pulls together many of the main messages.

[5] This topic was covered in parts in the East Timor Public Expenditure Management and Accountability Note from April 2002, and more analysis is forthcoming in the 2003 and 2004 Public Expenditure Reviews.

Box 1.2: Poverty Reduction Strategy: Empowerment

Empowerment embraces voice and participation of the poor in making decisions on economic, social, cultural and political issues. The National Development Plan, which was formulated through extensive consultations with the people of Timor-Leste, is evidence of the Government's commitment to the empowerment of its citizens. The Government intends to build on this experience by establishing an institutional framework for continued civil society consultation in the formulation and monitoring of operational plans at the national and sectoral level. The main elements of this pillar are:

- Community participation in the management of service provision to improve efficiency and enhance empowerment.
- Decentralization to ensure the participation of the people in general, and the poor and women in particular. The Government is committed to implementing a gradual process of decentralization. This will entail the transfer of resources and decision-making authority from line Ministries closer to the field level, with community management structures and the allocation of resources to the district / sub-national level. It will also involve the reform of local Government, providing opportunities for community and local participation in the prioritisation and management of services.
- Civic education has played an important part in promoting popular participation in the political and development process. Civil society organizations, including the Church, will be mobilized to promote awareness of civil rights and the rights of users of public services. Civic education will be included in a revised school curriculum. The Government too will seek to promote awareness of the role of public institutions, such as the parliament, and policies.

1.11 The overall report is organized in two volumes. Volume I summarizes the main messages and findings of the TLSS analysis, which are developed in detail in Volume II. Chapter 2 of Volume I reviews the progress in economic and social living standards since the violence in 1999. Chapter 3 presents the welfare profile. The following three chapters deal with the first three components of the Poverty Reduction Strategy. Chapter 4 addresses opportunity. It discusses living standards in villages, with a particular focus on agriculture, and cities. Chapter 5 deals with basic social services, in particular education and health. Chapter 6 discusses household security, covering disadvantaged groups and food security. Chapter 7 lays out Timor-Leste's development challenge. It summarizes the main determinants of poverty, takes stock of the Millennium Development Goals, and links growth projection to poverty reduction targets. The last chapter lays out some of the main considerations in setting up a poverty monitoring system.

1.12 Volume II is a compendium of the technical analysis. Each chapter is a self-contained, in-depth study of one specific topic. Chapter 1 presents the survey design and welfare methodology. Chapter 2 discusses the people's own perception of welfare, including the changes in living standards since the violence in 1999. Chapter 3 presents the welfare profile, covering poverty, inequality, and welfare. Chapter 4 looks at employment. Chapter 5 focuses on education. Chapter 6 discusses disadvantaged groups, and Chapter 7 analyses food security. The final chapter presents a model of determinants of consumption and poverty.

2 Transition to Independence

2. TRANSITION TO INDEPENDENCE

2.1 By late 2001, at the dawn to independence, Timor-Leste had already undergone dramatic social, economic, institutional, and cultural changes since the violence in 1999. In this chapter, we look back at this period of transition and ask how much, and what type, of progress was achieved. The first part summarizes the economic and social changes since the violence in 1999, reviewing macroeconomic and social indicators. The second section looks at the same issue from the people's own perspective.

DEVELOPMENTS SINCE THE VIOLENCE: ECONOMIC AND SOCIAL TRENDS

Macroeconomic Trends

2.2 Timor-Leste's economy has experienced a roller coaster ride over the past three years. It is only possible to give rough measures of economic performance due to the lack of reliable national accounts data. Destruction of much of the country's infrastructure and dislocation of the population led to a sharp decline in output in 1999. Initial IMF estimates put the GDP decline at 38.5 percent in 1999 with agricultural output falling by 48.4 percent.[6] The brunt of the slowdown fell on domestic savings, which contracted from 26 percent of GDP in 1998 to 5 percent in 1999, and on investment, which fell to little more than half the 1998 level.

2.3 The economy made a strong recovery in 2000 and 2001. Real GDP is estimated to have grown by 15 percent in 2000 and by 18 percent in 2001. Output, estimated at US$389 million in 2001, is now comparable to pre-1999 levels in real terms. Recovery has been strongest in the capital, Dili. The large expatriate presence led to a rapid resumption of commerce and services, such as restaurants and hotels, and the rebuilding of residential and commercial properties increased activity in the construction sector. The fast rehabilitation of rural roads, together with favourable weather conditions, has also elicited a strong response in rural areas. Food production (mainly maize and rice) in 2000 rose by 15 percent and production of most of the major crops recovered further in 2001. Production of most food crops has now almost reached to pre-1999 levels, though rice production is still lower than in the mid-1990s. The lack of recovery in rice production is linked to factors such as underdeveloped markets for domestic production, lack of packaging and distribution outlets, eroded irrigation infrastructure, and an adjustment to current market conditions where production is no longer subsidized by the Government. Coffee production in 2000 rose by some 40 percent but in terms of income, most of the increase was lost to coffee price declines, which continued through 2001.

[6] More recent information indicates that these early estimates probably overstated the decline in economic activity in 2000. For example, FAO estimates in April 2000 put the decline in farm food crops (mainly rice and maize) production at 35 percent. For a detailed discussion of the issues, see World Bank (2002).

2.4 Food prices have a direct impact on poverty. The 1999 disruptions produced shortages that led to a surge in prices, with inflation, in terms of the Indonesian Rupiah, reaching an estimated 140 percent for that year. But inflation subsided rapidly since mid-2000. And in 2001, prices, now measured in terms of US Dollars, were flat for the full year and declining by year end, reflecting increased food availability and perhaps some adjustment of prices and wages to a falling international presence.

2.5 As anticipated, the gradual withdrawal of the international presence following independence has led to contraction in economic activity, particularly in urban areas and in services that catered to expatriates. Most recent estimates indicate that output dropped by 1 percent in 2002. A further drop of 2 percent is projected in 2003 followed by a modest resumption of growth in 2004. Reports of drought in the south of the country underline the fragility of the recent recovery in agricultural production and have led to concerns about food security. Inflation has risen recently to around 5 percent as a result of the drought-induced scarcity of agricultural products.

Social Trends

2.6 The effect of the large scale destruction and collapse of the economy in 1999 on expenditure poverty is difficult to assess due to the lack of comparable expenditure data. However, we can assess changes in human development, comparing social indicators from the 2001 TLSS with the 1999 Indonesian Socio-economic Household Survey (SUSENAS), the last comprehensive evaluation of living standards in Timor-Leste prior to the referendum on independence.[7] Drawing on these surveys, Figure 2.1 shows statistics on population, education, health, livestock, housing, and infrastructure.

2.7 Timor-Leste is a less populous and younger country now than before the violence. One in two persons are below the age of 15. This nation's population of 830,000 will grow rapidly as large young cohorts move through the reproductive ages. This points to the importance of investments in children and the reproductive health of mothers.

2.8 The performance in the social sectors since 1999 is mixed. In education, school enrollment rates, especially for girls, have improved, with the net primary enrollment rate increasing from 65 percent in 1998/99 to 75 percent in 2000/2001. One in four children of primary school age still do not attend primary school. For child health, immunization is one of the most cost-effective, equitable health interventions available. Once immunized, every child, rich or poor, is equally protected for life. Yet, immunization rates were alarmingly low in 1999, and have dropped further. Only one in ten children under the age of 12 months receive full DPT vaccination in late 2001, and by August 2002 the percentage doubled.[8]

[7] The 1999 SUSENAS found that Timor-Leste was the second poorest out of the 27 regions in Indonesia, and poverty was twice the national average. However, differences in survey design, methodology, and the time period during which the survey was conducted, between the SUSENAS and TLSS make it impossible to reliably establish the poverty trend.

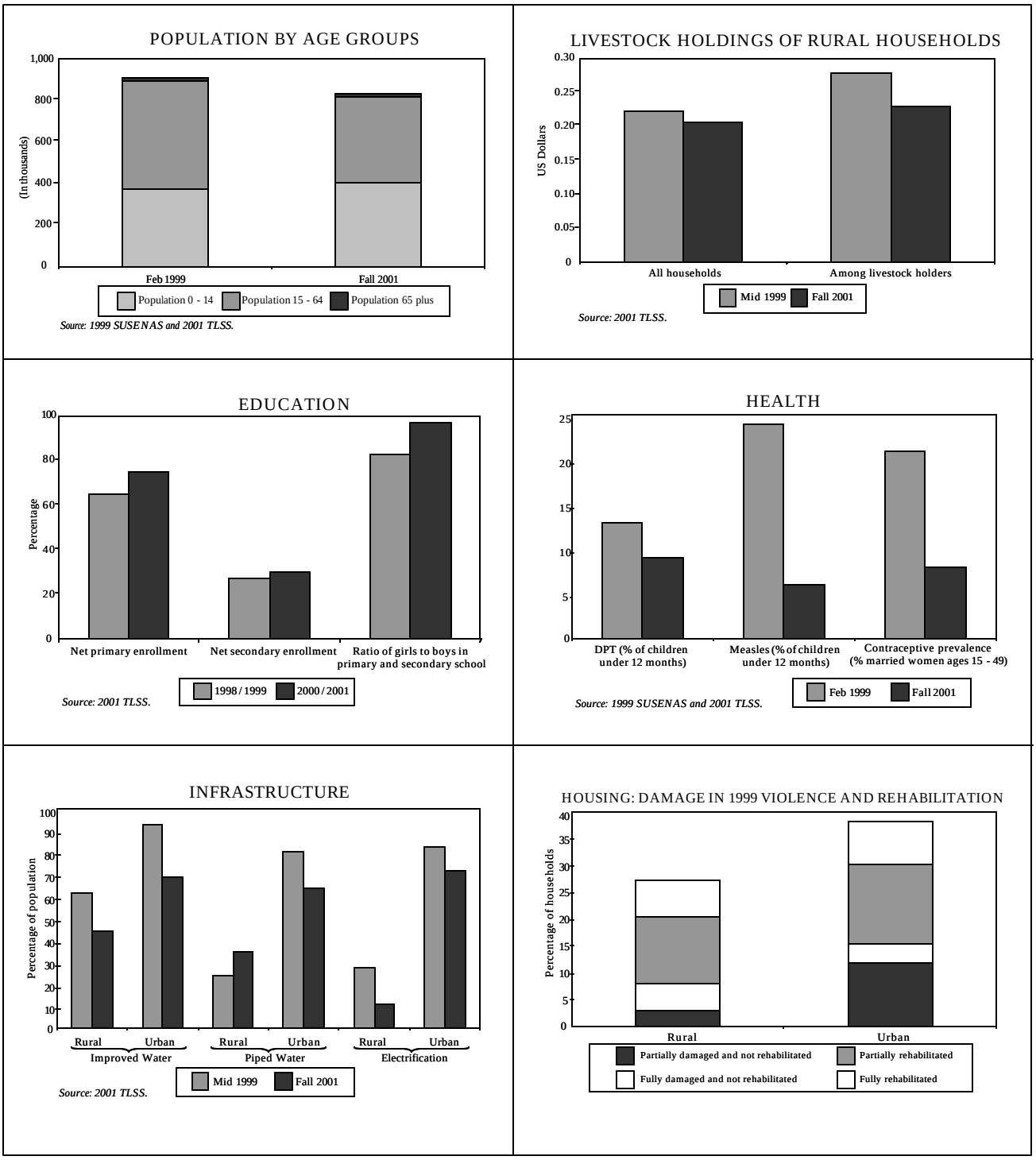
[8] The 2002 numbers are based on the UNICEF sponsored Multiple Clusters Indicator Survey (MICS) conducted in August-September 2002 on a nationally representative sample of 4,000 households. These numbers are significantly lower than the Ministry of Health numbers for 2003, which report 53 percent coverage for DPT3. See Chapter 5 for a more detailed discussion of these differences.

2.9 The reconstruction efforts have already facilitated a substantial recovery in household assets. Livestock holdings in rural areas are already over 90 percent of their 1999 value in rural areas, and livestock is more widely held than before. Almost 70 percent of damaged housing is at least partially rehabilitated, one third of which already fully rehabilitated. Finally, the restoration of infrastructure is still ongoing. While access to electrification, especially in villages, is still below the 1999 level, access to piped water or pumps in rural areas is now higher than in Indonesian times.

DEVELOPMENTS SINCE THE VIOLENCE: THE PEOPLE'S PERSPECTIVE IN 2001

2.10 Timor-Leste's path to independence since the referendum on August 30, 1999 has been challenging. Physical destruction and human terror were followed by a huge economic and institutional reconstruction effort. This transition has transformed people's lives fundamentally and in ways that go far beyond purely material endowments. Standard economic and social statistics fail to do justice to the significance of this adjustment, as they do not account for the multiple impacts on people's livelihood and sense of well-being. In this section, we report the people's own assessments of the changes two years after the violence. TLSS collected subjective information on life satisfaction both in general and with respect to various domains of life, such as jobs, food security, health, education, and empowerment. We can use these subjective measures to cross-check the evidence reported on objective statistics reported in the previous section. We investigate two specific areas: change in subjective well-being since the violence; and personal and national priorities going forwards. The analysis confirms that the economic record has been mixed, but also points to the dramatic improvements in non-economic aspects over the two years since the violence in 1999. However, the situation today may be different. The unrealistic expectations of fast improvements in living standards in the aftermath of independence, in combination with the downturn of the economy linked to the gradual withdrawal of the international presence, may have led to a deterioration in perceptions of well-being, especially in Dili. The riots of December 2002 in the capital and recent attacks on rural communities have underlined the fragility of the situation and brought security issues to the forefront. Youth unemployment, perceived exclusion by ex-combatants and those educated under the Indonesian system, the continued presence of a well-paid expatriate community, frustration with the slow pace of change relative to high expectations are some of the reasons that have been ascribed for the social disturbances.

Figure 2.1: Social Indicators 1999 and 2001



Change in subjective well-being two years after the violence in 1999

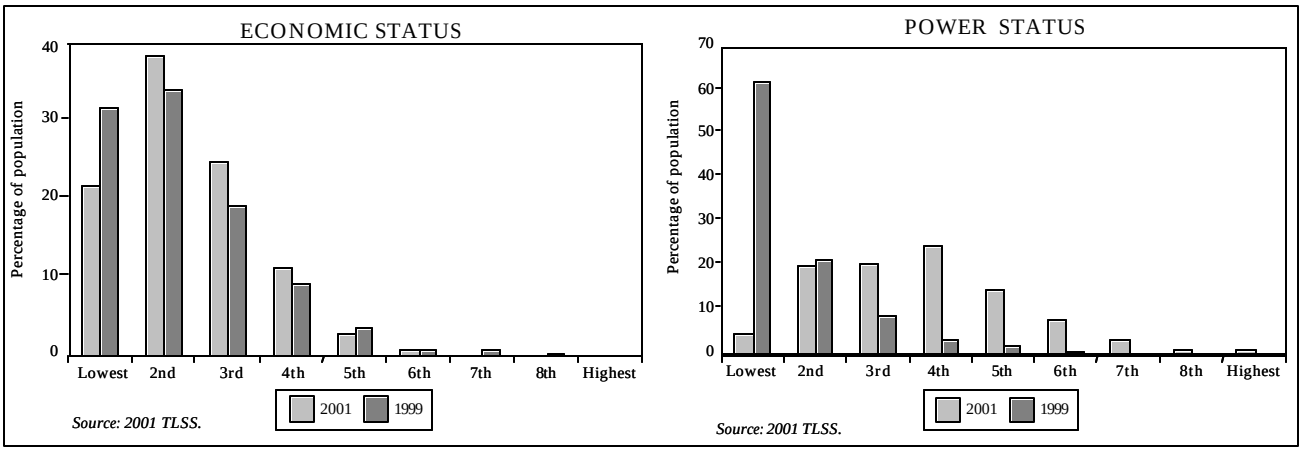
2.11 How has life changed since 1999 in the people's own assessment? In the survey, the people were asked to assess the changes since before the violence in 1999 along different dimensions: living standards, economic status, and power status. Living standards are closely linked to economic conditions, and, as evidenced in the previous section, they have remained difficult since the violence. In Figure 2.2, we show the responses of all individuals aged 15 years or older when asked about the change in living standards at the end of 2001 compared to 1999. About three in ten persons believe living standards have deteriorated, compared to only one in ten persons saying they have improved. This points to substantial material hardship during the transition process.

Figure 2.2: Change in Living Standards Between 1999 and 2001

Source: 2001 TLSS.

3.12 Living standards are important for both economic status and empowerment. Figure 2.3 displays the responses to "ladder questions", where persons are asked to rank themselves with regard to economic and power status, in 2001 and before the violence. Let us consider the economic dimension first. Looking back to before the violence in 1999, the vast majority view themselves as poor: one third of the respondents believe they were on the lowest step, another third on the second lowest step, and another 30 percent between the third to fifth lowest steps. Less than two percent ranked themselves on the top four steps. By comparison, in 2001, the situation improved, especially for the lowest third. The share at the lowest step has significantly decreased, boosting the shares of the second and third lowest steps, with the rest remaining unchanged. Overall, the lowest two thirds of the respondents believe that their economic situation has improved or remained unchanged, while the situation for the highest third has remained unchanged.

Figure 2.3: Economic and Power Status, 1999 and 2001



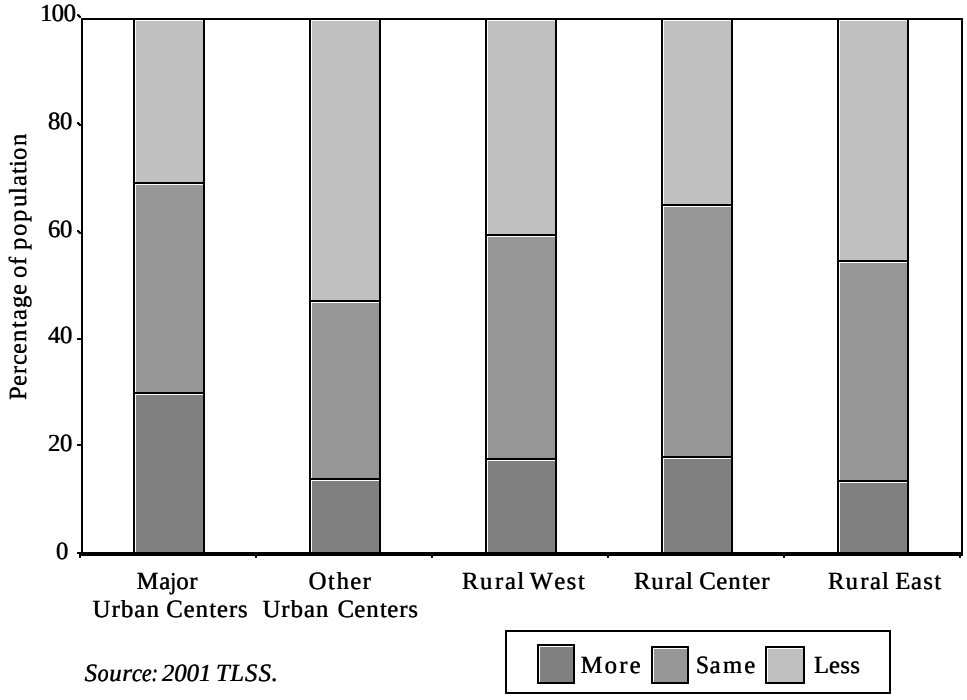
2.13 The questions regarding power status reveal a clear picture. Today's population viewed themselves as powerless in 1999, with six in ten placing themselves on the lowest step, and another two in ten on the second lowest step. Essentially nobody ranked herself on the top four steps. The situation in 2001 is substantially different. Only one in twenty people believe they are completely powerless, and close to three in ten believe they rank on the top five steps. These numbers suggest that, while the economic situation has improved primarily at the bottom tail, the advances in power status have affected almost the entire population.

2.14 Corruption is a core poverty issue. For example, the World Bank's Voices of the Poor recorded reports by poor people of hundreds of incidents of corruption as they attempt to seek health care, educate their children, claim social assistance, get paid, access justice or police protection, and seek to enter the marketplace. In their dealings with officials, poor men and women are subject to insults, rudeness, harassment, and sometimes assault by officials. Harassment of vendors in urban areas is widespread. Politicians, state officials, and public servants are rarely viewed as effective, trustworthy, or participatory. Corruption also matters for the broader performance of a country. It is an obstacle to economic and social development. It distorts the rule of law and weakens the institutional foundation on which economic growth depends. These harmful effects are especially severe on the poor, who suffer most from economic decline, are most reliant on the provision of public services, and are least capable of paying the extra costs associated with bribery, fraud, and the misappropriation of economic privileges

2.15 People's perception on the change in corruption since 1999 is shown in Figure 2.4. Overall, people feel corruption is less of an issue in 2001 than in 1999. Only one fifth of the population aged 15 years or older believes corruption has worsened since the violence, compared to two fifths who feel corruption has declined. Across the board of geographic and age-gender categories, more people believe corruption is less prevalent in 2001. However, there are important differences. Most strikingly, in major urban centers, three in ten people feel corruption has become worse. In rural areas, the issue appears to be larger in the west and center than in the east, and in rural mid- and highlands than in rural lowlands. With regard to gender, men are more pessimistic than women about the progress made in corruption prevention, as are persons younger than 50 years of age compared to those older

than 50 years of age. One possible explanation of this pattern could be involvement in commercial and administrative tasks. Inhabitants of Dili and Baucau, and prime-age men are likely to be more exposed to such activities. Interestingly, the more optimistic view on change in corruption in the rural east and rural lowland coincides with lower poverty than in the other rural domains.

Figure 2.4: Change in Corruption Since Violence in 1999



Source: 2001 TLSS.

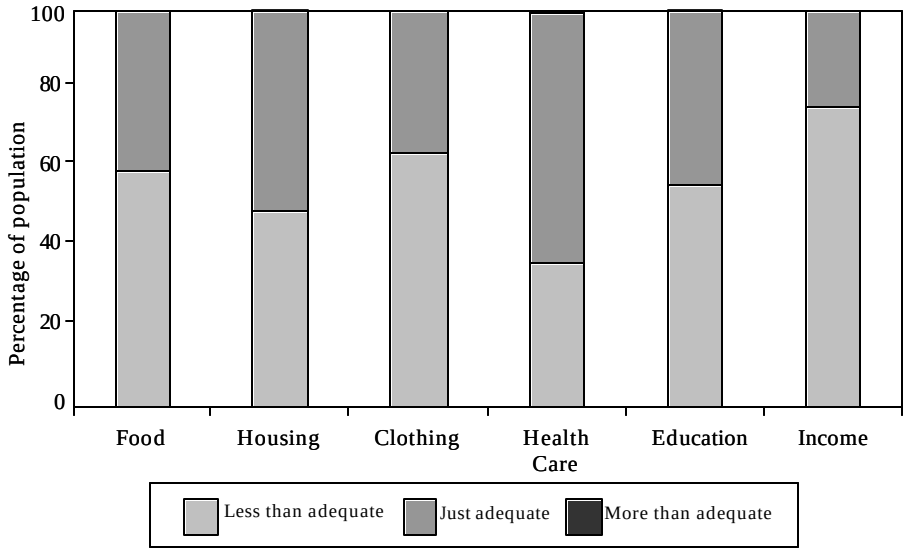
Subjective well-being: dimensions and priorities

2.16 What are the most pressing concerns of the population in late 2001? A standard tool to assess subjective well-being are "adequacy" questions covering the different categories of family needs. In Figure 2.5, we display the answers of heads of households to questions regarding their family requirements. It shows the percentage shares of each of the three possible answers (less than adequate, just adequate, and more than adequate) along the dimensions of food, shelter, clothing, health care, education, and income.

2.17 The striking feature is one of widespread *in*adequacy and severe hardship of everyday life. Whatever specific aspect of living standards we consider, 99 in 100 people feel at best just adequately endowed, and between over one third to three quarters believe to be less than adequately covered. The concern is largest for clothing, followed by food, children's education, and housing, and least for the provision of health care. In addition, more than three in four persons live in households where total income is deemed inadequate[9].

[9] It is not clear whether respondents viewed total income as a summary measure capturing other dimensions, or a separate dimension of living standards itself.

Figure 2.5: Adequacy of Living Standards

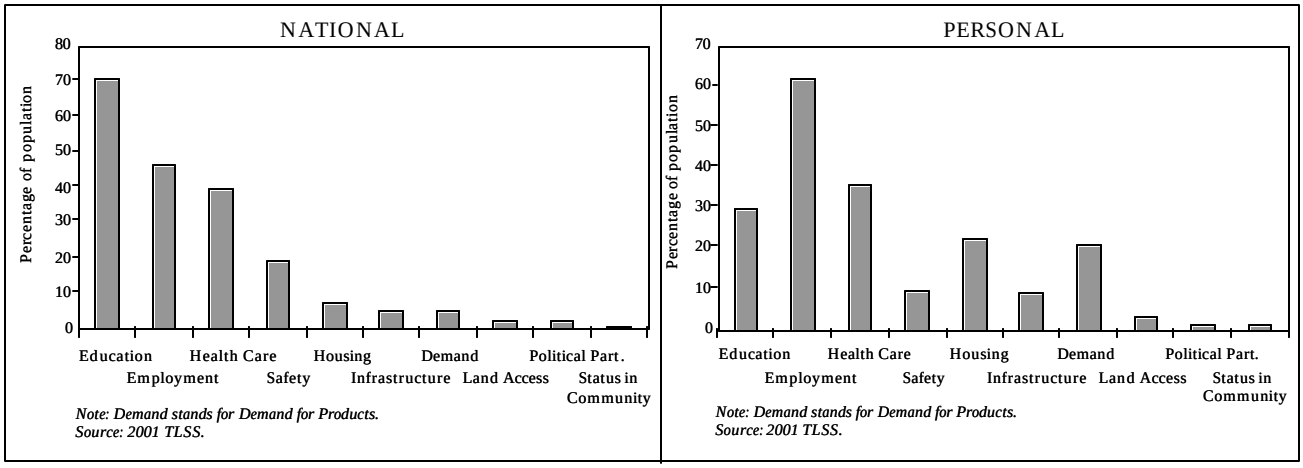


Source: 2001 TLSS.

2.18 In view of these substantial inadequacies in living standards, what are the personal and national priorities looking forward? TLSS asked individuals aged 15 or older to give first and second priorities from both the personal and national perspectives. The results are shown in Figure 2.6.

2.19 Top of the list of personal concerns are economic and social factors. Number one is employment, quoted by three fifths of the interviewees. This is followed by improvements in social services (education, health care, and housing), and demand for products. In contrast, the main achievements of the past two years (safety, political participation, and status in community) rank lowest in terms of importance for individual living standards for the future. The priorities for Timor-Leste's living standards are broadly in line with individual preferences. The bottom three categories are exactly the same, and the same three categories appear in the top three, even if their internal ranking is reversed. The most striking difference is the emphasis on education as key to national prosperity, listed by seven in ten individuals, compared to only three in ten for personal preferences. Employment, housing, and demand for products are listed by fewer people as national priorities than as individual priorities. Overall, this suggests that the immediate individual economic concerns are viewed as less important for the national agenda. In both personal and national rankings, economic and social concerns dominate aspects linked to empowerment, perhaps a reflection of the achievement in this area over the past few years.

Figure 2.6: People's Priorities for the Future



SUMMARY

2.20 Overall, at the time of Timor-Leste's independence, the population feels more empowered compared to Indonesian times, but less secure about its economic well-being. When asked about their economic situation in end 2001 compared to before the violence in 1999, slightly more people believe their economic situation has improved than deteriorated, but the bulk feels little has changed. By contrast, seven in eight persons believed they had more power in 2001 than before the violence in 1999. The people's assessments confirm that progress has been achieved in safety, political participation, education and status in community, whereas economic factors like housing, demand for products, employment and infrastructure have worsened and remain priorities for the future.

3 Welfare Profile

3. WELFARE PROFILE

3.1 How do the poor differ from the non-poor? In this chapter, we investigate the characteristics of the poor. The poverty profile includes information on where the poor live, what they do, how they earn a living, and what their living standards are in terms of health, education and housing. We also look at the distribution of economic resources overall. This analysis is important for two reasons. It provides insights on the characteristics of the poor for the design of poverty-reduction programs, and highlights the link of poverty to other dimensions of well-being.[10]

METHODOLOGY

3.2 Poverty is a complex phenomenon involving multiple dimensions of deprivation. It can mean lack of access to resources and opportunities, poor health, malnutrition, illiteracy, lack of safe drinking water and sanitation, deprivation of basic rights and security and powerlessness. While these deprivations often go hand-in-hand, the correlations between these different dimensions of poverty are far from perfect. The most commonly defined concept of poverty is an economic one, in which an individual is deemed poor if he is unable to attain a minimal standard of living. Multiple decisions are involved in deriving a summary measure of living standards (see Box 3.1 for a summary). There is a broad consensus that consumption is a preferable indicator of living standards than income. Following common practice in poverty analysis, the nominal consumption measure is converted to real consumption to adjust for cost-of-living differences across regions, and to account for differences in interview date. We follow standard practice and use per capita total household expenditure as basic welfare indicator and assume that households allocate resources equally among their members[11].

3.3 The poverty line is the minimal standard of living that an individual should attain so as not to be considered poor. Setting poverty lines is often the hardest and most contentious step in constructing a poverty profile. Following common practice in East Asia, we have defined a poverty line as the minimum expenditure needed to purchase a food basket that provides 2100 calories per person per day and includes an allowance for non-food consumption needs (such as clothing and housing). The poverty line estimated for Timor-Leste is US$15.44 per capita per month, or just over fifty cents per day[12], or US$1.5 in international dollars using the Purchasing Power Parity[13] adjusted exchange rates.

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[10] This chapter draws on Chapter 1 and Chapter 2, Volume II.

[11] Throughout the report, we analyze to what extent the conclusions depend on adjustments made for differences in household size and composition.

[12] Most of the monetary values in the survey were reported in Rupiah, since it was the dominant currency in use at the time of the survey. All Rupiah values in the survey have been converted to US Dollars using an exchange rate of 10,000 Rupiah / US Dollar, the approximate average exchange rate prevailing during the survey period.

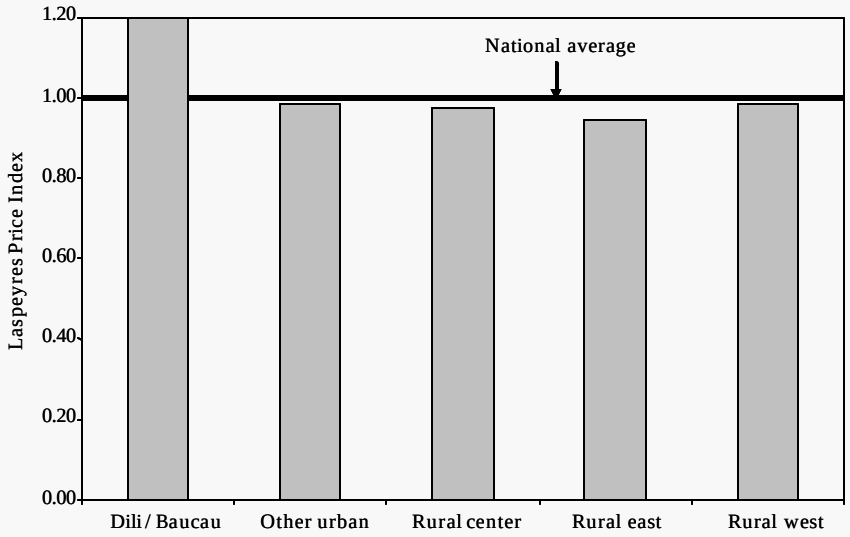
[13] The Purchasing Power Parity (PPP) rates allow a standard comparison of real price levels between countries, just as conventional price indexes allow comparison of real values over time. The PPPs are generally derived form price surveys done by the International Comparison Program, a joint program of the World Bank and UN agencies. Timor-Leste does not have a PPP yet, but the PPP has been calculated using an alternate methodology which calibrates the price per calorie in Timor-Leste to Indonesia. A similar method has been used for other East Asian countries with no PPPs (such as Vietnam).

Box 3.1: Constructing the Welfare Indicato

Income or Consumption? Income, together with assets, measures the potential claims of a person or household, while consumption captures the level of living in terms of what living standard individuals actually acquire. The main reason for preferring current consumption to income as an indicator of living standards is variability (Ravallion, 1994). In a mostly agricultural economy people receive income only infrequently and the amounts differ across seasons. Empirical evidence suggests that households in low income agricultural societies manage to smooth consumption in spite of highly volatile income receipts (Deaton, 1997). Thus, consumption will most likely be a better indicator of current consumption than current income; and current consumption may also be a better indicator of longer term welfare, since it reveals information about incomes at other points in time.

Per capita or equivalence scales? Households differ in size and composition. In particular, the needs of household members differ, particularly between adults and children. One option is to use a system of weights, whereby for example, children count as a fraction of an adult in terms of needs, and convert all households into the number of equivalent adults. But there also exist economies of scale in consumption. Some non-food items (for example, housing) have public goods characteristics, as their usage by one member of the household does not reduce their value to other household members. Thus, because people can share goods and services without reducing their welfare, the cost of attaining a given level of welfare may be lower in larger households than in smaller households. Simply deflating household consumption by household size ignores these economies of scale in consumption. The number of equivalent adults can be adjusted for economies of scale to get the number of "effective" equivalent adults. We follow standard practice and use per capita total household expenditure as the basic welfare indicator and assume that households allocate resources equally among their members. For the poverty profile, it is important to conduct a sensitivity analysis to see to what extent the broad conclusions depend on assumptions regarding equivalent scales.

Cost of living differences: Prices of goods and services vary considerably across different regions and this spatial variation in prices should be taken into account when comparing welfare levels across different parts of the country. In Timor-Leste, transportation is difficult and expensive, and local markets are not well connected, giving rise to possibly large variations in the cost of living. In order to construct a price index to convert nominal consumption into real consumption, we follow standard practice in East Asia and use a Laspeyres Index based on a fixed consumption bundle. The price index is constructed for five different parts of the country: Dili / Baucau, other urban areas, the rural east, rural west and rural center. The Laspeyres price index for each region is computed by comparing the cost of buying a reference bundle in that region compared to a reference region. To represent the consumption pattern of the poor, we take as the reference bundle the consumption basket of the 2nd to 5th deciles according to per capita consumption. We test the sensitivity of our poverty estimates to the choice of this index and find that the results are remarkably robust.



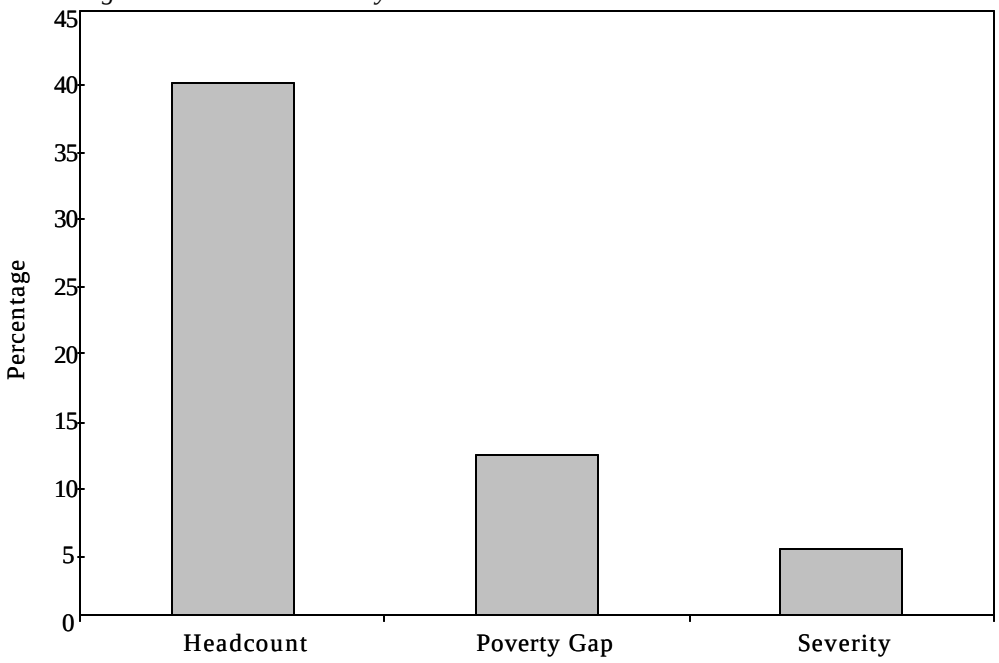
Source: 2001 TLSS.

POVERTY PROFILE

Poverty Incidence

3.4 The incidence of poverty (or the headcount index) in the country as a whole is 39.7 percent, amounting to 329,000 individuals (see Figure 3.1). In other words, two in five individuals in Timor-Leste are not able to cover the food and non-food consumption requirements. The poverty gap does not just count the poor, but measures their average consumption shortfall relative to the poverty line. It equals to 11.9 percent. This measure can be used to calculate the minimum income transfer needed to bring all of the poor just up to the poverty line assuming that the transfer is both perfectly targeted and fully consumed. This number totals to US$1.84 per person per month, or US$18.28 million overall per year. The severity measure of poverty, which incorporates inequality among the poor, by giving higher weights to the poverty gaps of the poorest, equals 4.9 percent. Due to its sensitivity to the distribution among the poor, the severity measure reveals differences across population groups that are veiled by the other two poverty measures.

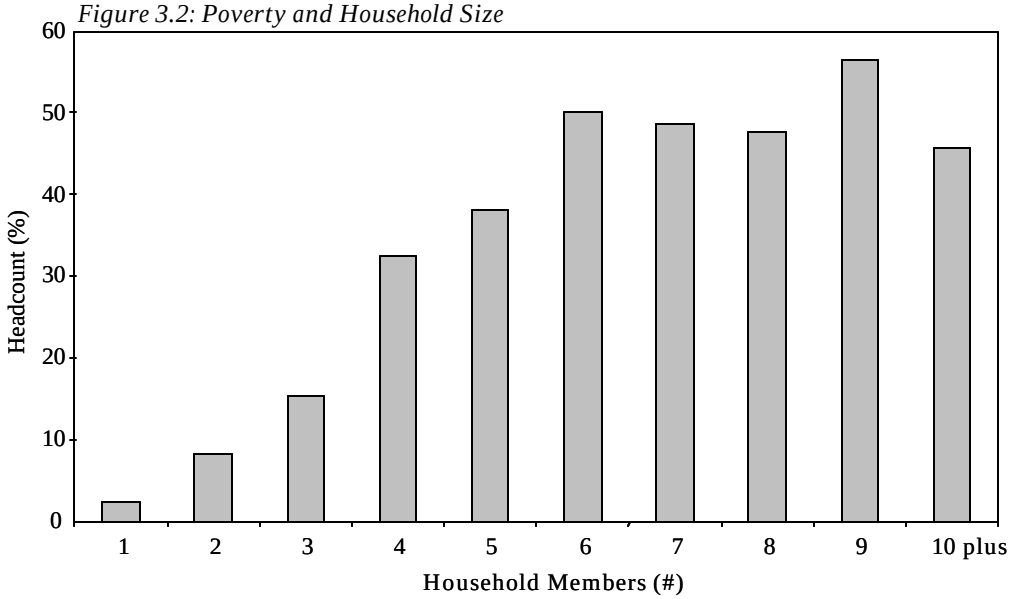
Figure 3.1: National Poverty Rates



Source: 2001 TLSS.

3.5 What is the sensitivity of poverty to assumptions regarding household size and composition? Using the per capita measure, poverty increases with household size (see Figure 3.2). In most cases, an increase in household size implies more children and elderly. Larger households with more non-earning dependents, such as children and the elderly, are less able to feed and clothe all household members.

Figure 3.2: Poverty and Household Size



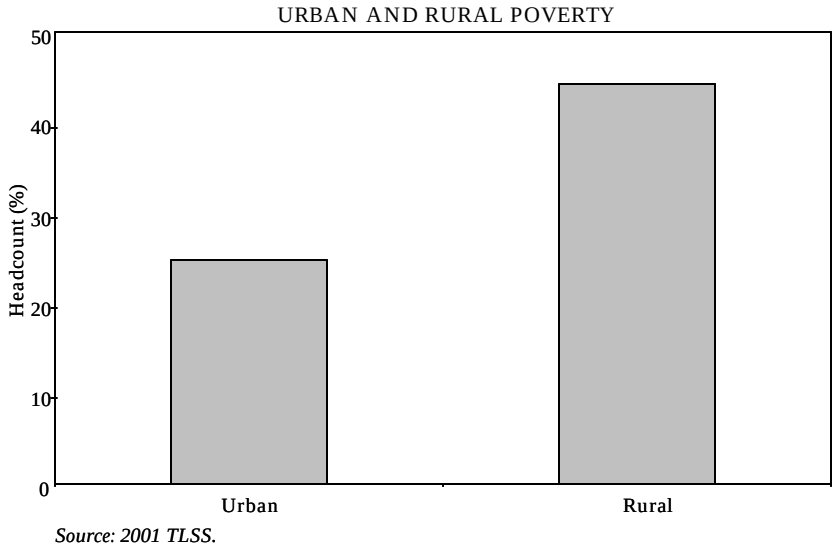
Source: 2001 TLSS.

Geography

3.6 National poverty rates hide a remarkable variation across the country. Poverty in Timor-Leste increases from East to West. The three districts (Oecussi, Bobonaro and Covalima) that comprise the west are home to one fifth of the population, but account for a quarter of the poor. In contrast, the three districts of the East (Baucau, Lautem and Viqueque) account for a quarter of the population, but less than one fifth of the poor. Poverty also rises with altitude above sea level, whereas coastal and landlocked sucos experience similar poverty.

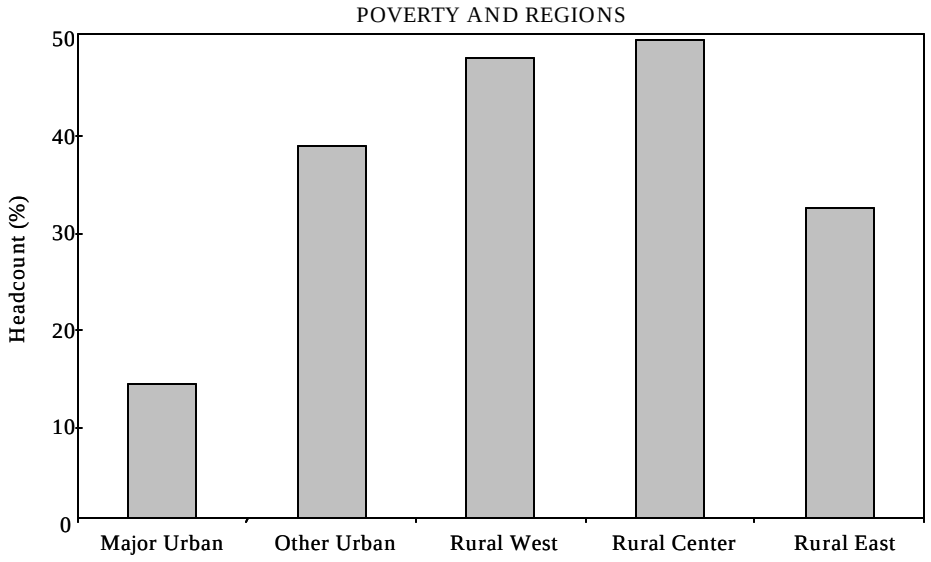
3.7 These geographical patterns are partly, but not entirely, a reflection of the degree of urbanization. In line with experience in other developing countries, poverty in rural areas is higher than in urban areas (see Figure 3.3). Since three quarters of the population reside in rural areas, poverty is overwhelmingly a rural phenomenon: six in seven of the poor live in rural areas, amounting to 280,000 persons.

Figure 3.3: Poverty and Geography

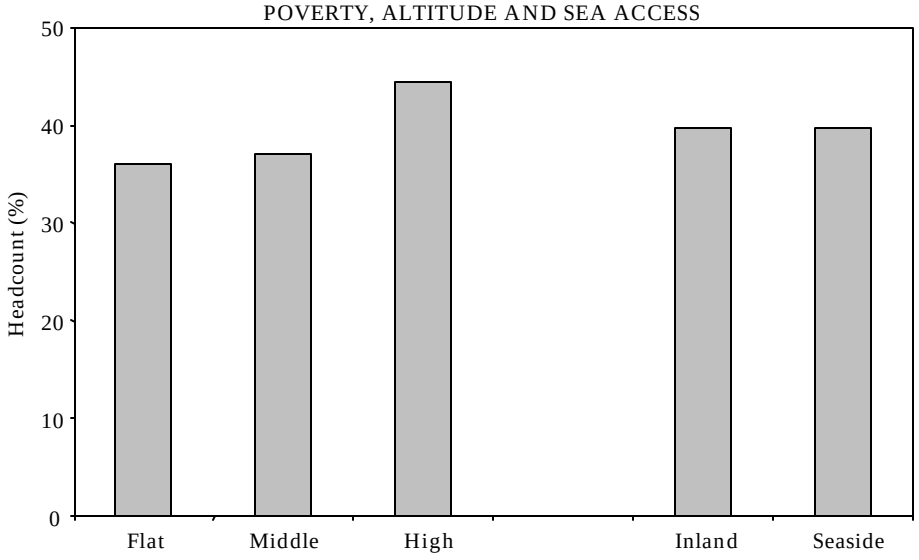


Source: 2001 TLSS.

Figure 3.3: Poverty and Geography (contd)



Source: 2001 TLSS.



Source: 2001 TLSS.

3.8 The investigation of the sensitivity of poverty rankings with regard to equivalence scales and poverty lines leads to these conclusions:

- Rural areas are substantially poorer than urban areas;
- Other Urban Centers are substantially poorer than Dili and Baucau, the two major urban cities;
- East is the least poor, while the ranking between Center and West is ambiguous – both nationwide and in rural areas only;
- In rural areas, the ranking for the headcount index based on altitude is ambiguous. But for the poverty gap and severity measures, Highland is the poorest, and Flatland the least poor[14].

[14] Flatland refers to sucos below 500 m altitude and highland to those above 500 m in altitude. In Figure 3.3, flat refers to sucos below 100 m altitude and middle to sucos between 100 and 500 m altitude.

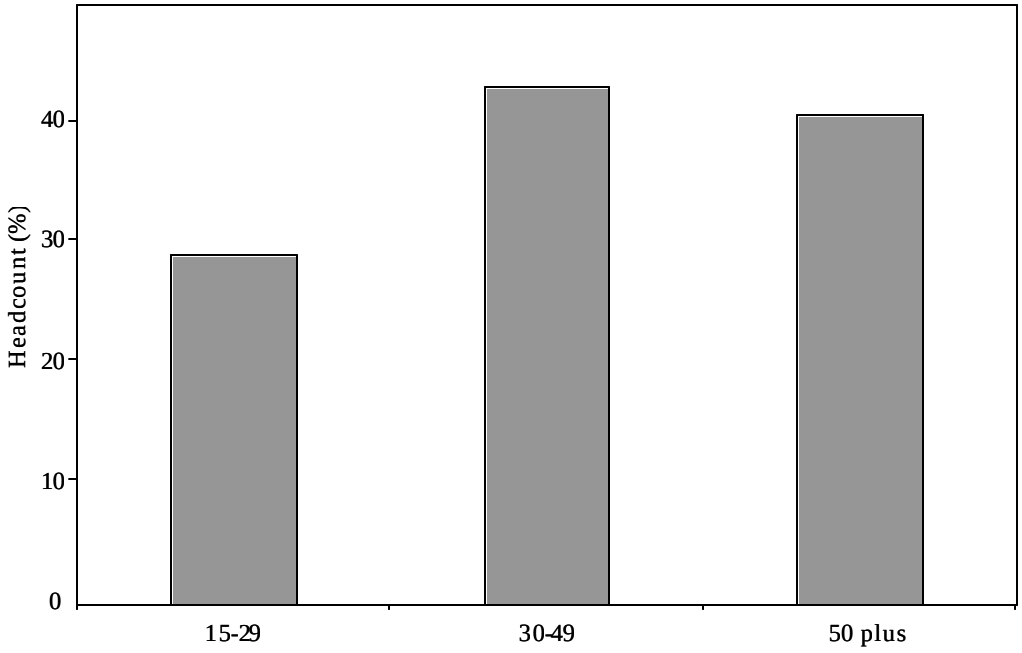
Characteristics of the Household Head

3.9 A standard approach is to categorize households by the characteristics of the household head. The head is in most cases the main provider, and his or her characteristics are of special importance to the well-being of the entire household. The head's features are also indicative of characteristics of the household in general, including size and composition.

Age

3.10 Poverty is linked to the age of the household head. In Figure 3.4, we separate households into three groups depending on the age of the household head. We focus on male-headed households, as nine in ten persons are members of such households. Almost two in three individuals live in households whose household head is between 30 to 50 years old. The incidence of poverty is highest among old prime-age (30-49 years) adult-headed households and lowest among the young prime-age (15-29 years) adult headed households.

Figure 3.4: Poverty and Age of Household Head

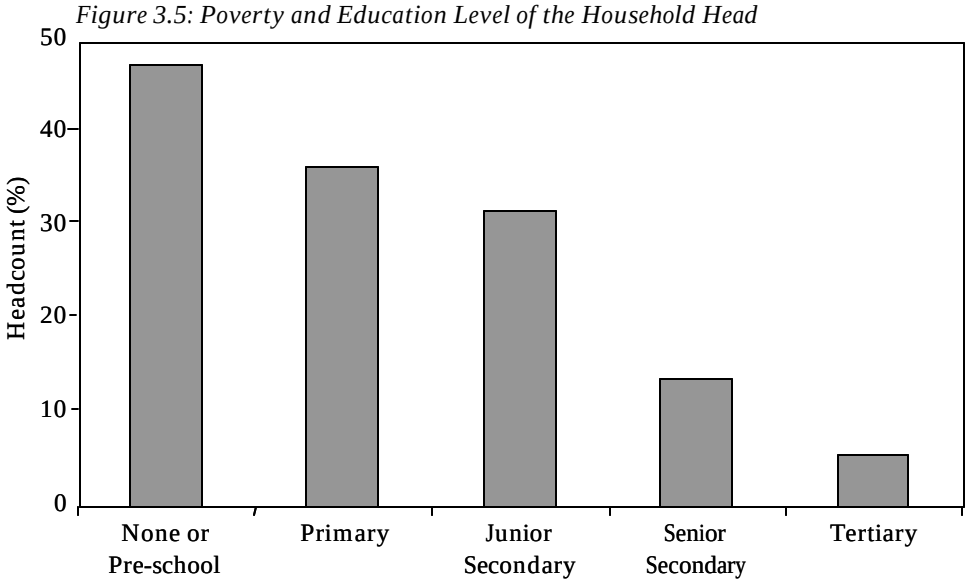


Source: 2001 TLSS.

Education

3.11 All over the world, education is an important predictor of poverty. Taking grade level completed as education indicator, we find that education levels of household heads are low. Close to three in five individuals live in families where the head has not completed primary education. No more than one in five has a household head that has finished at least junior secondary education.

Figure 3.5: Poverty and Education Level of the Household Head



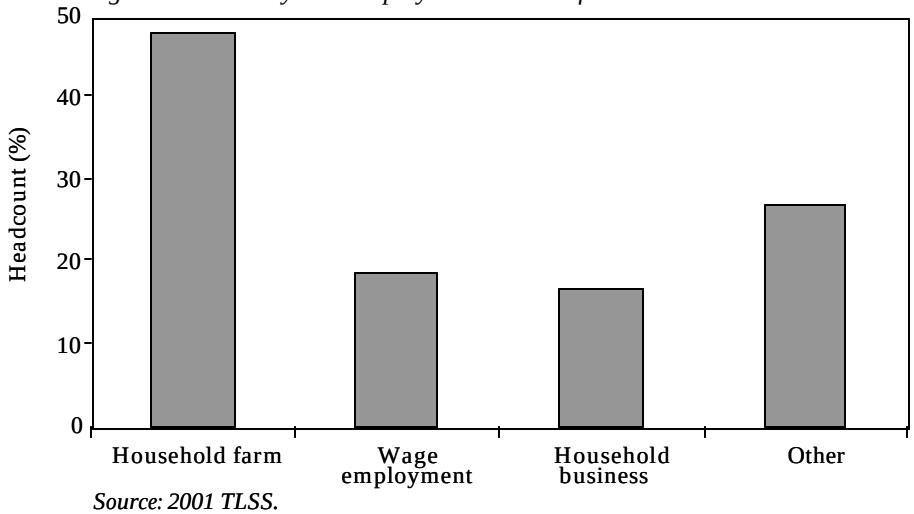
Source: 2001 TLSS.

3.12 Furthermore, as expected, poverty declines with the education level of the household head (see Figure 3.5). For example, close to one in two persons are poor in households where the household head has not completed primary education. This compares to less than one in seven where the head has at least senior secondary education. Finally, the average age of the household head drops off as we move from none or pre-school to secondary or tertiary education. This reflects the general increase in school enrollment and attainment over the last decades.

Employment

3.13 Jobs and income generation are at the core of the livelihood of families around the world. In Timor-Leste, the challenge of sustainable employment creation is especially urgent in view of the recent legacy. Many workers had formal employment in the bloated Indonesian public sector before 1999. The vast majority of these jobs disappeared with the move towards independence. Today, most families depend fully on farming (cultivation, husbandry, forestry, and aquaculture), and only few can supplement this income with receipts from household businesses.

Figure 3.6: Poverty and Employment Status of the Household Head



Source: 2001 TLSS.

3.14 What is the link between poverty and the occupation of the household head? We limit our attention to heads in the age bracket from 15 to 64, typically considered as the economically active phase in life. Economic activity can be of different types. We distinguish four broad categories (see Figure 3.6): self-employment in agriculture (household farm), remunerated work as an employee for somebody else, self-employment in non-agriculture (household business), and others. Almost seven in ten individuals live with heads that, over the course of the last 12 months, have only worked on their farm. Almost half of them are poor. For one in ten persons, household resources were at least partly gained from a household business (but not from remunerated employment), and for one in seven from wage employment. These two groups experience substantially less poverty, with less than two in ten falling below the poverty line. Finally, the residual category contains heads that are not pursuing any of these three activities, including living off wealth. They are worse off than those engaged in remunerated employment or household businesses, but still far better off than heads who depend entirely on farming.

Assets

3.15 While farming income and wage earnings move families toward self-sufficiency, opening the door to acquiring assets is the key to their achieving economic security. Assets are an insurance against economic uncertainty and a way of preparing for future expenses. In Timor-Leste, material assets come in the form of land and livestock. We will now look in turn at each of them to explore the link to poverty.

Land

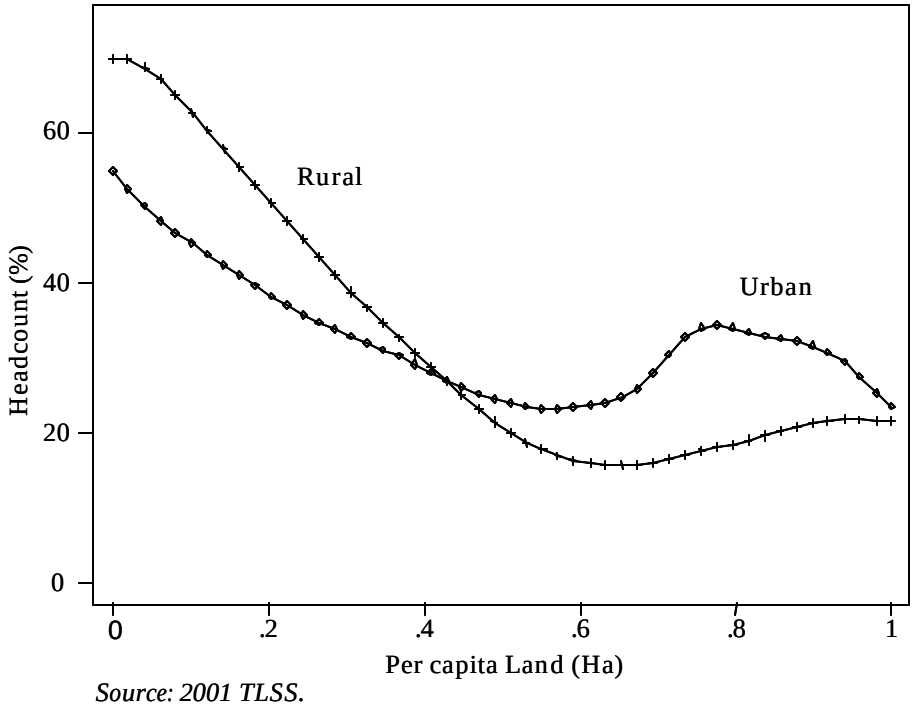
3.16 Land is the most important factor of production in agriculture, the primary source of income for three quarters of the population. Land access is determined by a traditional system of land tenure. Households claim to own 95 percent of the land under their control. Four fifths of this land was inherited and two-thirds of it is held on the basis of customary right. Only 4 percent of the land plots are disputed.

3.17 Land holdings are widespread, with 86 percent of the population living in households with access to land. Among those with land access, land holdings are typically limited to one or two plots. The size of the land holdings is small: the average area per person is 0.4 hectares, the median area per person is only 0.22 hectares, and fewer than one in twenty persons with land access hold more than one hectare per capita. Families make full use of their landholdings, with 95 percent cultivating their land over the last year. The quality of the land varies – about one fifth is irrigated and less than two fifths are flat. There is a wide urban-rural gap. As expected, rural households are more likely to own land, and on average have access to 70 percent more land than the urban citizens. Their land is also of higher quality, as it is more likely to be irrigated and level.

3.18 In order to investigate the relationship between poverty and land size among the land holders, we turn to Figure 3.7. It depicts the link between the poverty headcount and per capita land size up to one hectare, which covers 95 percent of the land holding population. For per capita land size of less than 0.4 ha, poverty is higher in rural than in urban areas, while the ranking reverses for larger land holdings. More importantly, poverty decreases

with larger land size, both in urban and rural areas: as expected, more land is linked to lower poverty[15].

Figure 3.7: Poverty and Land Size: Rural versus Urban



Source: 2001 TLSS.

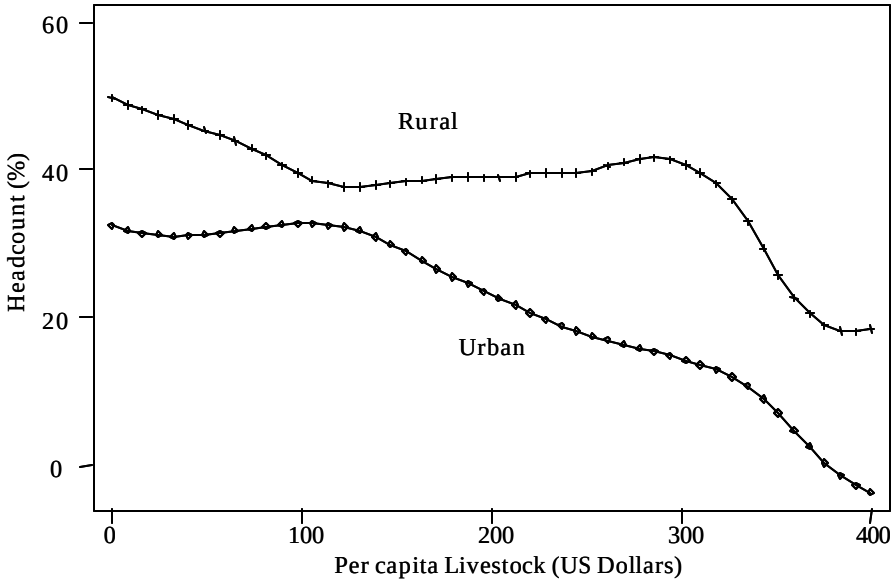
Livestock

3.19 Apart from land and housing, livestock is the most valuable household asset. Cattle, pigs, chicken and other animals are life-enhancing and life-supporting, feeding both people and soils. For many, livestock is one of the few means of creating assets and escaping poverty. Nine in ten rural dwellers live in households that own animals. The value of livestock assets is about US$100 per capita, which amounts to four times the monthly per capita expenditures. About one in ten persons in rural areas have per capita livestock holdings in excess of US$200. In cities, 70 percent of the population live in households which own animals, but the value of the livestock is only about half that in rural areas.

3.20 Are livestock holdings related to poverty in farming households? In Figure 3.8, we display the poverty headcount relative to livestock holding per capita, separating rural from urban areas. We find that for families in both villages and cities, more livestock is associated with less poverty. However, this relationship does not hold for all values of livestock assets. For example, for animal assets between US$100 to US$300, poverty appears broadly unchanged in rural areas, even though it is declining in urban areas. This reminds us that, while livestock is a key factor in the livelihood of families and communities, it is only one of many determinants.

[15] We find a similar pattern for the relationship between poverty and the estimated sales value of the land.

Figure 3.8: Poverty and Livestock: Rural versus Urban



Source: 2001 TLSS.

Infrastructure

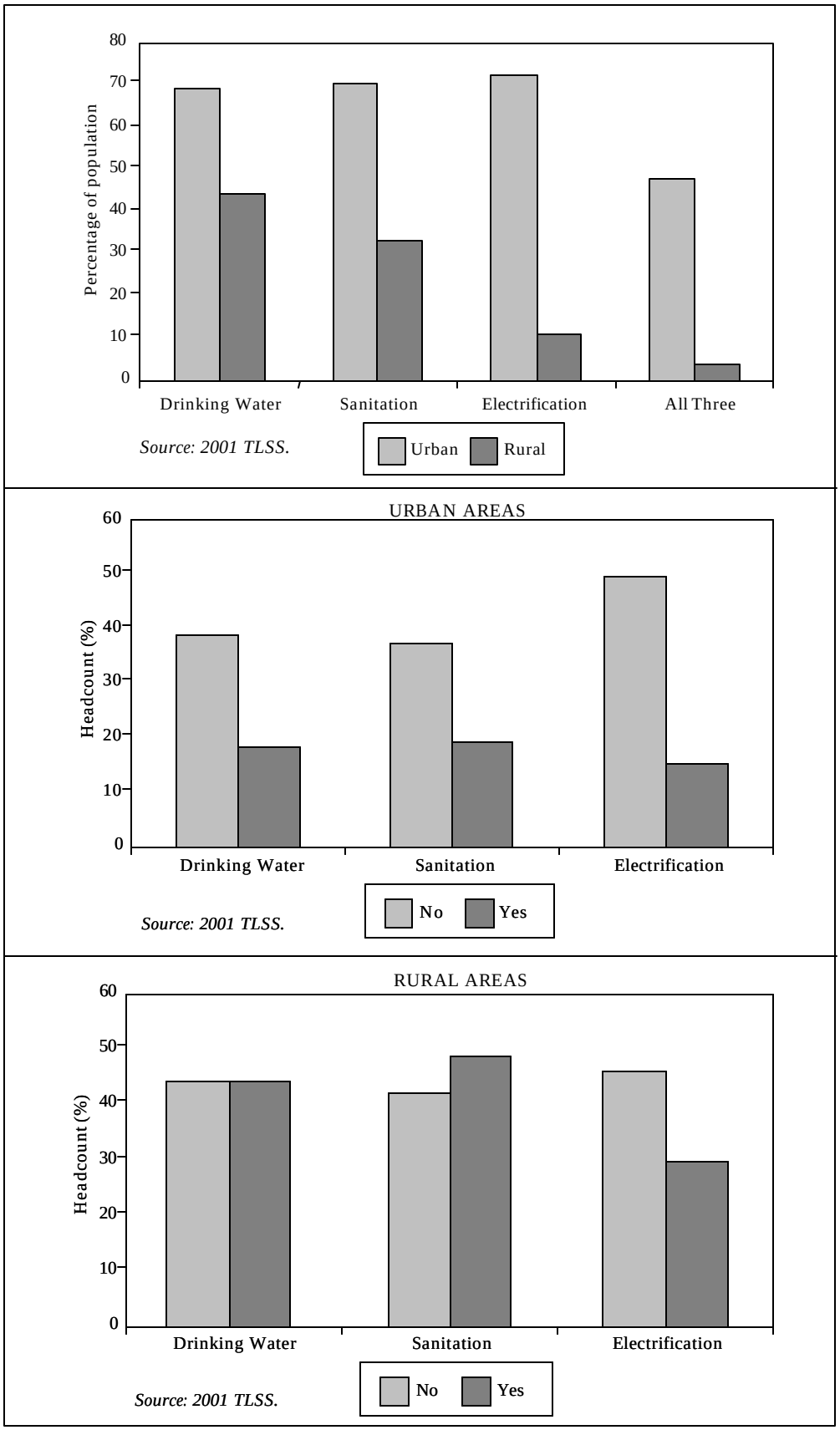
3.21 The importance of infrastructure for development can hardly be overstated. The experience of many low income countries shows that living standards improve dramatically as access to services, such as safe water, sanitation, electric power and transport, expand. However, quantity is no substitute for quality. Low operating efficiency, inadequate maintenance, and lack of attention to the needs of users can result in gains made from initial infrastructure investments evaporating quickly. Timor-Leste received a boost in infrastructure during the Indonesian occupation. Yet inadequate institutional incentives for maintenance, together with the destruction accompanying the violence, took a severe toll on households' access to services. The considerable effort to rehabilitating infrastructure could only begin to redress this situation, especially in rural areas.

3.22 Lack of infrastructure services, from safe water, sanitation to electricity, is clearly an important dimension of poverty. The numbers tell a stark picture. Nationwide, three in four persons live without electricity, three in five persons without safe sanitation and every other person without safe drinking water (see Figure 3.9). There is a vast divide between urban and rural areas. In urban areas 70 percent of the population has access to these services. The shortfall in rural areas relative to the urban share is 25 percentage points for drinking water, 37 for sanitation and 61 for electrification. In urban areas, almost half the population has access to all three services in contrast to only 4 percent in rural areas.

3.23 The evidence confirms that lack of infrastructure is a key constraint of the poor. Persons without access to infrastructure are in general also poorer than those with access to infrastructure. This holds especially in urban areas. These differences are sharpest with respect to access to electricity in both urban and rural areas. For example, while only one in seven urban dwellers with electricity are poor, almost one in two without electricity live below the poverty line. The corresponding gap for rural areas is only half as large (17 percent compared to 34 percent). For drinking water, just under one in five urban dwellers with safe drinking water are poor, compared to two in five urban citizens without drinking water. In rural areas, the differences are much less sharper with no differences in the headcount index

across groups with and without drinking water, but differences persist for the poverty gap and poverty severity measures.

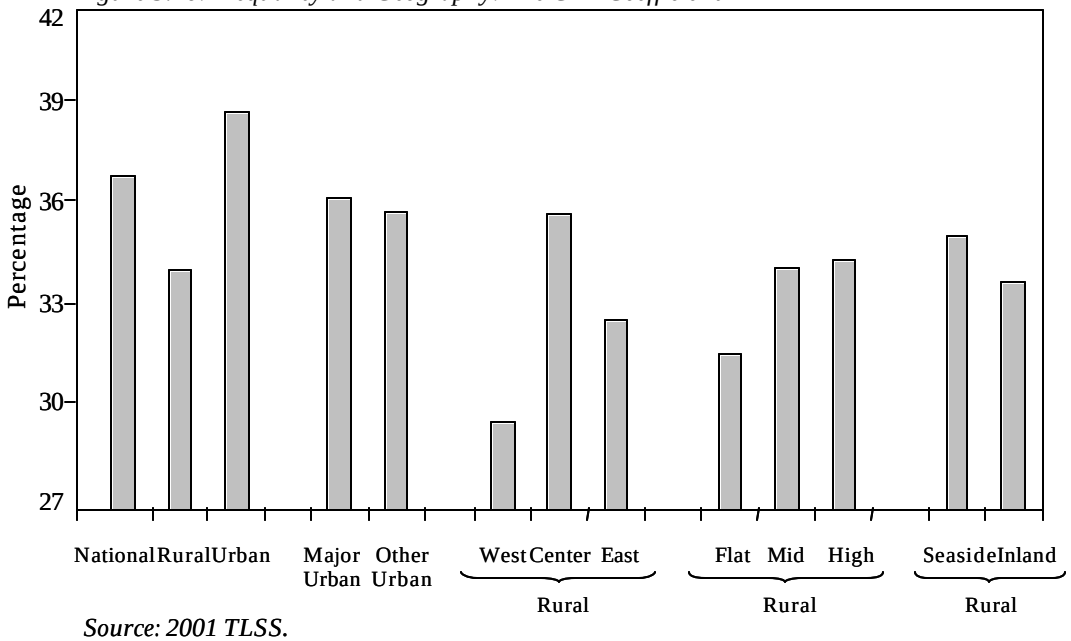
Figure 3.9: Poverty and Infrastructure



INEQUALITY

3.24 So far, our attention had been primarily on the lower half of the distribution. Now we ask how the rich fare relative to the poor. We find evidence of considerable inequality. For example, the poorest two fifths of the population, ranked on the basis of per capita expenditure, have an expenditure share of no more than 18 percent, and have monthly per capita expenditures below US$15.49, which is just above the poverty line of US$15.44. By contrast, the riches two fifths of the population have an expenditure share of about two thirds, and have monthly per capita expenditures of no less than US$18.22. The most popular inequality indicator, the Gini coefficient, is displayed in Figure 3.10.[16] Comparing inequality by the different geographical categories, we found a significant difference along the East-West dimension, and smaller variations for the other groupings. Inequality is higher in urban than in rural areas.

Figure 3.10: Inequality and Geography: The Gini Coefficient



Source: 2001 TLSS.

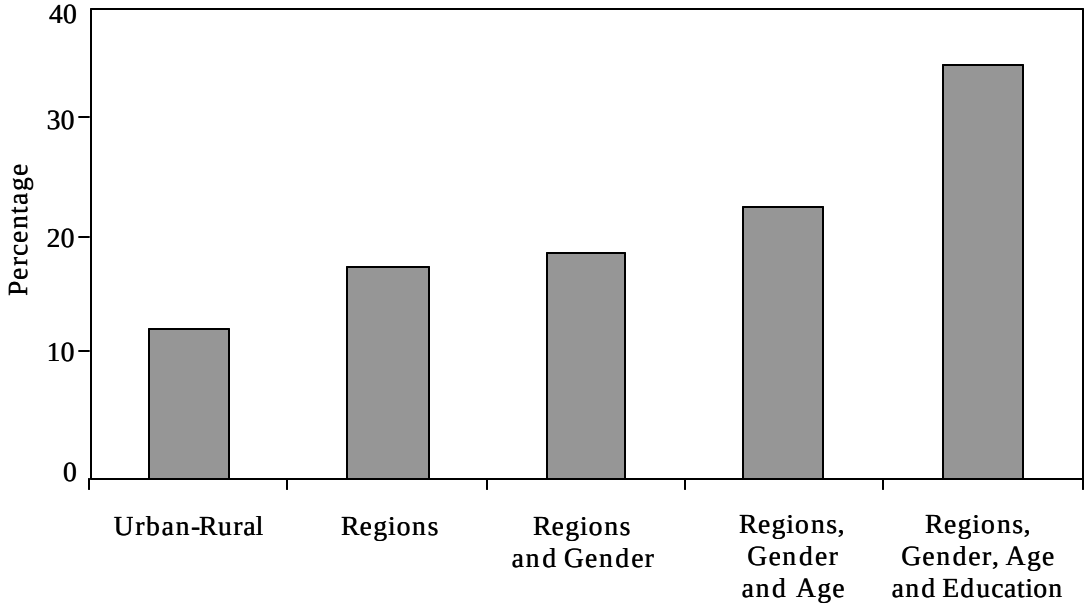
3.25 What can account for the variation in inequality? In Figure 3.11, we isolate five principal characteristics of the household that may be seen as potential explanations of the structure of inequality, using a decomposable inequality measure.[17] The first two are geographical features, namely degree of urbanization and the classification of regions into Major Urban Cities, Other Urban Centers, Rural West, Rural Center and Rural East. The last three dimensions are linked to the household head: gender, age (five groups: under 25, 25-34, 35-44, 45-54, 55 plus), and education (five groups: no primary, primary, junior secondary, senior secondary, and tertiary). For example, separating urban and rural differences accounts for 13 percent of

[16] The Gini index increases with inequality. A Gini index of zero indicates perfect equality, and an index of 100 perfect inequality.

[17] The General Entropy (GE(a)) class of inequality measures where the parameter a determines the weight given to distances of expenditures at the tails of the distribution. GE(0) is identical to the mean log deviation and gives more weight to the lower tail. GE(1) is the Theil index and applies equal weights across the distribution. The decompositions are presented for GE(0).

overall inequality. The largest contributions to explaining inequality come from urbanization and education. If we control for all five features we explain no more than one third of the observed inequality. The implication is that the real story of inequality is to be found within geographic, gender, age, and education groups.

Figure 3.11: Decomposition of Inequality



Note: Regions denotes a breakdown into Major Urban Centers, Other Urban Centers, Rural West, Rural Center, and Rural East.
Source: 2001 TLSS.

SUMMARY AND POLICY ISSUES

3.26 Poverty is widespread in Timor-Leste with two fifths of the population unable to cover basic food and non-food needs. Living standards vary across the country. Urban areas, especially the two major cities Dili and Baucau, are better off than rural areas. While three quarters of the population live in rural areas, six in seven poor reside there. Poverty also increases from East to Center and West, and, but less distinctly, from Lowland to Highland. More human capital through better education leads to lower poverty. Demographic characteristics matter too – larger households and families with a higher share of children and elderly are poorer. In rural areas, valuable land and livestock holdings imply low poverty. Secure access to infrastructure services, ranging from safe water and sanitation, to electricity, is essential for escaping poverty. Inequality is considerable and mostly within-group. Accounting for geography, gender, age, and education of the household head explains at most one third of overall inequality.

RESEARCH ISSUES

3.27 Timor-Leste's poor share a number of characteristics, including rural residence, low education and farming, which are in line with features of the poor in most developing countries. Country-specific are the findings on the geographical distribution of poverty, and

research is needed to better understand the differences between East and West, and Low- and Highland. Furthermore, since the fielding of TLSS in late 2001, Timor-Leste has undergone important changes, including the reduction in international presence and the reflux of emigrants. It will be important to assess the repercussions of these economic and social changes on poverty, including the urban-rural divide. Finally, in view of the importance of rural livelihoods for poverty, future work should establish a more detailed poverty profile of farming communities and explore the importance and origin of intra-regional differences in living standards.

4 Opportunity

4. OPPORTUNITY

4.1 Economic growth is a precondition for sustained poverty reduction. The NDP presents economic growth, together with poverty reduction, as its paramount objective. Creating opportunities for the poor is the first of four pillars of the Government's Poverty Reduction Strategy (see Box 4.1). It involves foremost making markets work for the poor. Providing an enabling environment for the private sector is essential for employment generation and the prosperity of small and micro-enterprises. The NDP stresses priority policies and legislation to improve the policy environment. This includes business regulations, trade policy and regulations, land and property legislation, labor legislation, the efficiency of law and order services, and infrastructure issues, especially related to power and transport[18]. Power sector issues present an important constraint to private sector development (Box 4.2). Clarifying property rights, in particular for assets such as land and other natural resources, is crucial to provide incentives to invest and to enable the poor to benefit from the returns to these assets. The Stability Program of January 2003, which outlines the key priorities for the next year in implementing the National Development Plan, highlights governance and job creation as key areas. Under the general theme of service delivery for poverty reduction, priority is also given to interventions in the agricultural sector to improve food security, market access and distribution. In this chapter, we discuss the role that employment, assets, and productivity play in shaping rural and urban livelihoods. The first part presents the employment structure, and the second section highlights key aspects of economic activity in villages and cities.[19] Economic infrastructure, while of crucial importance to poverty reduction, is not discussed since the survey had limited information on this aspect.

[18] See World Bank (2002) for a discussion of the key elements of improving the business environment.

[19] This chapter draws on Chapter 4, Volume II, and Foerster, J. (2002).

Box 4.1: Poverty Reduction Strategy: Opportunities for Economic Participation

The Government's Poverty Reduction Strategy has five main elements:

- Agriculture: The strategy aims to improve productivity in agriculture, which provides the livelihood of the majority of the poor. Rehabilitation and construction of irrigation systems, introduction of water harvesting techniques, wider distribution of improved seeds, fruits, protection of livestock and sustainable management of forest and other natural resources through community participation. Improvements in marketing and infrastructure are also planned.
- Informal sector: Increasing opportunities and improving productivity in the informal sector through training, introduction of appropriate technologies, and other support services including micro-credit are planned.
- Private sector development: Providing an enabling environment for private sector development, where priority policies and legislation are being drafted to improve the policy environment and to encourage both domestic and foreign private investment.
- Infrastructure: Provision of infrastructure, including roads and bridges, ports and airports, electricity, communication, and postal services.
- Pro-poor macroeconomic policies and public expenditure policies.

Source: Planning Commission (2002).

Main messages

Agriculture is the dominant sector of employment, accounting for four-fifths of all jobs nationwide, and for nine in ten jobs in rural areas. Overcoming the deprivations faced by low-productivity, volatile subsistence farming households requires a two-track approach.

- Reduce dependency on agriculture through promotion of non-farm employment opportunities and diversification out of agriculture. This includes activities carried out during slack periods, sectors with close ties to agriculture (farm equipment, agro-processing, transportation, marketing, and food processing), and ensuring that there are no barriers to rural-urban migration.
- Improve agricultural productivity through building up of the poor's human and physical assets (education, land, livestock) and improving the returns to these assets with the use of better seeds, fertilizers, diversifying into higher valued crops, improved farming technologies, and upgraded infrastructure (access to markets and credits). Investments in human capital will also help shift labor out of agriculture into non-farm work.

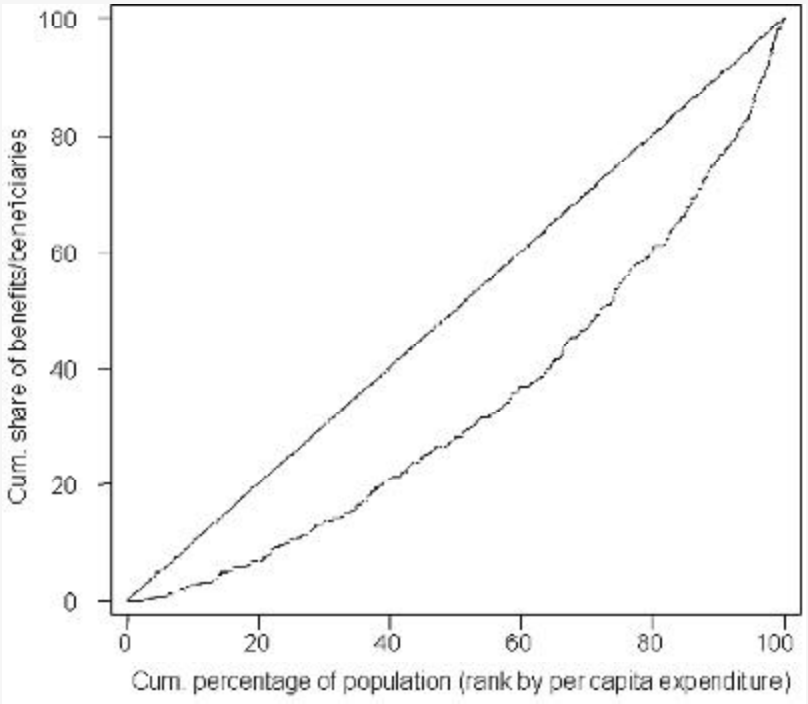
Urban areas are characterized by the coexistence of high wages and high unemployment. Some 15-20,000 young persons enter the job market each year. A lean public sector will not be able to provide them with employment. The discontent of unemployed youth, fuelled by material hardship, can pose a threat to the fragile social stability. A policy response should focus on these areas:

- Generate jobs in the private sector. This requires the promotion of a favorable business climate (providing a transparent legal and regulatory environment, including clarifying property rights, and developing basic business services such as accounting, finance, insurance and infrastructure), especially for small- and micro enterprises and labor-intensive sectors.
- Ensure that regulations do not distort the labor market and discourage employment. Wages should be allowed to adjust to levels of demand and supply as the economy adjusts to the withdrawal of the large international presence.

Box 4.2: Electricity

A reliable source of electricity is an important condition for a vibrant private sector. Electricity supply in Timor-Leste is entirely diesel based and costs have risen sharply in line with international oil prices. The electricity tariff effective August 2001 was 24.9 cents per kw / hour for businesses and US$1 / month for the first 25kw / hours and 24.9 cents for each additional kw / hour for residential users. This rate is high by international standards but this reflects the high unit costs. Since billing began, the rate of payment of invoices has been low. In spite of the high cost, supply remains erratic.

The government is spending a significant share of its budget for electricity subsidies. In FY2002, of the 20 percent allocated to economic services, over half went to power (11 percent). From a poverty perspective, the high share of government expenditures allocated to power utility operating subsidies is an issue of concern. The figure below shows that the distribution of the electricity subsidy is strongly regressive, that is, it benefits the rich more than the poor. Two fifths of the population that has electricity belongs to the richest quintile. The household survey only asks if the household was electrified but not how much electricity was consumed. The exact distribution of the subsidy across income groups is therefore difficult to quantify. However, to the extent that the rich are likely to consume more power, the subsidy would be even more regressive than shown. In principle, a higher and better enforced revenue collection among rich households could be a counterbalancing factor, but at the present time, fee collection is low, even in Dili. Hence there is little doubt that electricity subsidies are benefiting the rich far more than the poor. Furthermore, the opportunity cost of electricity subsidies – 16% of actual government expenditures in FY2001 and at least 11% in FY 2002 – is huge, diverting resources that could be applied in poverty reduction programs.

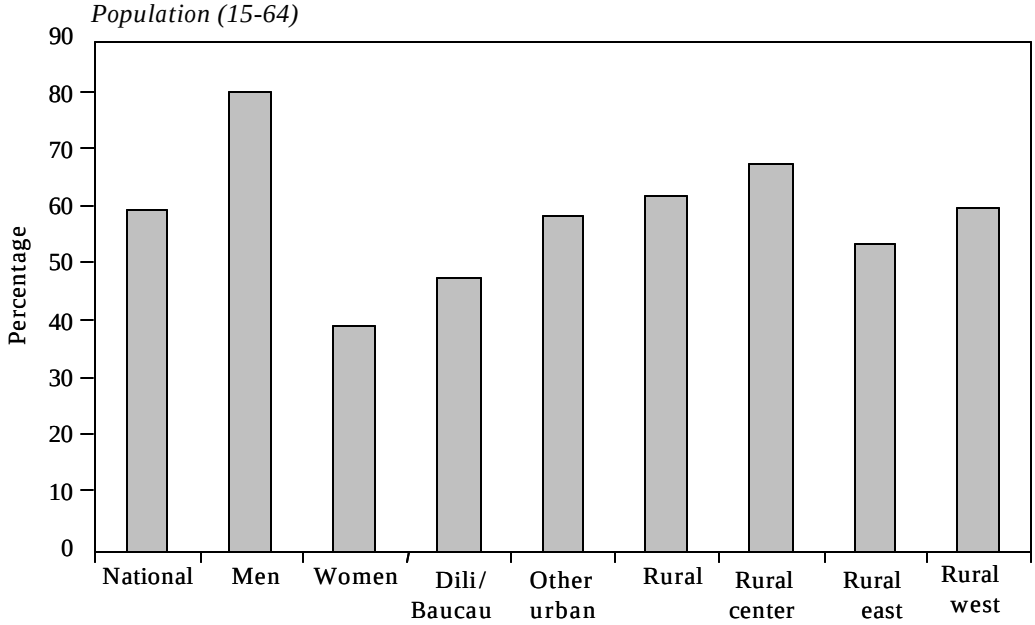


Source: World Bank (2002), World Bank (2002b) and 2001 TLSS.

EMPLOYMENT AND POVERTY

4.2 Secure employment is the key to escaping poverty. The population views it as the main priority for improving living standards and among the top priorities for the nation as a whole (Figure 2.6). The overall labor force participation rate is 60 percent (Figure 4.1). This figure is comparable to numbers under the Indonesian occupation.[20] Labor force participation rates are higher for men than women, lowest in Dili, and highest in the rural center. They are lowest among the youngest (15-24 years). Nine in ten prime aged males (25-54 years) participate in the labor force, while female participation rates peak after the child-bearing years.

Figure 4.1: Labor Force Participation Rates among the Economically Active Population (15-64)

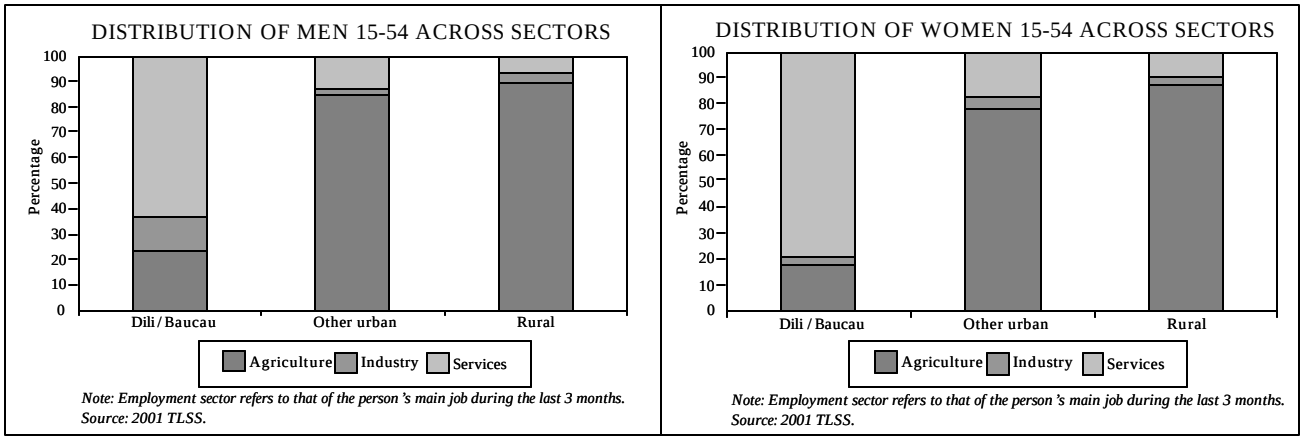


Source: 2001 TLSS.

4.3 Agriculture is the main sector of employment, accounting for four-fifths of all jobs. Only 4 percent of the labor force is employed in industry. By comparison, in 1998, 70 percent of all workers were employed in agriculture and 10 percent in industry. This indicates a reduction in formal employment opportunities since 1999, and a shift of employment back towards self-employment in agriculture. The sectoral composition of employment differs between urban and rural areas. Nine in ten men of prime working age between 15 and 64 are employed in agriculture in rural areas, while less than a quarter in Dili are employed in agriculture (Figure 4.2). Other urban areas are closer to rural areas in terms of their employment structure. Women are more likely to work in services in all areas than men.

[20] The participation rates from the Indonesian labor force survey were 62.5 percent in 1995, 61.5 percent in 1996, 61.1 percent in 1997, and 71.9 percent in 1998.

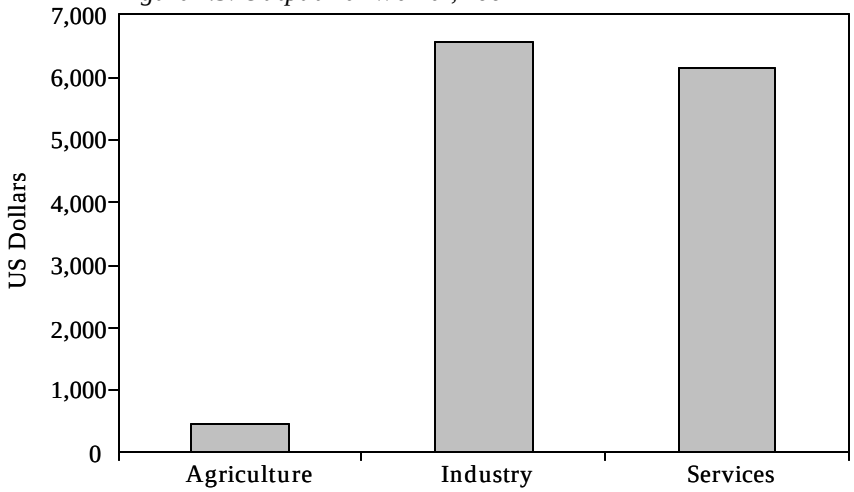
Figure 4.2: Employment Sector by Gender



Note: Employment sector refers to that of the person's main job during the last 3 months.
Source: 2001 TLSS.

4.4 While agriculture provides the bulk of employment, its contribution to non-oil GDP is less than one quarter. Productivity, defined as output per worker, in industry and services is more than ten times as high as in agriculture (see Figure 4.3).

Figure 4.3: Output Per Worker, 2001



Source: 2001 TLSS and Planning Commission (2002).

4.5 The move away from formal employment has also reduced wage earnings. Only one in ten workers receive wages or salaries. Male workers are slightly more likely (13 percent) to be wage employees than females (9 percent). By comparison, in 1998, 21 percent of male workers and 8 percent of females were wage employees. Wage employment is strongly associated with higher living standards. Only 3 percent of the male wage-workers belong to the poorest quintile, and over one fifth to the top quintile.

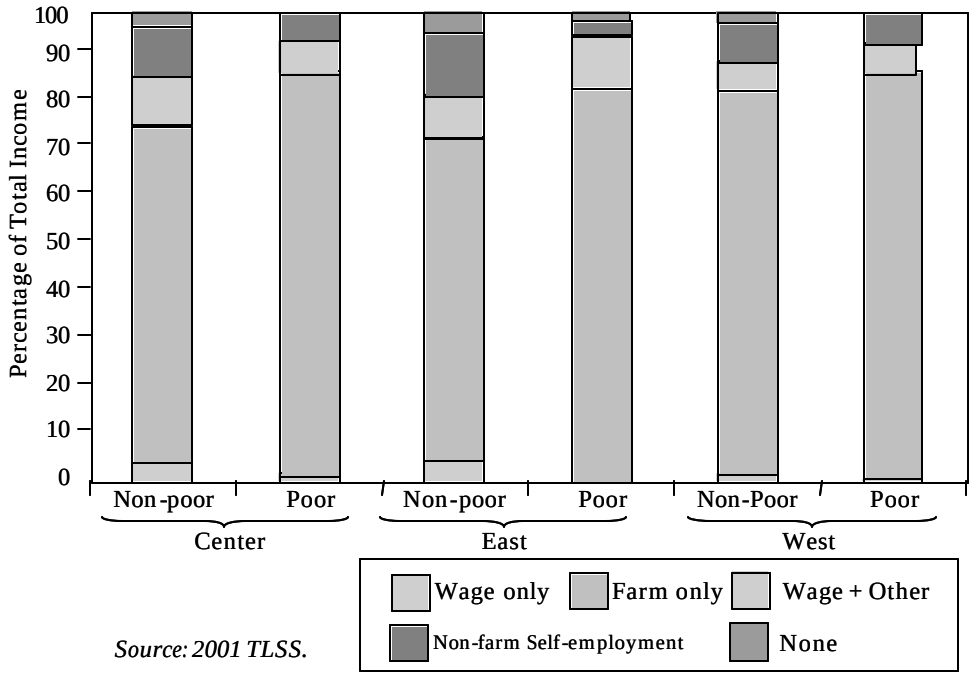
RURAL LIVING STANDARDS

4.6 Timor-Leste is a rural country. Three quarters of the population live in villages, and three in four rural households rely exclusively on income from agriculture. Figure 4.4 shows the patterns of labor income by region and poverty status. The overall diversification in income sources is limited. However, in all three regions, the non-poor depend less on farming

income than the poor. Diversifying income sources outside of agriculture is an important mechanism to cope with farm income fluctuations. In addition, non-farm income sources yield higher earnings. Earnings from wages are eight times higher than from farming, and three times higher than from non-farm self-employment (see Figure 4.5).

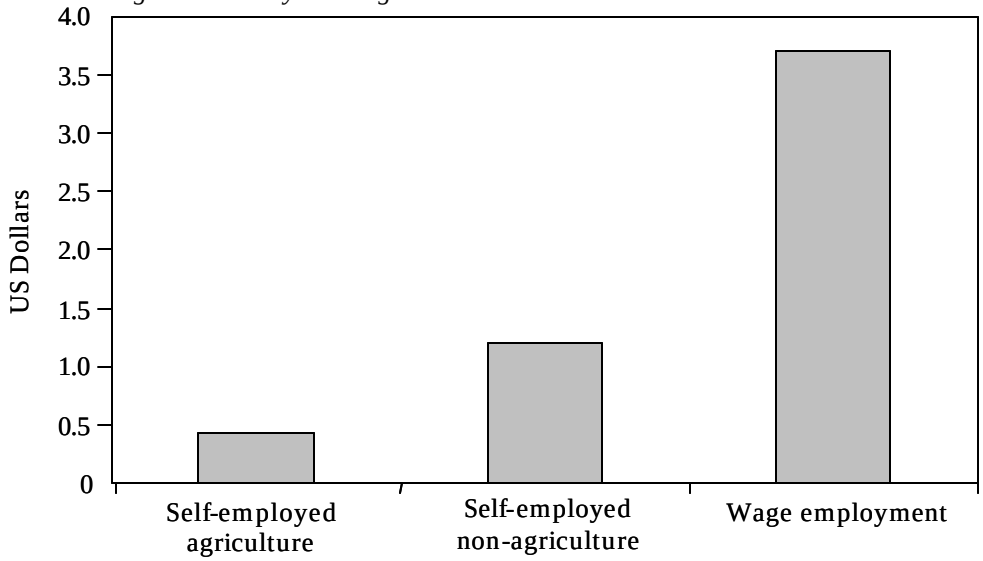
4.7 These numbers illustrate that non-farm employment is vital for raising living standards in rural areas. Nevertheless, agriculture will remain the main sector of employment and source of income for the majority of the population for decades to come. Improving productivity and incomes in agriculture are an important part of expanding opportunities for the poor, and have to be pursued in parallel with promoting the rural non-farm economy.

Figure 4.4: Household Sources of Income in Rural Areas



Source: 2001 TLSS.

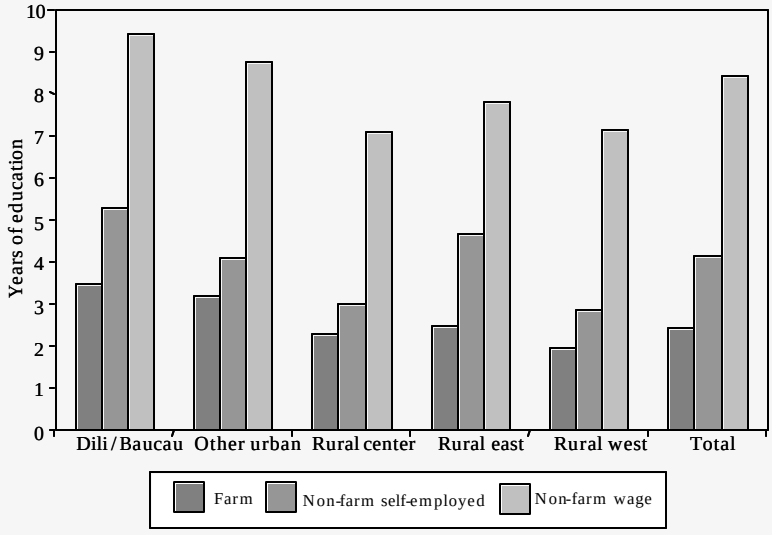
Figure 4.5: Daily Earnings in Rural Areas



Source: 2001 TLSS.

Box 4.3: Characteristics of Farm and Non-Farm Workers

Non-farm workers are only a small fraction of the workforce in Timor-Leste. Among the working age group (15-64 years) who are employed, just under one fifth engage in non-farm work as their primary occupation. Wage work predominates, with 12 percent of the employed work-force, and self-employed business employment accounts for the remainder. Four in ten non-farm workers are from Dili, another quarter from the Rural Center, and the other regions account for about one tenth each. The most important distinguishing feature between farm and non-farm worker is education: persons engaged in non-farm wage work have over eight years of education, those engaged in non-farm self-employment half that, and farmers have 2.4 years of education (see Figure). This pattern is consistent across regions.



Source: 2001 TLSS.

In addition, non-farm wage workers are also younger than farm workers (33 years versus 37 years), especially in urban areas and the Rural West. Finally, two-thirds of all non-farm workers are male, but the pattern differs across wage work and self-employed workers. Three out of every four wage workers is male, but only 1 in 2 non-farm self-employed workers is male. The fraction of males in non-farm self-employment is highest in Dili (two-thirds) but only between a third and forty percent in the other regions.

AGRICULTURE

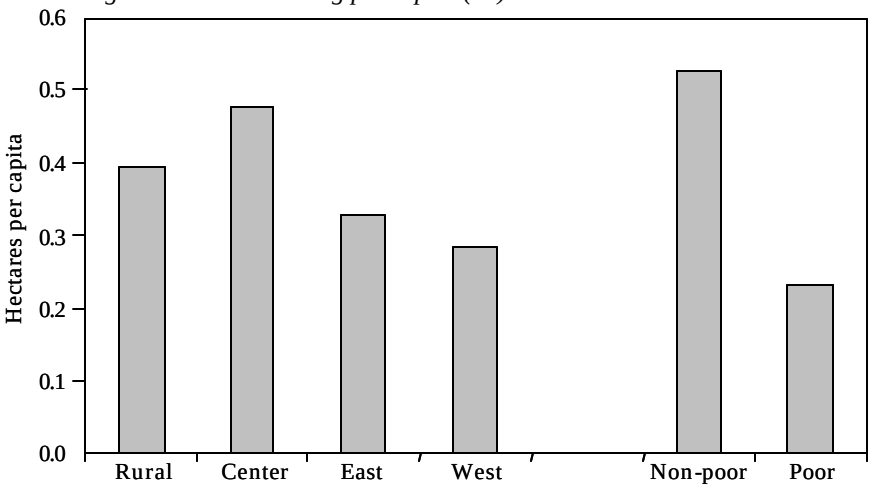
4.8 Agriculture, comprising crop and livestock activities, fisheries and forestry, accounted for about 32 percent of non-oil GDP between 1993-1998 (World Bank, 2002a). Crop cultivation dominated the sector, with livestock, fisheries and forestry contributing a much smaller role. In 2000, the share of agriculture declined to about 26 percent of non-oil GDP. The destruction of infrastructure and assets (livestock, food and seed stocks), displacement of large numbers of the population, and the elimination of production subsidies for crops such as rice, inputs such as fertilizers, fuel, and cooking oil, are some of the factors that contributed to this decline. The decline in agricultural output, in conjunction with a shift of employment towards agriculture noted above, implies that agricultural productivity declined between 1999 and 2002. The recovery in production of most major crops (except rice) by 2001 has been threatened by the reports of drought in the south of the country this year.

4.9 Agriculture in Timor-Leste is dominated by subsistence farmers. They produce for self-consumption, produce with basic inputs including unpaid family labor, small plots of land, basic tools, and rely mostly on rainwater. In the following, we characterize agriculture with regard to assets (land and livestock), crop production, factors of production, and crop sales.

Assets

4.10 Land is the main asset of rural households.[21] The average rural household owns 1.2 ha of land, or 0.4 ha per capita. Land ownership is fairly widespread, with only 6 percent of the rural population being landless. But, land ownership is distributed unequally. Among rural landholders, the poor own half as much land per capita than the non-poor (Figure 4.6). The Gini coefficient for per capita land holdings is 0.55, which is significantly higher than the distribution of consumption (0.37). As shown in Chapter 3, poverty declines with higher landholding. Most households have no formal titles to land, yet only 4 percent of land plots are disputed. The majority owns their land on the basis of customary rights and report having inherited it.

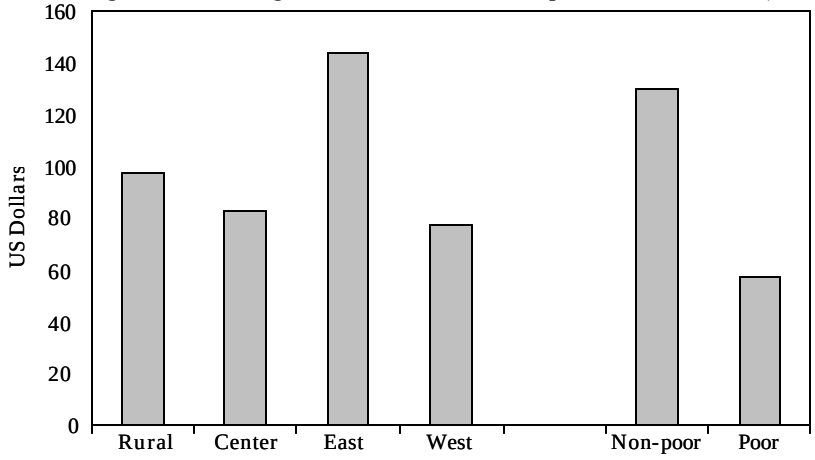
Figure 4.6: Landholding per capita (ha)



Source: 2001 TLSS.

4.11 Besides land, most rural households also own livestock. Chickens and pigs are the most common livestock, with seven in ten rural residents holding them. One in five rural residents own horses, while one in ten hold cows and buffaloes. The average value of livestock assets owned by the non-poor is double that of the poor on a per capita basis (Figure 4.7). The value of livestock assets held by households in the East exceeds those in the Center and West by 75-85

Figure 4.7: Average Livestock Value Per Capita in Rural Areas (US Dollars)



Source: 2001 TLSS.

[21] A large proportion of households in other urban areas also relies on agriculture for their livelihood and for many purposes will be combined with the rural sample. Average land ownership in other urban areas (0.25 ha per capita) is lower than in rural areas (0.38 ha per capita).

percent. Thus, the non-poor own more assets – twice the land per capita, and twice the livestock holdings than the poor and also have greater human capital, another important asset. As noted in Chapter 3, more livestock is associated with lower poverty.

Crop Production

4.12 Agriculture data are notoriously difficult to collect, and estimates of production and yields have to be treated with caution. Higher cultivable land per capita translates into greater production of crops per capita for the non-poor than the poor. The non-poor produce more per capita of the main staples (rice, maize, cassava)[22]. They also produce significantly higher amounts of the higher-value crops, such as coffee, fruits, vegetables (Table 4.1). Compared to the poor, the non-poor produce in per capita terms 50 percent more rice, one quarter more maize, and one fifth more cassava. They produce four and a half times the amount of coffee cherries, and seven times the amount of fruit. Poverty rates by different crops produced shows that coffee producing households are the least poor. In summary, a larger fraction of non-poor households grow the higher value crops (coffee, vegetables, and fruit) and they produce more of all crops, especially the higher value crops.

Table 4.1: Per Capita Annual Production of Different Crops (kg/capita)

	Total (tons/year)	Per capita production (kg)		
	Poor	National	Non poor	
Gogo rice	3,622	4.4	5.5	2.6
Rice	53,845	65.0	75.2	49.5
Maize	64,931	78.4	85.5	67.6
Cassava	48,056	58.0	62.5	51.2
Coffee cherries	19,285	23.3	33.7	7.5
Coffee dry bean	14,134	17.1	20.2	12.3
Kidney bean	3,722	4.5	4.7	4.2
Sweet potato	24,705	29.8	31.5	27.3
Potato	968	1.2	1.1	1.3
Taro	13,111	15.8	17.1	13.9
Squash	8,932	10.8	14.0	5.8
Mung bean	1,786	2.2	2.7	1.3
Soy bean	819	1.0	1.0	1.0
Coconuts	2,115	2.6	3.3	1.4
Peanuts	1,468	1.8	2.1	1.3
Vegetables	1,860	2.2	2.7	1.6
Bananas	19,138	23.1	23.9	21.9
Other fruit	3,052	3.7	5.6	0.7

Source: 2001 TLSS.

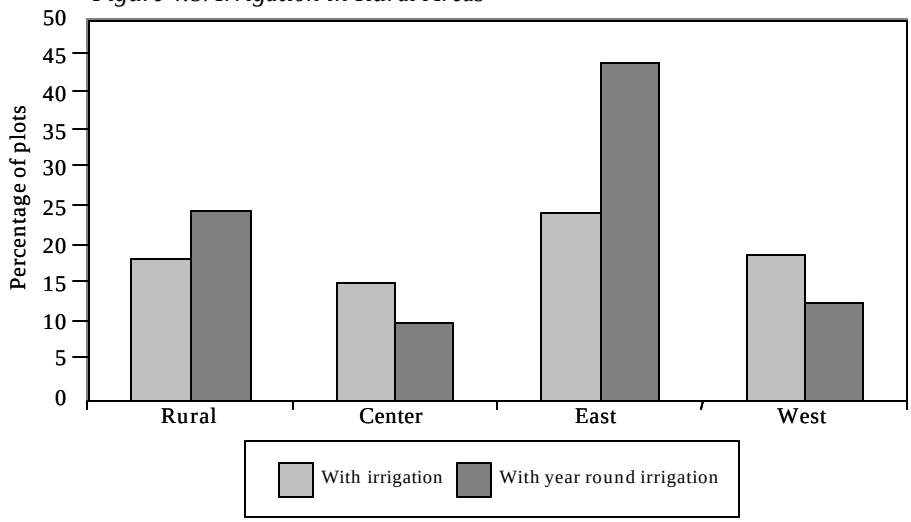
Factors of production

4.13 What explains the higher production of the non-poor than the poor? One key factor is the availability of more, and better quality land. One important dimension of land quality is

[22] The differences are even larger when you compare the poorest and the richest quintiles. The richest quintile has larger plots of land for all crops (except soy bean). The differences are marginal for peanuts, coconut, squash, cassava and maize, but larger for crops such as rice, upland rice, coffee, vegetables and fruit. These differences are especially large for higher paying crops such as coffee, vegetables and fruit.

irrigation.[23] Just under a fifth of all plots are irrigated and a quarter of all irrigated plots have year-round irrigation in 2001 (Figure 4.8). The substantial investments in reconstruction in 2002 would have expanded the plots under irrigation. The limited availability of irrigation throws farmers at the mercy of the vagaries of weather, and their fortunes are linked to rainfall availability. Irrigation is used primarily to grow rice, but not exclusively. The East has the largest fraction of irrigated plots, and 44 percent of the irrigation is year round.[24] And, while irrigation is limited, the non-poor have larger irrigated landholding per capita (0.13 ha) than the poor (0.04).

Figure 4.8: Irrigation in Rural Areas



Source: 2001 TLSS.

4.14 Achieving higher yields is also linked to the use of labor and other inputs and better access to markets. Besides land, the main factor of production is labor – within agriculture, 98.5 percent are self-employed working solo or assisted by family or unpaid household workers. The use of other inputs, such as fertilizer, pesticides, manure, and improved seeds is very limited. Among all agricultural households, only 3 percent of households used fertilizer, manure, or pesticides, and almost all of them are non-poor. Over three quarters of the farmers in late 2001 report that they do not use such inputs due to lack of availability. Households in the rural East and rural West are more likely to use these inputs. Land preparation is undertaken primarily with basic tools, with very limited use of equipment such as tractors.

4.15 Access to credit from formal sources is still very limited. In late 2001, for the country as a whole, 12 percent of the population borrowed money in the past year. While 14 percent of the poor borrowed, only 11 percent of the non-poor borrowed. Just under seven out of ten people borrowed once, a quarter borrowed twice. Nine out of ten people who borrowed did so from friends and relatives and the loans were primarily for consumption. Only 2 percent borrowed for agricultural inputs and four percent for a non-agricultural business.

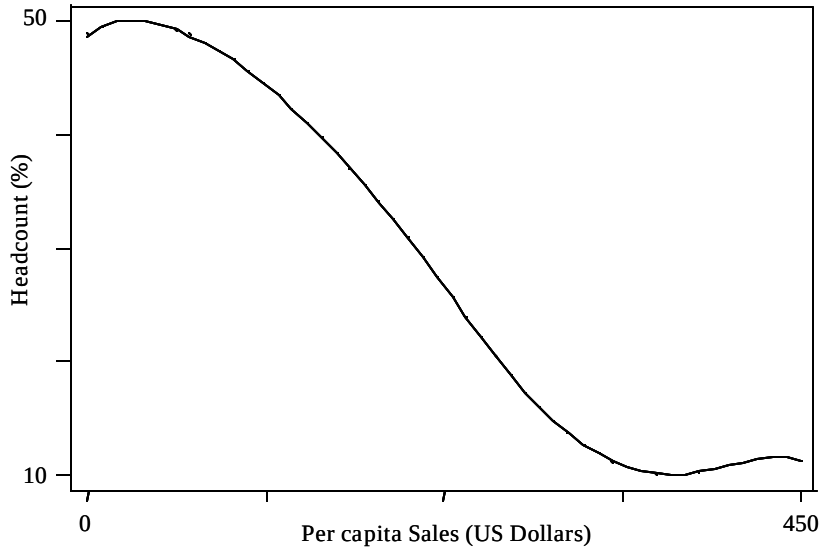
[23] Data are also available on the slope of the land. Steep slopes are associated with higher poverty in the East, but with lower poverty rates in the Center, where households grow coffee on these slopes. In the West there is little correlation between slope and poverty rates.

[24] Land holding in other urban areas is smaller, but the poor / non-poor difference persists among landowners.

Crop Sales

4.16 Most farmers are subsistence farmers who produce for self-consumption. Overall, about two-thirds of crops are self-consumed. Integration into markets allows farmers to engage in the production of higher earning cash crops. At the national level, we find that households with higher crop sales per capita are less poor (Figure 4.9). Poorer farmers sell more low-paying crops such as rice, maize, taro, squash and different types of beans. Non-poor farmers vend high-valued crops, such as coffee, vegetables and fruit. This relationship does not, however, hold up for the East, where households tend to sell less, on average, yet are less poor than households in the Center and West (Box 4.4).

Figure 4.9: Value of Per Capita Crop Sales and Poverty Rate



Source: 2001 TLSS.

Box 4.4: How Large and Stable are Regional Differences?

The design of efficient policies that are tailored to the specific conditions of a country presents a challenge for government and development agencies. In this context, the extent of regional differences is one essential input into policy priorities. If regions are marked by sharp and stable differences in living standards, then a geographically differentiated strategy might be appropriate (for example, fiscal transfer rules for regional transfers that transfer more per capita to poorer regions, incentives for investment etc). While other factors have to be taken into account in the design of such policies, establishing the extent and nature of regional gaps is an important first step.

In Timor-Leste, the percentage of the population living in poverty is the lowest in Dili / Baucau, followed by the Rural East and Other Urban Centers. Poverty is highest in Rural Center and Rural West. Are these differences significant? A first question is the extent to which the rankings depend on the precise level of the poverty line. Analysis shows that in rural areas, the ranking between Rural West and Rural Center is ambiguous, and Rural East is unambiguously the least poor. Nationwide, Dili / Baucau is the best off region. However, the differences between Dili / Baucau and Rural East narrow under alternate assumptions. For example, excluding housing from the consumption measure and poverty line leads to only slightly higher poverty in the Rural East relative to Dili / Baucau. But other welfare indicators demonstrate that Dili / Baucau is better off than the other parts of the country. It has substantially better access to infrastructure services (safe drinking water, sanitation, electricity, and access to markets), higher education outcomes (lower illiteracy rates, higher primary and secondary net enrolment rates), and superior immunization coverage for children under the age of one. Food security indicators also confirm that the major cities are the best off: no more than one third report that their food consumption was less than adequate in contrast to two-thirds of the population in Rural East. The average distance to an everyday market in the Rural East is over

Box 4.4: How Large and Stable are Regional Differences? (contd.)

25 km in contrast to just 1.6 km in Dili/Baucau. In summary, while the consumption poverty rankings between the major cities and the Rural East narrow under alternate assumptions, other non expenditure indicators of welfare confirm that Dili/Baucau is the most well-off region.

Turning to rural areas, why does Rural East have the lowest poverty in spite of its more limited access to markets?

- First, being furthest away from the border to Indonesia, the Rural East was relatively protected during the violence in September 1999, as confirmed by survey indicators of destruction of housing and of livestock values compared to 1999. The worst hit areas were Rural West and Other Urban Centers. Almost 6 in 10 houses in Rural West were destroyed during the violence in 1999 compared to less than one tenth in Rural East. Average per capita livestock holdings in 2001 were only 17 percent of their 1999 value in Rural West and 40 percent in Other Urban areas, but almost three quarters in Rural East. Subjective well-being data also corroborate that the population in the Rural East reported the lowest downward mobility in terms of both economic well-being and power between 1999 and 2001.
- Second, the population in Rural East currently has substantially higher values of some type of assets – average livestock values per capita in Rural East are the highest, almost 80 percent higher than in Rural Center, and almost double that in Rural West. Per capita land holdings in Rural East are 0.33 per capita, lower than in Rural Center (0.51), but the amount of irrigated land per capita is significantly higher in Rural East (0.15 ha per capita) than in Rural Center or Rural West (around 0.05 ha per capita).
- Third, evidence from the suco survey indicates that some areas in Rural East have two harvests of rice, with the second harvest in October. Thus, the timing of the survey with respect to the second harvest might partly explain the lower poverty.
- Finally, employment data from the household survey indicate that while labor force participation rates in Rural East are lower than in Rural Center or Rural West, largely due to lower female participation rates, the average hours worked by those in the labor force are significantly higher (44 hours per week compared to 36-37 hours). This may reflect additional labor needs during harvesting time.

The data point to a number of factors that explain the relative prosperity in the Rural East compared to other rural areas. Yet, it is difficult to assess whether this reflects a transitional position or a truly structural phenomenon. While consumption poverty indicators rank Rural East lowest, other welfare indicators show that Rural East is not consistently better off than other rural areas. In summary, while Dili/Baucau is clearly the most prosperous region, other geographic differences are less robust and may be affected by transitional factors.

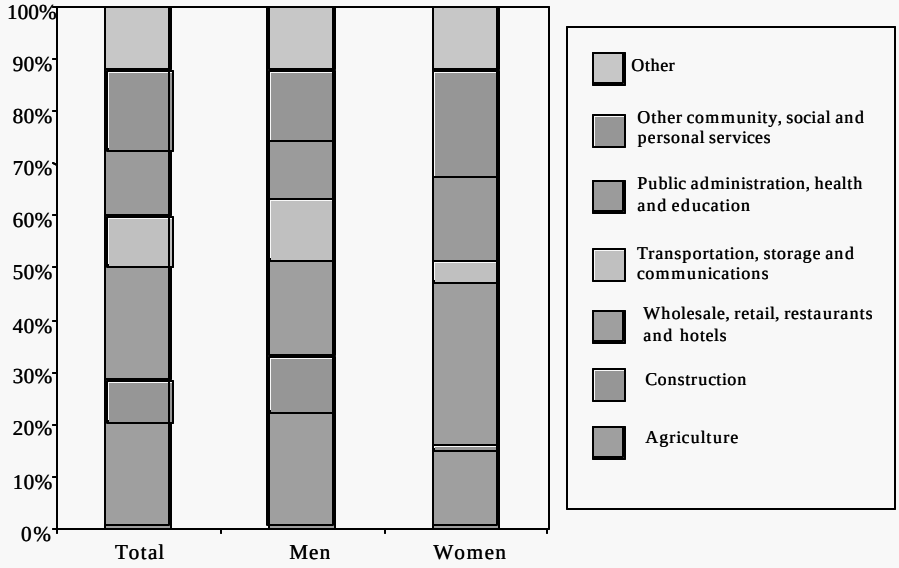
URBAN LIVING STANDARDS

4.17 Labor market issues differ for rural and urban segments. While the main concerns in rural areas are low productivity and lack of off-farm employment, urban workers are faced with the fundamental problem of job security. With the withdrawal of the large international presence in major urban centers, many service sector jobs will be lost. As noted above, the service sector is the main employer in Dili/Baucau (Box 4.5). This section focuses on two aspects of the urban labor market: unemployment and wages.

4.18 Unemployment is largely an urban phenomenon. According to international standards, defined by the International Labor Organization, the unemployed are persons who are part of the labor force and, in the last 7 days, did not work but were looking for work. This international definition may not provide an adequate picture of joblessness in developing countries due to the importance of seasonality and the discouraged worker effect, i.e. take

Box 4.5: Jobs in Dili/Baucau

Most jobs in Dili/Baucau in late 2001 were in the service sector, which employed seven in ten workers. Wholesale trade, retail, restaurants and hotels is the largest sub-sector within services employing one in five workers. While one in three women work in this sector, less than one in five men do. Almost three in ten jobs are in community, personal, social services, including in education and health, and these jobs account for almost two in five jobs that women hold. One in ten people work in transportation and communications, and just under one in ten in construction. These jobs are dominated by men. Agriculture, the predominant employer in Timor-Leste as a whole, accounts for only one in five jobs in the major urban cities. This pattern is broadly consistent across age cohorts, although the 25-44 year olds are less likely to work in agriculture. While two out of five uneducated workers work in agriculture, only one in twenty among those with senior secondary education do.



Four in ten people are self-employed. Older workers (45-64 years) are more likely to be self-employed, with more than half engaged in family businesses. Women are also more likely to be self-employed. One in four workers are employees in the private sector, and another one in five in the public sector. A third of all 15-24 year olds work as employees in the private sector. Higher education allows workers to access more formal jobs. Four out of five workers with at least some senior secondary education are employees compared to only one fifth among those with no education

account of individuals who are willing to work but have ceased to look actively for jobs. This definition is more appropriate for wage and salaried workers. In rural areas, where most individuals work as self-employed in the household farm, this concept of unemployment is particularly difficult to apply – underemployment and low productivity jobs are the main issues. Our data allow for an alternate classification of workers as "jobless" based on the self-reported main occupation of every working-age individual. Overall, there is a considerable but imperfect overlap between the two definitions (see Box 4.6).

4.19 Are those without jobs poorer than those with jobs? Table 4.2 compares poverty rates in Dili and Baucau of the working, the jobless, and those out of the labor force for both definitions of unemployment. The working are further divided into those employed inside and outside of agriculture. For population aged 15-64, poverty is highest amongst those working in agriculture. It is between two to three times as high as for the unemployed or jobless, confirming the close connection of poverty and dependence on agriculture. Poverty among those without jobs is higher than those employed in non-agriculture jobs, but the

Box 4.6: Two Concepts of Unemployment

We present two alternate definitions of the unemployed. First, we use the standard international definition. Second, we use the information on the self-reported main occupation of every working-age individual. The latter definition implicitly has a longer time frame over which the individuals response is based, in contrast to the international definition that refers to the past seven days. The unemployed are identified as those responding "jobless", and the out of the labor force as those reporting "pensioner", "housewife", and "student". The table shows the working age population (15-64 years) divided into three groups – working, unemployed, and out-of-the labor force. There is considerable but imperfect overlap between the two definitions. Overall, about four in five working-age individuals are classified into the three groups (working, unemployed, or being out of the labor force) identically by both definitions. However, only about one third of those classified as unemployed in Dili/Baucau according to the international definition label themselves as jobless, and half consider themselves to be out of the labor force.

	International classification			
	Working	Unemployed	Out of Labor Force	Total
National				
Self-reported activity				
Working	47	1	4	52
Jobless	0	1	2	3
Out of Labor Force	10	1	34	45
Total	57	3	40	100
Dilli/Baucau				
Self-reported activity				
Working	34	1	2	38
Jobless	0	3	6	10
Out of Labor Force	5	5	43	52
Total	39	10	52	100

Source: 2001 TLSS

difference is relatively small. However, among the 15-34 year olds, the unemployed are substantially poorer than those working in non-agricultural jobs, especially according to the self-reported classification. The unemployed have a poverty rate almost twice as high according to the international definition, and three times as high according to the occupational definition.

4.20 While the poverty incidence differs somewhat between the two concepts of unemployment, the definitions closely coincide with regard to unemployment rates by different characteristics, In Table 4.3, we focus on unemployment in Dili/Baucau according to the international definition. Workers in those major urban centers face the highest unemployment rates, with one fifth of the workforce being unemployed (Figure 4.10). Women have higher unemployment rates - one in four women are unemployed, compared to one in seven men. Unemployment rates decline sharply with age: the unemployment rate among the youth (15-24) is a staggering 43 percent, it declines to 17 percent for the 25-34 year olds, and 9 percent of the over 35 year olds.

Table 4.2: Poverty Rates by Labor Status

	Dilli / Baucau	
	15-64	15-34
International classification		
Self-reported activity		
Working	13.8	9.6
Agriculture	30.0	25.7
Non-agriculture	10.1	6.8
Unemployed	11.5	12.7
Out of Labor Force	12.0	11.5
Self-reported activity		
Working	13.0	9.7
Agriculture	30.5	26.4
Non-agriculture	9.1	5.7
Jobless	14.8	17.0
Out of Labor Force	12.0	10.6
Total	12.6	11.1

Source: 2001 TLSS

4.21 To look at the joint impact of worker characteristics on unemployment, we turn to a multivariate analysis.[25] The model includes as explanatory variables personal characteristics (age, gender, education, marital status), and household variables (household composition and assets). Separate estimations are run for the 15-64 year olds and for the 15-34 year olds in Dili / Baucau. The results confirm the previous findings. Among the working age population, women are more likely to be unemployed. Controlling for other characteristics, they have a six percent higher probability of being unemployed. Unemployment declines also strongly with age – those older than 24 years of age are 13 to 16 percent more likely to be unemployed than the 15-24 year olds. Controlling for other characteristics, education does not have a significant effect on employment.[26] These results are confirmed for the 15-34 year olds sub-group. In this case, 25-34 year olds are 10 percent less likely to be unemployed than the 15-24 year olds.

Figure 4.10: Unemployment Rates

Source: 2001 TLSS.

[25] A probit model is estimated for individuals in the labor force. The dependent variable takes a value 1 if the person is unemployed and zero if the person is working.

[26] The coefficients are positive and in some cases near significant, suggesting that in Dili / Baucau, unemployment is a problem of the educated.

4.22 Next, we focus on the pool of the unemployed (Table 4.3). The bulk of the unemployed are young and educated males. Half the unemployed in Dili / Baucau are young (15-24 years) and another third are between 25 and 34 years. While men face a lower likelihood of unemployment, they also represent the bulk of the labor force and therefore of the unemployed. Two in three unemployed are male. Half of the unemployed have higher secondary education or more.

Table 4.3: Unemployment Rates and Characteristics of the Unemployed

	Unemployment rates		Composition of unemployed	
	Dili / Baucau	National	Dili / Baucau	National
Total	19.7	5.3	100	100
Gender				
Men	17.6	4.6	63	57
Women	25.0	6.8	37	43
Ages group				
15 / 24	43.0	14.9	50	56
24 / 34	16.5	5.0	31	27
35 / 44	10.8	2.3	13	10
45 / 54	8.3	1.0	5	3
55 / 64	5.6	1.6	1	3
Education				
No school	11.0	2.0	12	20
Primary	17.2	6.6	20	27
Junior high school	27.1	8.4	17	15
Senior high school or more	23.7	14.9	50	38

Source: 2001 TLSS

4.23 In spite of high unemployment, wages are high. The large influx of international agencies, NGOs and other foreign employers inflated earnings. Figure 4.11 shows hourly wages for urban employees, in addition to those for production manufacturing workers for Indonesia.[27] As a cross-check, we have also included the rates posted for the Timor-Leste civil service, which are in line with our estimates on TLSS hourly wages for public sector employment. The wages for workers in Timor-Leste are on the order of two to three times higher than the Indonesian wages. These findings confirm evidence from other sources. For example, unskilled farm labor wages in the coffee industry are estimated to be three times higher now compared to rates in Indonesia (World Bank 2002)[28]. According to a widely held view within Timor-Leste, this differential is justified in view of the significantly higher cost-of-living compared to Indonesia. These high wages, however, erode Timor-Leste's competitiveness. The coexistence of high wages and unemployment is a puzzle. Civil service wages were set initially at rates starting at US$85 per month, which were about three times the average in Indonesia. These relatively high wages at the lower grade levels may have set the levels for other private sector wages leading overall to an uncompetitive real wage.[29] More recent information indicates that private sector wages have started to fall. In early 2003, one of the largest employers in Dili reduced the pay for non-skilled workers by one

[27] The Indonesian figure is a national average. Wages in Bali and other eastern provinces are even lower.

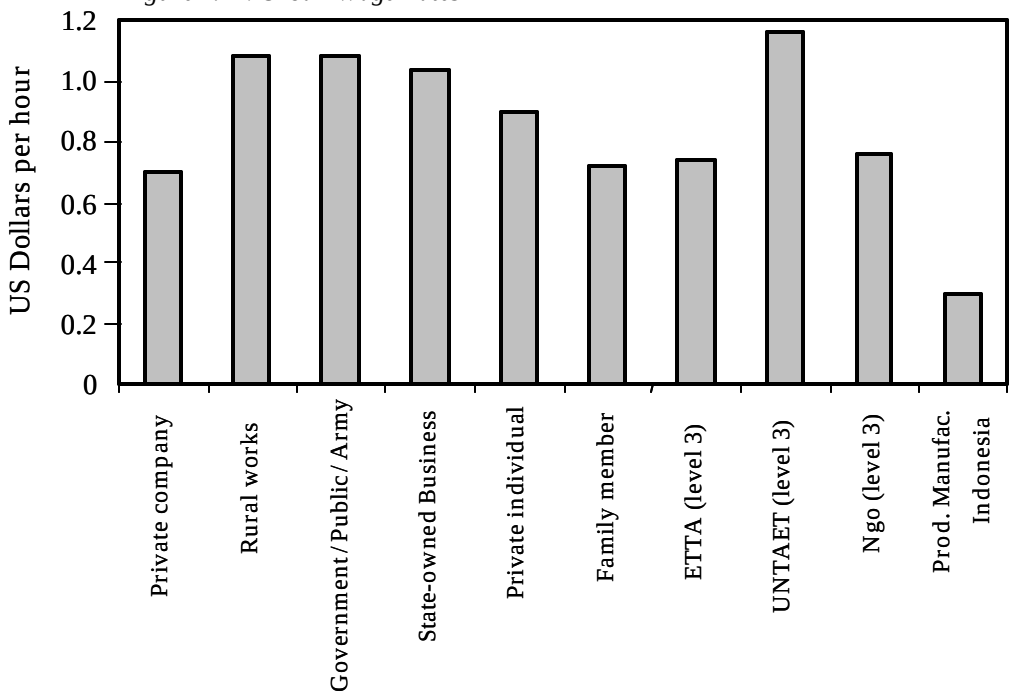
[28] See World Bank (2002) for a discussion of this issue.

[29] ETTA salaries correspond reasonably closely to the mid-points of the salaries agreed by the NGOs and it seems that the NGOs used ETTA scales as a reference point (World Bank, 2002).

quarter to $90/month. With public sector wages remaining unchanged, one implication of this adjustment is that the private-public wage gap is increasing.

4.24 High urban wages, fueled by a service sector boom triggered by international presence, and reduced public sector employment are likely to have contributed to the decline in wage employment in overall employment from 1998 to 2001. These high wages have direct implications on private sector employment opportunities. Private employers, unable to meet the high wage costs, may export jobs and shift towards labor-reducing technologies, in turn reducing the growth of private enterprises in Timor-Leste.

Figure 4.11: Urban Wage Rates



Source: TLSS (2001), ETTA, UNTAET and NGO rates from World Bank (2002)

SUMMARY AND POLICY ISSUES

4.25 Employment and jobs are at the core of improving living standards. Before 1999, formal employment in the bloated Indonesian public sector was common, while now only few people have regular incomes outside of agriculture. The public sector employed 28,000 people under the Indonesian occupation, whereas the current payroll is only half that number. The NDP emphasizes the need to keep a lean, disciplined and transparent public sector. Some 15-20,000 young persons enter the job market each year, far more than the anticipated vacancies in the public sector. Creating an adequate number of both formal and informal employment opportunities to meet the needs of the country's youth is one of the key challenges for Timor-Leste.

4.26 The Government's Poverty Reduction Strategy rightly emphasizes improvements in agricultural productivity. Agriculture is the dominant employer, accounting for four-fifths of all employment. But it only accounts for a quarter of non-oil GDP, pointing to low output per worker in the sector. A key driver for higher living standards in rural areas is access to non-farm employment opportunities and diversification out of agriculture. Non-poor

households in rural areas are much more likely to receive income from non-farm enterprises and/or wage earnings. While improving employment opportunities outside of agriculture is important, it remains essential to raise agricultural productivity. Among agricultural households, living standards are primarily determined by the distribution of assets. Non-poor households have higher human capital and twice as much land and livestock per capita. A larger fraction produce higher value crops, and they produce more per capita of the main staples and of higher value crops. Households that are better integrated into markets have lower poverty rates.

4.27 Urban labor markets experience the twin existence of high wages and high unemployment. The influx of expatriates during the transition to independence fuelled a service sector boom in the major urban centers, which yielded high real wage levels, urban concentration, and misallocated investment in the service industry. The coexistence of high wages and high unemployment is a puzzle. Civil sector wages, set at three times the average in Indonesia, may have set the levels for other private sector wages, leading to an overall uncompetitive real wage. There is a difficult transition ahead as declining demand and high unemployment rates are expected to put downward pressure on urban wages. Recent evidence indicates that private sector wages are falling. As difficult as the transition may be, it needs to take place for the longer term growth prospects of the economy. Looking forward, as the service sector starts downsizing, it will be crucial to provide a conducive private sector environment for sustainable job creation. As new sources for jobs become available, wage levels should be allowed to adjust to the new conditions of demand and supply. While labor costs and labor productivity may be an important restraint on private investment, other issues related to private sector development are also important (clarifying property rights, the legal and regulatory environment, availability of business services, such as accounting, finance, insurance, and availability of infrastructure). The December 2002 riots in Dili have brought security and law and order to the forefront. Job creation is one component for stability. Ensuring that the skills supplied by the education system match the skills demanded in the labor market is a key challenge for Timor-Leste. Labor regulations need to be able to maintain adequate worker protection while keeping sufficient labor market flexibility to ensure competitiveness and creation of employment.

RESEARCH ISSUES

4.28 This poverty assessment has only provided the first step in understanding the sources of employment and productivity growth in rural and urban sectors. Agriculture will remain the main source of livelihood for the bulk of the population for the foreseeable future. More research is needed to identify the determinants, and constraints, of agricultural productivity across regions. A flourishing non-farm sector is critical to improving rural living standards, yet it employs only a small share of the labor force. Investigating the essential drivers for expanding non-farm employment is an area for future research. Generating jobs in urban areas is a high priority. Reviewing the regulation and legislation governing the labor market, analyzing business conditions for small- and micro enterprises, identifying the mismatch of skills demanded and supplied and the role of private firms in on-the-job training are areas for further investigation.

5

Basic Social Services

5. BASIC SOCIAL SERVICES

5.1 Access to basic social services, like education, health, water and sanitation is essential for a decent life. It also improves the ability of persons to contribute to a prosperous country. The poor often lack access to these basic services. The benefits of improved human development outcomes are well known. Education raises the productivity of labor, the most important asset of the poor. There is ample evidence of the effects of education in improving productivity and output in farming and wage employment. Educated farmers are more likely to adopt new technologies and to get higher returns on land.[30] Raising the human capital of poor children greatly improves their chances of escaping poverty later in life. There are other positive effects of education. For example, educated mothers tend to have healthier children, as they are more likely to be better nourished and immunized. A healthier life in turn reduces the time lost in school, or at work, due to illness. As international experience demonstrates, the case for improving the access and quality of the basic services for the poor is compelling.

5.2 Timor-Leste's need for raising human development standards cannot be overstated. Literacy rates are low and health is poor. Only one in twenty persons speak Portuguese, and no more than four in five Tetun. The population ranks education and health as top priorities for the future, on par only with employment. In its poverty reduction strategy, the NDP places high importance on providing social services to the poor, particularly of quality primary education and health care, including preventive programs such as immunization and public health (Box 5.1). The Stability Program of January 2003 reiterates the Government's commitment to service delivery for poverty reduction by focusing on primary and secondary education, vocational training and expanding basic health services by increasing the number of mobile clinics and health posts in inaccessible areas. This chapter first reviews spending on social programs, and then provides a more detailed analysis of the two largest social sectors, education and health. The experience of the two sectors has been different. A key lesson of the reconstruction program in Timor-Leste is that there is a tradeoff between developing a coherent policy framework and rebuilding the infrastructure[31]. While health paid early attention to developing a medium-term strategy, creating sustainable institutions with strong management capacity, it was slower at the initial stages in achieving physical reconstruction targets. By contrast, education achieved rapid progress in reconstructing schools and enrolling children, but the emergency response was not embedded in a policy framework, which is now hampering implementation.

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[30] At the macroeconomic level, education is one of the main determinants of a country's aggregate output.

[31] See Rohland and Cliffe (2002) for a discussion of the lessons learned from the Timor-Leste reconstruction program.

Box 5.1: Poverty Reduction Strategy: Improving Basic Social Service Delivery

The delivery of basic social services, particularly quality primary and secondary education and primary health care, including preventive programs such as immunization and public health, is given priority in the National Development Plan.

1 In education, the Plan presents programs aimed at increasing enrolment rates, particularly for children from poor families, improving the quality of learning and teaching, through increased provision of teaching materials and teacher training, and for adult literacy.

2 In the health sector the delivery of basic health services will focus on the needs of women and children by expanding preventive, curative and educational programs at the community level.

3 Provision of drinking water in urban areas will, eventually, be made on a cost-recovery basis, whilst community ownership and operation is already the norm in rural areas, with the State supporting initial investments.

4 The Government recognizes that it cannot be the sole provider of basic social services if it is to achieve the desired levels of coverage. The Government intends to strengthen partnerships with the Church, NGOs and the private sector, as well as communities, in education, health and rural water supply. Public-private partnerships in the education and health sector will be explored with a view to the expansion of cost-effective, quality services for all.

Source: Planning Commission (2002).

Main Messages

Public Spending:

- Public spending in the post-independence period broadly supports service delivery functions, with education accounting for one quarter of government spending (CFET) and health for 10 percent. The challenge will lie in maintaining adequate allocations to these high priority sectors as external financing declines.
- Within the sectors of health and education, there is concern about the share of resources allocated to tertiary services, which largely benefit the non-poor. For example, hospital spending is regressive, but half of CFET health spending was allocated to tertiary care in FY2002. The NDP specifies capping it at 40 percent, a policy that the Ministry is implementing.

Education:

- Education enrolments increased dramatically over the period 1998/99-2000/01 with a narrowing of the gaps between rich and poor, and boys and girls. But the education sector faces several challenges:
- Developing a sector strategy to guide decisions;
- Providing quality education to the large school-going population;
- Improving the efficiency of the education system by reducing the number of over-age children, drop-out and repetition rates; and
- Enrolling the quarter of school-aged children who have never attended school.
- Establishing Portuguese and Tetun as languages of instruction, with a sufficient number of adequately trained teachers and appropriate pedagogic materials.

Health:

- Health indicators are among the lowest in East Asia and immunization rates, already low to begin with, declined between 1999 and 2001. Utilization rates remain low, and distance to the health facility is cited as an important reason for not seeking health care especially in rural areas. Providing affordable, accessible health services, especially for the rural poor, will be a key challenge. Limiting the expansion of hospital services will release resources for primary health care in less well served rural areas. The Ministry of Health is well placed to focus on service delivery since it has developed a policy framework since the outset.

PUBLIC SPENDING FOR BASIC SERVICES[32]

5.3 Government spending is a powerful vehicle for achieving national development goals. Budgetary spending in 2002 reflects the changing policy priorities with a strong focus on social sectors.[33] In spite of large start-up costs for the establishment of core public sector institutions, the social sector's share of Consolidated Fund for East Timor (CFET) spending, the Government's recurrent budget, increased from 29 percent of total CFET expenditures in 2001 to nearly 40 percent of expenditure in FY2002 (Table 5.1). Education accounts for one quarter of CFET spending, and health for almost one-tenth. The aggregate pattern of expenditure broadly follows the CFET structure.

Table 5.1: Structure of Expenditure by Source of Funds and Sector (%)

	2001				2002			
	CFET		Total (all sources)		CFET		Total (all sources)	
	US $	Share	US$	Share	US $	Share	US$	Share
Health	3.1	6	8.9	3	6.0	9	26.8	9
Education	10.1	20	42.3	16	16.0	25	47.7	17
Other Social	1.6	3	69.7	27	3.2	5	30.6	11
Total Social	14.8	29	120.9	47	25.1	40	105.2	37
Total	51.3	100	258.2	100	63.4	100	286.6	100

Note: CFET data from FY02 Revised Budget
Source: Ministry of Finance

5.4 The pattern of sectoral expenditure is broadly supportive of the immediate objectives of the pre-independence period: establishment and support to the core institutions of government and restoration of basic social services. Spending on education as a share of GDP and in per capita terms is significantly higher than the average for low-income countries (Table 5.2) but comparable to countries of similar income levels. FY2002 CFET spending on education amounted to US$19 per capita.[34] When all external financing is taken into account, per capita spending increases to US$58. The situation is similar in the health sector, where CFET expenditures are higher than low income countries, both as a share of GDP and on a per capita basis, with US$7.3 for CFET spending but lower than in middle income countries[35]. However, when all sources of financing are considered, health expenditures are significantly higher than all other low and middle income countries, at US$32 per capita and 7 percent of GDP. In FY2003, CFET spending on health is budgeted at $9 per capita and is $26 per capita for all sources of funding.

[32] This section draws on World Bank (2002b). Updated analysis on public spending is available in the forthcoming Public Expenditure Review.

[33] The fiscal year 2002 runs from July 2001 to June 2002. Public spending in Timor-Leste is disbursed through four channels – the Consolidated Fund for East Timor, which accounted for 22 percent of programmed expenditures in 2002; the Trust Fund for East Timor, which is the Government's capital program and accounted for 19 percent of expenditures; bilateral projects, which accounted for 39 percent of programmed expenditures; and the assessed contribution to the UN covering some international staff and some government operating costs, which accounted for 19 percent of programmed expenditures.

[34] Education spending was $11 per capita in Vietnam and $8 per capita in Uganda, $13 per capita in Pakistan and $14 per capita in India. These are countries with similar levels of income. Expenditures in countries with higher incomes, show higher levels of spending - $36 per capita in the Philippines and $28 per capita in Sri Lanka, and $17 per capita in China.

[35] Health spending was $1 per capita in Vietnam,$5 per capita in Uganda, $4 per capita in Pakistan, $2 per capita in India, $12 per capita in Sri Lanka and $15 per capita in the Philippines, and $14 per capita in China.

Table 5.2: International Comparators: Sectoral Expenditure as Percentage of GDP

	CFET		Total				
	Per capita spending	Share of GDP	Per capita spending	Share of GDP	Low income	Middle income	East Asia Pacific
Education	19.3	4.1	57.6	12.4	3.4	3.8	2.5
Health	7.3	1.6	32.4	7.0	1.3	3.1	1.7

Source: Ministry of Finance (Note: CFET data from FY02 Revised Budget); World Development Indicators 2000/1 (Note: Education and Defense data refers tp 1997; Health to 1990-98)

5.5 The high levels of external financing in both these sectors reflects inflows to support reconstruction and rehabilitation programs which will draw to a close in the next two to three years[36]. As operating costs shift to the budget, the challenge will lie in ensuring adequate allocations to the priority sectors of education and health. For example, for health spending to reach the international US$12 per capita benchmark, CFET spending would have to increase by 50 percent, with health's share of the budget rising from 10 percent to over 15 percent. Consequently, choices will have to be made regarding the prioritization of programs in case the overall budgetary envelop does not increase in line with the reduction in external financing. As public spending is cut back, services with the greatest social returns and poverty reduction impact should be protected. Clearly, considerable attention should be paid to the forward planning of expenditures in order to assess the future cost implications of policy decisions and ensure that sufficient resources are allocated to the Government's stated policy priorities.

EDUCATION

Public Spending in Education

5.6 International experience suggests that one of the key determinants of the poverty–orientation of spending in the social sectors is the distribution of spending between levels of service delivery. Expenditures on lower level services, which are more accessible to the poor, tend to be progressive and spending on higher levels of service tend to regressive. A similar pattern is found in Timor-Leste.

[36] It may be more valid to compare spending to other post-conflict countries in the years following the conflict. While it is complicated to make cross-country comparisons because of data comparability, the data for a limited sub-set of post-conflict countries shows that the share of education and health in GDP and per capita spending levels are more comparable, though there is a range. For example, in Lebanon, per capita health and education spending were US$50, and the shares of GDP were between 2-3 percent. Health spending in Nicaragua was US$27 per capita, with a GDP share of 6.8 percent, and education spending per capita was US$13 per capita and the GDP share was 3 percent. Rwanda health spending was US$4.2 per capita and the share in GDP was 2 percent.

Table 5.3: Education Spending by Source Funds and Program, FY2002 (%)

Sector / Program	CFET	BFET	Bilateral	Total
Early Childhood Education	1	-	-	0
Primary and Secondary of which	77	90	29	57
Primary Education	54	90	3	39
Technical and Vocational	3	-	17	9
Non-formal and Language	1	-	6	3
University	7	-	47	25
Administration and Management	7	10	2	5
Total	100	100	100	100

Source: Ministry of Finance (Note: CFET data from FY02 Revised Budget); World Development Indicators 2000/1 (Note: Education and Defense data refers tp 1997; Health to 1990-98)

5.7 In FY2002, 54 percent of CFET expenditures are allocated to primary education, 23 percent to secondary education and 10 percent to tertiary services (Table 5.3). When external financing[37] is taken into account, the share of primary education in total spending drops significantly, to 37 percent of total, while the share of tertiary education increases to 25 percent, both as support to the development of national institutions and scholarships abroad. Figure 5.1 plots the cumulative percentage of beneficiaries against the cumulative percentage of the population for primary and secondary schooling. Unit costs for public schooling by level have been calculated for the analysis in the public expenditure note. Since the unit costs of primary schooling are constant, the distribution of beneficiaries (students in primary school) is identical to the distribution of the subsidy. Public spending on primary education is progressive, with the lower primary grades (1-3) more progressive than the upper primary grades (4-6) because the poor tend to drop out before completing primary education. As fewer poor children attend junior secondary and senior secondary school, the better off students capture the benefits of public spending on these levels. As a consequence, junior secondary school is regressive and senior secondary school is more regressive than junior secondary education. The top quintile of the population has 48 percent of the senior secondary students. Tertiary education is highly regressive, and the top quintile of the population has 65 percent of all tertiary students. Owing to the relatively high share of education spending on secondary and tertiary services, the overall pattern of education spending is regressive, with the richest quintile benefiting from 35% of education subsidies (Figure 5.1). Obviously, the regressive nature of education spending would be even more marked if external financing is taken into account, since this significantly increases the subsidy at university level. Bilateral spending, in particular, is very skewed towards university education, with half of all spending allocated to the sector.

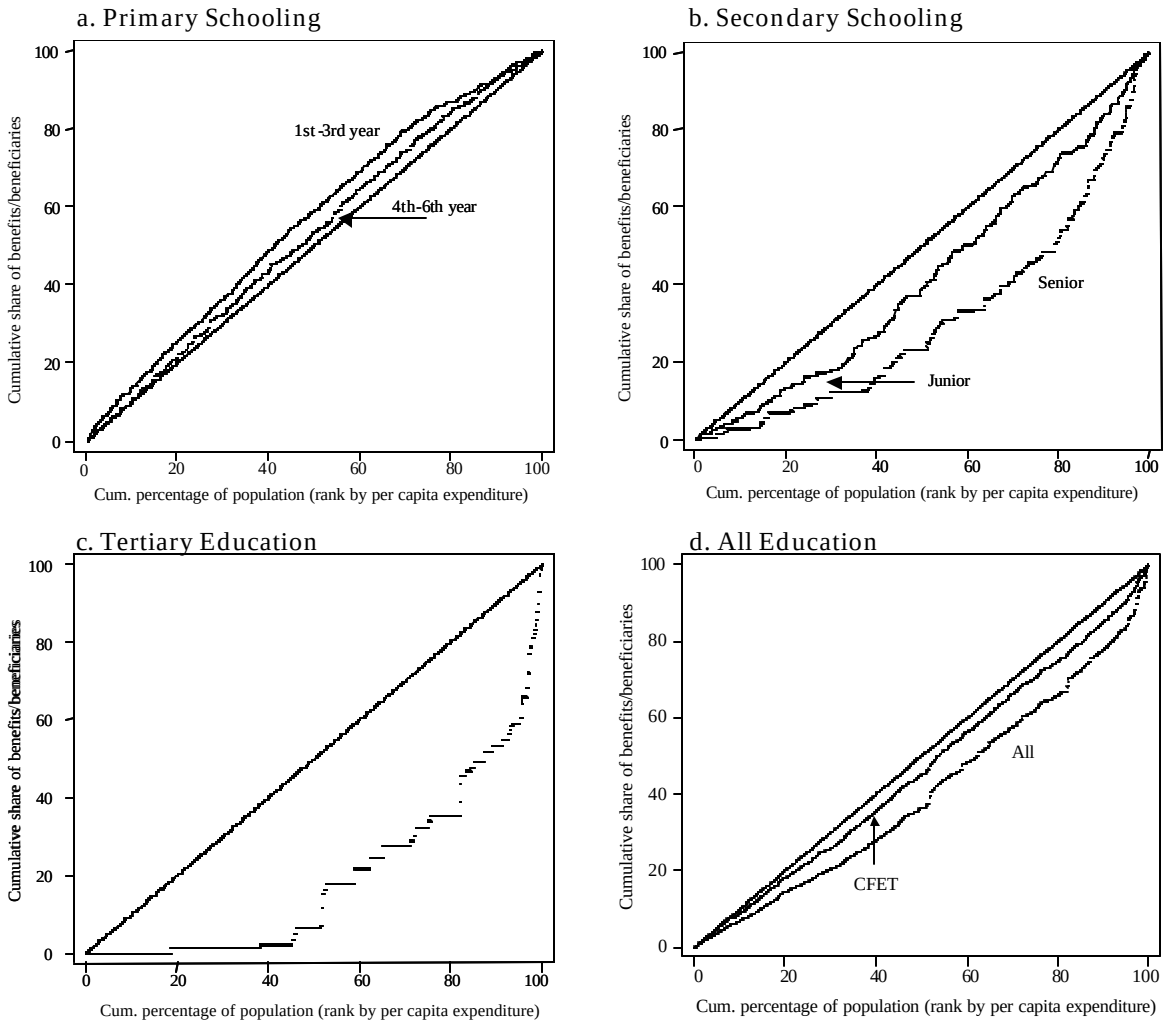
5.8 The public sector is the main provider of schooling with 87 percent of all students attending public school. Close to one in ten pupils attend religious schools and the remainder private secular schools. The poor are much more likely to attend public schools. Analyzing the incidence of education by the type of school (public, private or religious) shows that

[37] It should be noted that the information on external financing is about commitments, which may differ quite significantly from disbursements. Information on disbursements is not available.

public spending on primary school is progressive, but that on religious and private primary schooling is not[38]. The breakdown for public spending on junior and senior secondary schooling indicates that public schooling is distributed more equally than religious schooling for both levels of schooling.

5.9 This analysis presents only the average incidence of spending. It is likely that increases in spending (marginal incidence) favor more the poor than the rich. However, this depends on a greater understanding of the determinants of enrollment. There is clearly a need for some reconsideration of the allocation of public spending between levels of education, with a larger share of spending allocated to primary and junior secondary education accompanied by measures intended to increase poorer children's enrollment in secondary and university education. The policy response favored by most countries in these circumstances is to increase cost recovery from higher level services, while providing targeted subsidies to support students from poor families.

Figure 5.1: Incidence of Public Spending in Education



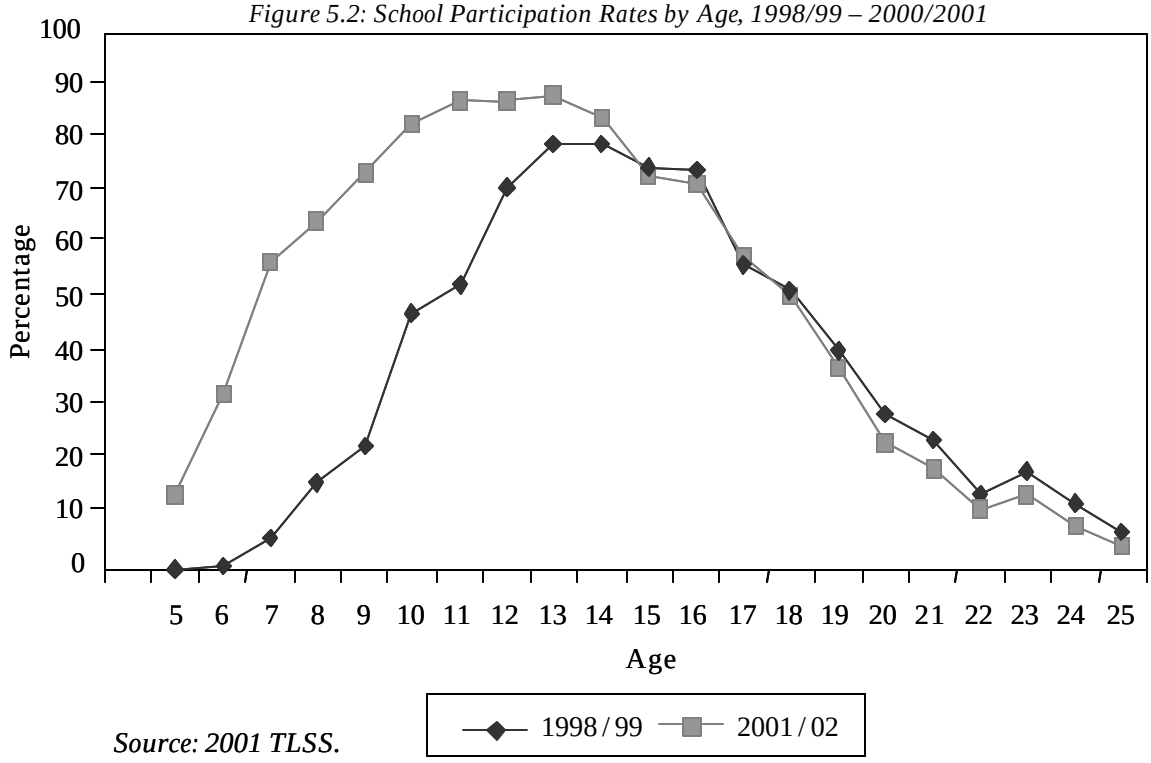
[38] In 2001, there was a substantial degree of public subsidy for religious schools. Principals and full time teachers tend to receive the same public salaries as their counterparts in public schools, while the schools continue to charge fees to finance part time or supplemental teachers to improve the learning environment.

Accomplishments in Building an Education System[39]

5.10 Within about 18 months after the destruction, the school system, by and large, was rebuilt. By early 2001, about 86 percent of classrooms were rehabilitated and useable. 922 schools were in operation, of which 82 percent offered primary education, 11 percent junior secondary education, 3 percent, senior secondary education and the rest other types of education[40].

5.11 ***School Participation***: In addition to rebuilding schools, school participation rates increased dramatically between 1999 and 2001. The largest increase in enrollment between 1998/99 and 2001/02 was among children between the ages of 5 and 14 (Figure 5.2). These increases in enrollment, especially by the poor, girls and rural children has resulted in narrowing the gaps in school participation rates between the richest and the poorest quintiles, boys and girls (Figure 5.3), and urban and rural areas. This is remarkable given the destruction in the violence of 1999 that affected 95 percent of the schools and led to an exodus of teachers. About 20 percent of primary school teachers and 80 percent of secondary school teachers, who originally come from other parts of Indonesia, left the country. Many migrants who had higher levels of education and skills also left. This has created a shortage of teachers especially at the secondary school level.

Figure 5.2: School Participation Rates by Age, 1998/99 – 2000/2001

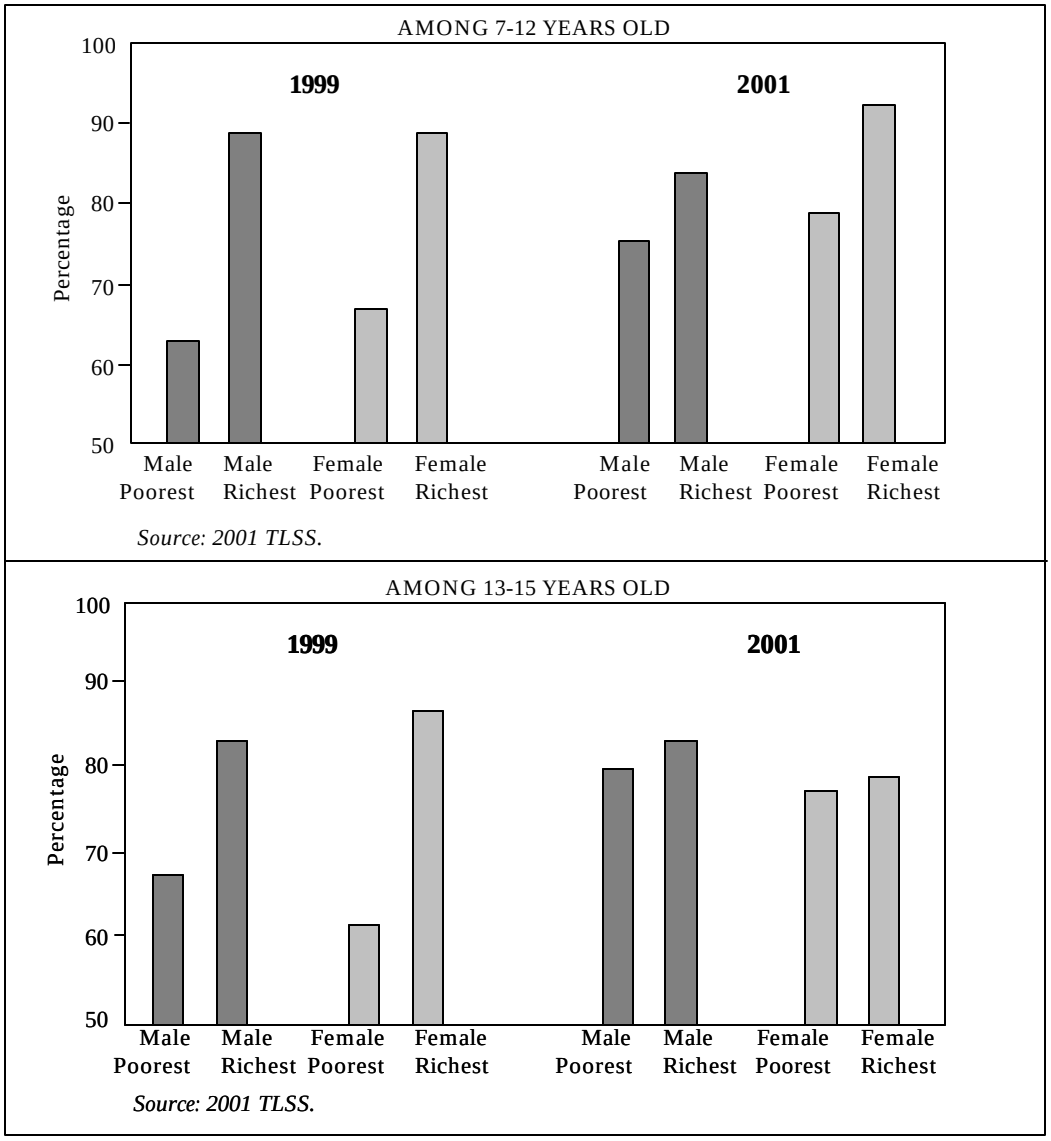


Source: 2001 TLSS.

[39] This section draws on Chapter 5, Volume II.

[40] Data are from the School Mapping Survey (2001).

Figure 5.3: School Participation by Quintile and Gender, 1999 and 2001



Cost of Schooling

5.12 The reduction of the cost of schooling by means of the abolition of school fees, PTA contributions, and requirements for uniforms is likely to have contributed to increasing enrollments. The average monthly expenditure for attending public primary school in 2001 was US$0.56 in contrast to US$1.55 in 1995 (in 2001 exchange rate and prices). Table 5.4 shows the distribution and levels of school expenses for public primary schools in 2001. In 2001, the poorest quintile spent US$0.31 per month per student while the richest quintile spent US$0.91 per month. Tuition fees, Parent Teacher Association (PTA) fees and textbook costs were very low for the bottom four quintiles. The main expenditure was on educational materials besides textbooks.[41] In contrast in 1995, monthly expenditure fees ranged from US$0.82 for the lowest quintile to US$2.67 for the richest quintile[42].

[41] The questionnaire in 2001 asked for expenditures on uniforms and other clothing, while data for 1999 report only uniforms. To the extent this might have caused any ambiguity, we do not discuss this category.

[42] Fees accounted for 13 percent of household spending on public primary education per capita of the poorest quintile in 1995, PTA charges for 9 percent, uniforms for 52 percent, textbooks for 16 percent, and other instructional materials 10 percent.

Table 5.4: Monthly Expenditure on Public Primary Schools, 2001 (US Dollars)

	Tuition	PTA	Uniforms	Text-books	Other educa-tion materials	Meals and transport	Extra classes	Other	Total
Poorest	0.003	0.002	0.178	0.001	0.090	0.000	0.000	0.020	0.310
Q2	0.019	0.004	0.234	0.008	0.184	0.006	0.000	0.034	0.488
Q3	0.018	0.004	0.338	0.008	0.162	0.010	0.009	0.041	0.588
Q4	0.030	0.006	0.348	0.004	0.256	0.027	0.002	0.040	0.712
Richest	0.140	0.017	0.393	0.018	0.234	0.048	0.000	0.060	0.911

Note: All Rupiah values from the survey were converted to US Dollars using an exchange rate of 10,000 Rupiah/US Dollar
Source: 2001 TLSS

5.13 The effect of reducing the cost of schooling is reflected in the regression analysis that shows that household resources (represented by nominal household expenditure) had a much weaker relationship with school enrollment in 2001 than in 1999 or 1995, after controlling for age, gender, and urban / rural residence.[43] For every 10 percent increase in household resources, enrollment rose by about 2 percentage points in 1995; 1.6 percentage point in 1999, 0.28 percentage point in 2001.

Challenges in Education

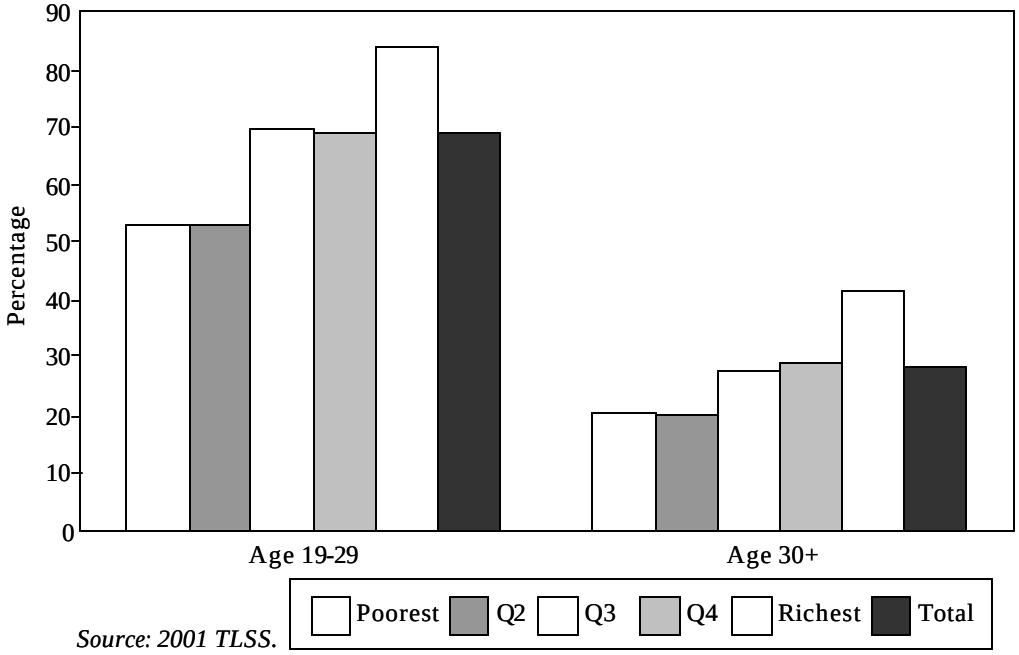
5.14 While progress on reconstruction and school enrollment has been very impressive, the sector faces a number of urgent concerns. The education sector is still developing a sector-wide policy framework to guide sector decisions for the implementation of the National Development Plan. Such a medium-term strategy has to ensure that issues related to the quality of education, including curricula development, teacher training and management, are addressed, as they received too little attention during the initial emergency response. It also has to spell out specific policies to deal with three challenges:(i) demographic context; (ii) internal efficiency of the education system; and (iii) challenge of bringing the out-of-school children into the system.

5.15 ***Large School Age Population and High Adult Illiteracy***: Timor-Leste is a young nation and they are a young people with about 45 percent of the population under the age of 15. This large cohort of school going children will put pressure on the education system. In addition, the adult population has very low educational attainment. Overall, 57 percent had no or little schooling, 23 percent only primary education, and 18 percent secondary education and 1.4 percent higher education. A larger share of the younger generation has attended school compared to the older generation. About 72 percent of over 30 years of age have never attended school, whereas 31 percent of the 19-29 year olds have not attended school (Figure 5.4). Within each age group, the rich are more likely to have attended school. The older the generation and the poorer they were, the least opportunity they had for education. As a consequence, adult illiteracy rates are high.[44] The implications are that the pool of well-educated persons who could be recruited to teach in the schools is very small, posing a constraint to efforts to improve education quality.

[43] Expenditures are in nominal terms because appropriate deflators for pre-2001 values were not available. For all other statistics using per capita expenditure, value are in real terms adjust for temporal and spatial price differences.

[44] Illiteracy rates are also highest among the poor and the older generation. Among children 13-15, these disparities across income groups have been removed.

Figure 5.4: Ever Attended School by Quintile and Age



Source: 2001 TLSS.

5.16 ***Overage children***: One measure of the internal efficiency of the system is the match between grade and age of the child. Table 5.5 shows the gross and net enrollment ratios for different levels of schooling. There is a big divergence between the gross and net enrolment rates. Although many students who were not enrolled in 1998/99 enrolled in school in 2000 and 2001, most of them attended lower grades in primary education. For example, in 2000/1, over 70,000 students enrolled in Grade 1, more than double the estimated number of 6 year olds. More recent data from August 2002 MICS survey covering the school year 2001/2002 confirm the overage children phenomenon and show the primary net enrolment rate constant at 75 percent.

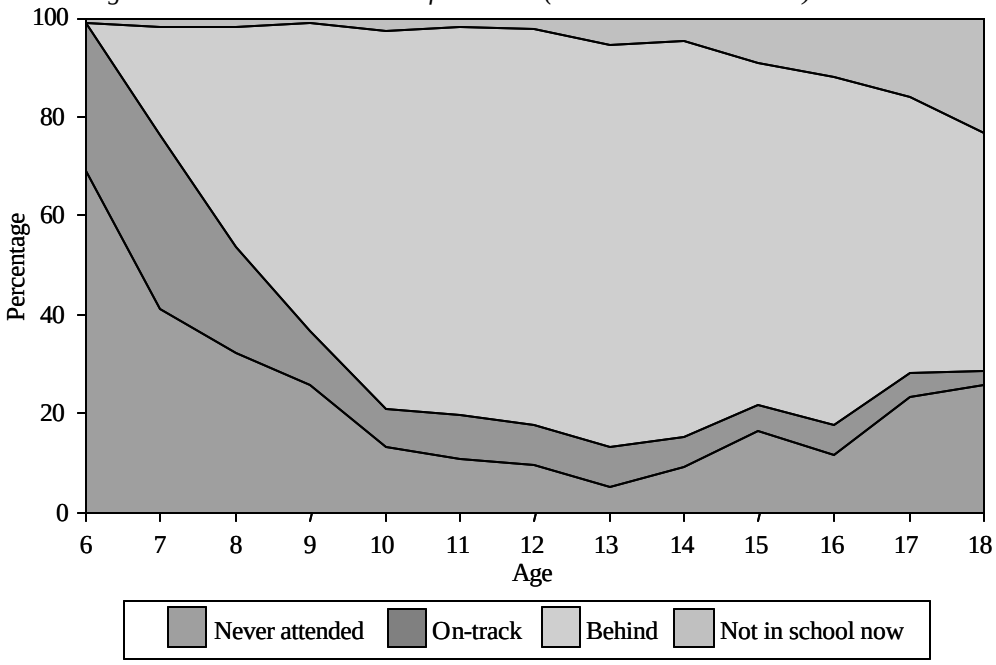
Table 5.5: Gross and Net Enrollment Ratios

	1998/99	1999/00	2000/01
Net enrollment ratio			
Primary (7-12 yrs)	65	57	75
Jr. secondary (13-15)	24	21	22
Sr. secondary (15-16)	11	11	16
Secondary (13-17)	27	25	30
Gross enrollment ratio			
Primary (7-12 yrs)	90	85	113
Jr. secondary (13-15)	44	42	47
Sr. secondary (15-16)	22	22	29
Secondary (13-17)	34	33	38

Source: 2001 TLSS

5.17 This can be seen even more clearly in Figure 5.5, which plots the education profile for 6-18 year olds. As the figure shows, despite the increases in enrolment, a third of all 8 year olds and a quarter of the 9 year olds have never attended school; overall a quarter of all 6-18 year olds have never attended school. There are clearly a vast number of over-aged children in the education system, as is manifested in the divergence in the gross and net enrolment ratios.

Figure 5.5: Enrollment Status of Children (School Year 2001/2002)



Source: 2001 TLSS.

5.18 The poverty dimension is partly manifested through the grade-age misalignment. Poorer students are more likely to be older at any given grade. For example, only 10 percent of poor students started Grade 1 at age 7 and 26 percent started at age 9. In contrast, 29 percent of the children in the richest quintile started Grade 1 at 7 years. Through combination of late enrollment and repetition, this pattern is maintained across grades. Although more boys started Grade 1 at age 7 (22 percent versus girls' 14 percent), girls over-took boys by Grade 3 due to lower repetition rates. Rural children were by far worse off than urban children. Only 16 percent of rural children started Grade 1 at age 7, compared with 28 percent of urban children. By Grade 4, only 6 percent were of the right age, compared with 12 percent of urban children.

5.19 ***High repetition and dropout rates***. Table 5.6 shows the distribution of repetition, promotion and dropout for each grade at the primary and secondary levels. Between 20-25 percent of children repeated and around 10 percent dropped out each grade in primary education and junior secondary education. Compared to primary and junior secondary education, senior secondary education has lower dropout and repetition rates. This is likely due to the fact that students who move up to secondary education level are more persistent and also tend to come from wealthier families who do not need their labor to support the family. The data also shows that girls tend to have lower repetition, lower dropout rates and

higher promotion rates. A cohort flow analysis found that at this level of internal efficiency, only 67 percent would reach Grade 4, 47 percent would complete Grade 6, 53 percent would drop out. On average, the dropouts would complete 4 grades. The cost per student for 6 years of primary education is about US$300. The cost per graduate, however, is twice as much because of the repetition and dropout rates.

Table 5.6: Repetition, Promotion and Dropout Rates by Grade (%)

Primary Grades	G-1	G-2	G-3	G-4	G-5	G-6
Males						
Repetition	20	24	25	25	25	23
Promotion	70	68	66	67	66	68
Drop-out	11	9	9	9	10	9
Females						
Repetition	20	23	24	24	23	20
Promotion	70	69	68	68	69	72
Drop-out	10	8	8	8	9	8

Primary Grades	G-1	G-2	G-3	G-4	G-5	G-6
Males						
Repetition	23	25	24	9	10	11
Promotion	71	68	69	87	86	87
Drop-out	6	6	7	3	4	2
Females						
Repetition	21	23	24	9	8	8
Promotion	75	70	70	89	90	90
Drop-out	5	7	6	2	3	2

Source: School Mapping 2001.

5.20 This high level of wastage has serious implications. From the educational point of view, the levels of skills acquired by those who have enrolled are likely to be low because about half of them are not in school long enough to learn. From the fiscal perspective, this entails high levels of spending without educating as many children as it should. The cost per graduate is the key measure of efficiency of resource use. The large number of children who are still out of school and a larger younger cohort that need to be educated in the future are bearing the real cost of inefficient use of resources.

5.21 ***Out-of-school Children*** As indicated above, there are also a large fraction of children who do not attend school. Over a third (36%) of all 6-14 year old children do not attend school, and 61 percent of all 6-9 years olds do not attend school (Box 5.2). The reasons for never attending school are important to consider in developing successful strategies to reach education objectives. Among children 7-12, about 27 percent or so considered that they were not of the right school age (Figure 5.6). Demand side issues seem to be more of the determining factor. About 32 percent of the poorest and 26 percent of the richest had "no interest" in schooling. On the supply side, "school too far" is a key factor cited for non-attendance. Among children aged 13-15, the lack of interest is cited as the major reason for never attended school for this age group.

Box 5.2: Who are the Out-of-School Children?

One third of all 6-18 year olds did not enroll in the 2000/2001 school year, but a large part of them do not attend due to young age. Over two fifths of those children are 6 and 7 year olds, and over half of them say they are not attending school because they are below the school age. Another twenty percent are 8 and 9 year olds for whom lack of interest is the main reason. For older children, lack of interest and the need to work at home or in agricultural work are important reasons.

Distribution of Out-of-School Children by Age

Age	6	7	8	9	10	11	12	13	14	15	16	17	18	6-18
%	26	15	12	8	5	3	3	2	3	5	4	6	8	100

Just over half the children are males, and they are more likely to come from the lowest per-capita consumption quintile.

Distribution of Out-of-School children by Quintile

Quintile	1	2	3	4	5	National
%	27	21	21	21	10	100

Just under half of the out-of-school children live in the Rural Center and another fifth live in the Rural East. In both these regions, their share among the out-of-school children exceeds their share of the school age population. Urban areas only contribute 15 percent of out-of-school children, lower than their share among the population of school age children.

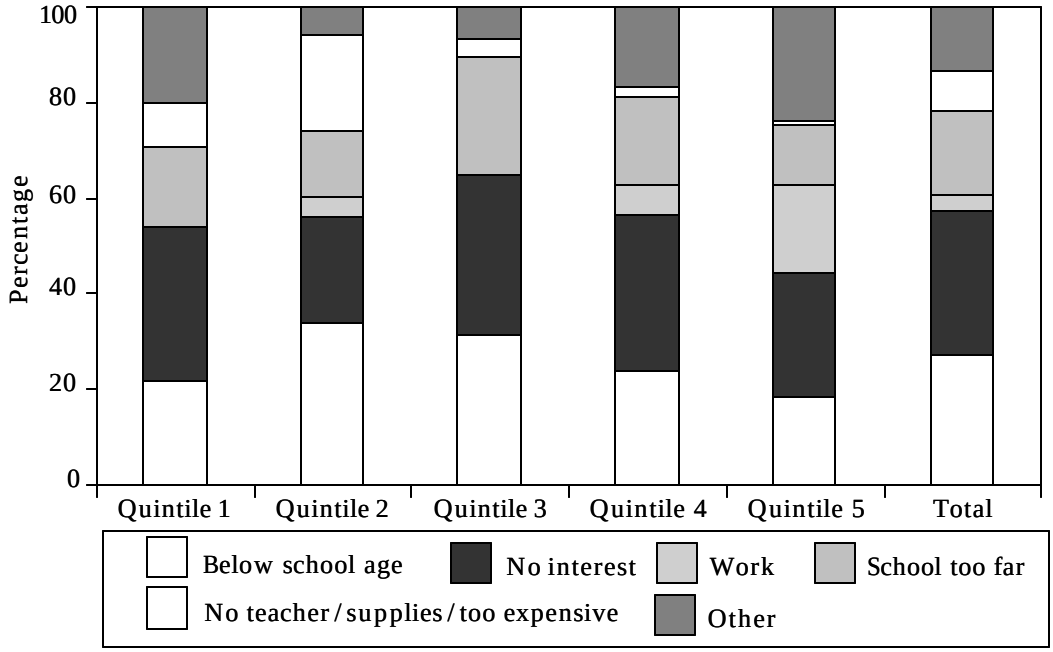
Distribution of Out-of-School Children by Area

Area	Dili/Baucau	Other urban	Rural center	Rural east	Rural west	National
% of school age population	13	10	40	19	19	100
% of out-school children	8	7	46	21	18	100

5.22 *Absenteeism*. The number of days that students were absent in 2000/01, among those who attended, is a good indicator of whether they find it worthwhile to go to school. Primary school students from poorest two quintiles have the lowest absenteeism within the last 3 months, while the top quintile has the highest. Twenty-two percent of students of the poorest quintile and 46 percent in the students in the richest quintiles reported absenteeism in the three months of the school year. The vast majority has no more than six days absence within a three month period. Similar patterns also hold for junior secondary and senior secondary education level.

5.23 The principal reason for absence from school at all levels was illness. In primary school, two-thirds of students across all quintiles reported illness as the reason for absence, in secondary school the percentage increases to 78 percent, and for senior secondary students it is 82 percent. At the primary level, distance from the primary school weighs more heavily for the lower four quintiles but does not affect the richest quintile at all. At the secondary school, distance to school and the need to work at home affect the poorest quintile disproportionately more.

Figure 5.6: Reasons for Never Attending School, 7-12



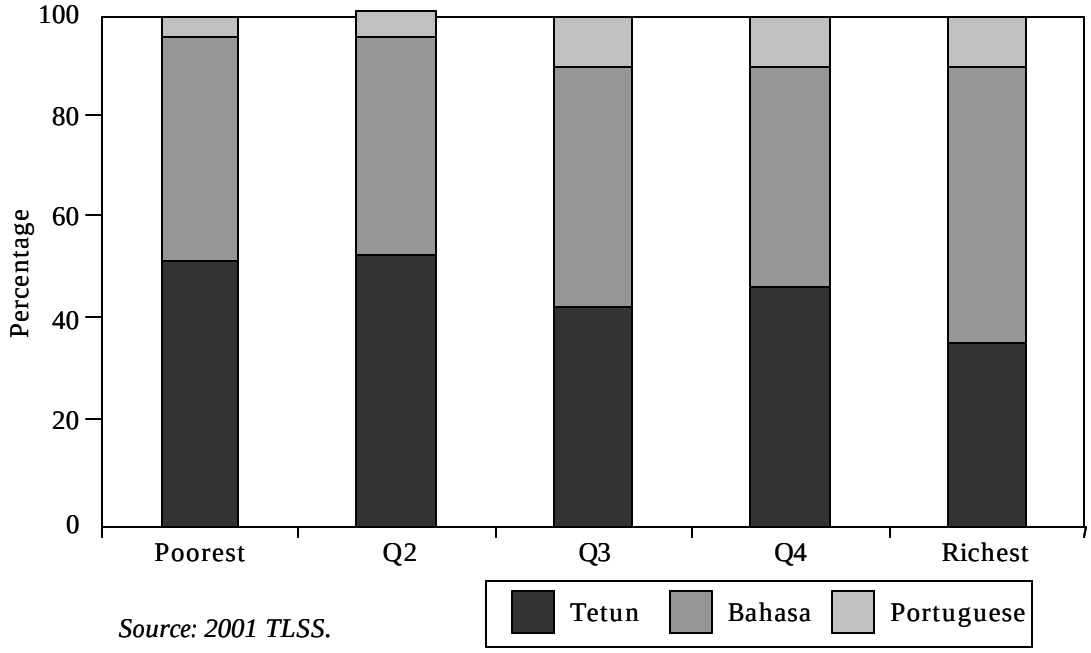
Source: 2001 TLSS.

Supply Side Factors

5.24 Access and quality of schooling are important determinants in the decision to go to school. While quality is difficult to quantify, the household survey asked about several dimensions of it.

5.25 ***Language of Instruction***: This issue poses a major challenge. Portuguese and Tetun are the official languages in Timor-Leste. In the education sector, the policy has been to introduce Portuguese progressively as the language of instruction. Starting in the 2000 / 2001 school year, instruction would be in Portuguese for students in grades 1 and 2, and it would be introduced as a second language for higher grades. This has created a number of problems since only 5 percent of the population speaks Portuguese, and consequently few teachers speak Portuguese. Only 158 teachers were approved for teaching Portuguese, 44 percent of whom live in Dili / Baucau. Figure 5.7 shows the language of instruction in school in 2001 by quintile. For practical purposes in the transition, instruction is divided almost evenly between Tetun and Bahasa Indonesia, with about 8 percent in Portuguese. Tetun is more commonly used in the schools attended by the poorest quintile, whereas a higher proportion of schools attended by the rich use Portuguese.

Figure 5.7: Language of Instruction in School



Source: 2001 TLSS.

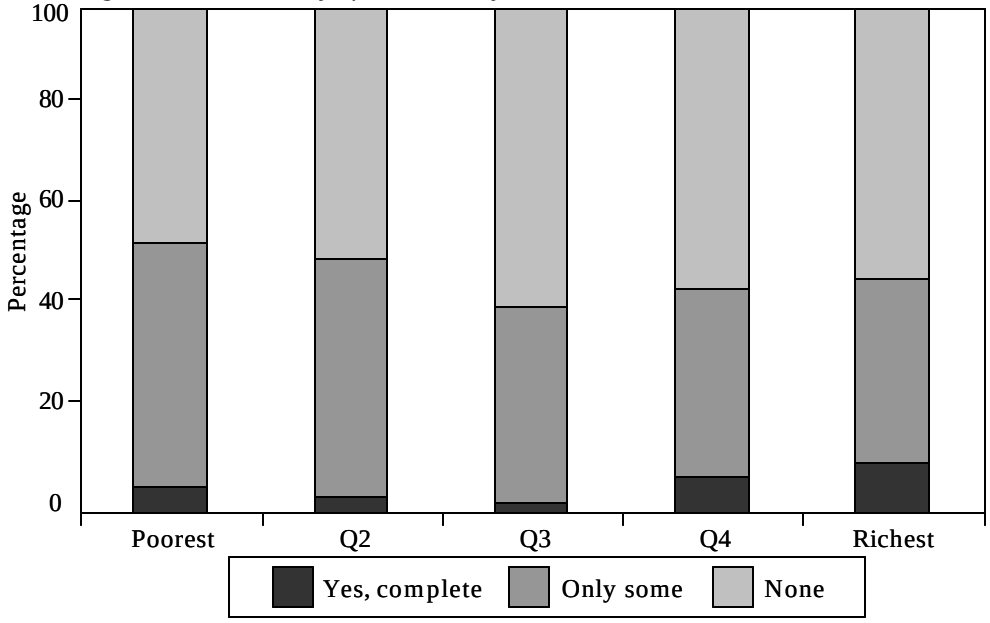
5.26 ***School Access***. As indicated above, distance from school and means of transportation affects the decision to go to school. The data shows that the majority of children who attend school walk there (94 percent or more in the bottom four quintiles), and even three quarters of the richest quintile walk to school. On average, the one-way time to primary school is 24 minutes, and it increases to 49 for junior secondary school.

5.27 ***School Infrastructure and Quality***. Figure 5.8 shows the distribution of textbook availability (in three categories) by quintiles. It turns out that across all quintiles, about half of the students do not have a complete set of textbooks. The vast majority of them obtained the books first from the school. The second most common way to obtain the books is by purchasing second-hand books. About 81 percent of students across all quintiles have a desk to work on and chair to sit on but 20 percent do not. The majority found their teachers present either all the time (63 percent) or almost all the time (31 percent), but still about 7 percent experience teacher absenteeism. The average student-teacher ratio is 62 for public primary schools in 2000/2001, with a wide range from 17 (in a school in Dili) to 243 (for a school in Turiscai sub-district of Manufahi)[45]. The variation across districts ranges from 40 in Covalima to 89 in Aileu. Data for 2001/2002 show that with a significant increase in the number of teachers particularly in underserved districts, this ratio has declined to 47, with a narrowing in the range across districts. The average ranges from 44 in Ermera to 52 in Manufahi.[46] The average hours of homework per week can also be used an indicator of school quality, and the rich tend to spend more time on homework. The quality of teaching is low and upgrading teacher skills is a priority.

[45] See East Timor Human Development Report (2002), UNDP.

[46] The district level numbers are based on a background paper (Timor Leste Education Sector Expenditure Review (2002)) for the World Bank Public Expenditure Review (2003).

Figure 5.8: Availability of Textbooks by Quintile



Source: 2001 TLSS.

Determinants of Enrollment

5.28 Enrollment decisions are determined by demand and supply side factors. We undertake a multivariate analysis of the determinants of school enrolments to allow us to disentangle the effects of different variables. A model of school participation[47] is estimated separately for primary school children (6-12 years) and secondary school age children (13-18 years). The regressions are run independently for urban and rural areas. The model includes as explanatory variables characteristics of the child (age, gender, mother tongue), education and age of parents, characteristics of the household head (gender and occupation), demographic composition of the household, per capita expenditure, access to school, and school quality variables as proxied by the percentage of children with textbooks, with chairs and desks, the language of instruction, teacher absenteeism, and the cost of schooling, which is proxied by the median cost of public primary schooling in the suco.

5.29 What determines participation in for 6-12 year olds? As expected, age is a strong predictor of participation and is positively associated with being in school in both urban and rural areas. A twelve year old is 45 percent more likely to attend school than a six year old. Girls are more likely to attend school in rural areas. In line with evidence from other studies, children of more educated parents are more likely to go to school – this is especially true if either father or mother have some secondary education. Having a mother alive is very important, especially for children in rural areas. Access to schooling matters in rural areas – having a primary school in the community increases the probability of school participation by 11 percent, and a greater distance to school deters school participation. This effect is stronger for girls. The cost of schooling matters only for girls in rural areas. School quality variables generally have the right sign but are usually not significant. Household wealth is a significant determination of school participation for 6-12 year olds girls in rural areas only.

[47] A probit model is estimated, which takes the value 1 if the child is in school and zero otherwise. Marginal impacts, which calculate the effect of the variable on the probability of participation, are estimated.

5.30 For secondary school participation, age remains an important predictor, but now older children are less likely to go to school. Girls are less likely to continue to go to school. Parents education is important, especially the father's education. Whether the mother is alive is particularly important in rural areas. Household size is negatively associated with secondary school enrollments in urban areas. Again, the presence of a secondary school in the community enhances the probability of participation by 23 percent. Household wealth enhances school participation particularly in rural areas.

HEALTH

5.31 Timor-Leste faces a host of health challenges. The burden of disease is largely due to communicable diseases, such as malaria, tuberculosis, respiratory tract infections and childhood infections. Maternal mortality is high – it is estimated to be in the range of 800-840 per 100,000 births, which in turn is linked to poor reproductive health. According to the MICS survey in 2002, only one in four women who gave birth had skilled personnel assisting them. Infant and child mortality rates are also estimated to be high (Table 5.7). Lack of safe drinking water and sanitation also contribute to poor health outcomes. One in two people live without safe drinking water and three in five people without sanitation facilities. Life expectancy is low in the range of 57 years. As pointed out in Chapter 3, immunization rates for children had declined in 2001 from already low levels since 1999. Against this backdrop, Timor-Leste seeks to restore access to basic services for all its people. This section first examines the impact of public spending in health on the poor. It then turns to the pattern and costs of health care utilization.

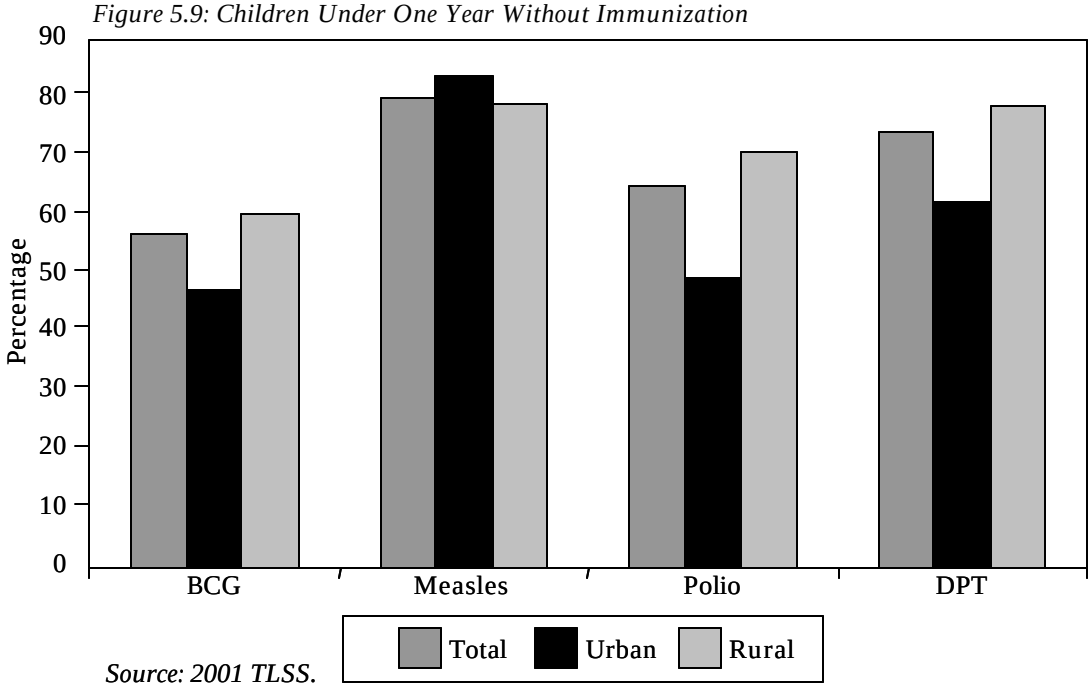
Table 5.7: Health Indicators for Timor-Leste

	Timor Leste 2002	Low incomce countries 2000
Infant mortality rate (per 1000 live births)	88	76
Male	99	na.
Female	77	na.
Under 5 mortality rate (per 1000 live births)	125	115
Male	142	na.
Female	108	na.
Maternal mortality rate*	420	na.
Life expectancy **	57	59
Male	56	58
Female	59	60
Anthroprometrics***		
Malnutrition (weight for age)	43	na.
Stunting (height for age)	47	na.
Wasting (weight for height)	2	na.

** Data are for 1999* *** Life expectancy figures are for 2001*
**** Percentage of moderately malnourished children under 5 years old.*
Source: UNDP (2002), UNICEF (2002) and World Bank SIMA Database

5.32 Figure 5.9 shows the percentage of children aged under 1 year with no immunizations in 2001[48]. The MICS survey shows improvement during 2002, with increased coverage rates for all immunizations, but they remain significantly lower than the Ministry of Health statistics. In general, immunization coverage is lowest in the Rural East, and highest in Dili/Baucau. Generally, children of less than one year old in urban areas are more likely to be immunized. Urban children are much more likely to have a DPT immunization (38 percent) than children in rural areas (22 percent). Complete DPT immunization is even lower, with less than one in ten children receiving the full set of DPT injections. Complete DPT immunization rates doubled by August 2002. However, once again, there is a significant discrepancy between these survey-based numbers and the Ministry of Health statistics, which show 53 percent immunization for complete DPT immunization among the children under a year of age. This pattern is consistent with experience from several countries, as administrative data are often more optimistic than household survey data as a result of institutional incentives for over-reporting. In addition, administrative data may underestimate the number of children to be immunized, adding to the bias of over-stating immunization coverage. However, household survey data that rely on recall of mothers for immunization data as in Timor-Leste may suffer from recall problems leading to under-reporting. The Ministry of Health is undertaking a review of its Health Management Information System in 2003 to look at the consistency of data sources. The Demographic and Health Survey and the Health Seeking Behavior Surveys planned for 2003 will provide updated information on progress in immunization.

Figure 5.9: Children Under One Year Without Immunization



Source: 2001 TLSS.

5.33 Malnutrition is a serious problem in Timor-Leste, with over four in ten children under the age of five being moderately or severely malnourished in 2002[49]. Wasting, as measured

[48] The figures are much lower than the service statistics collected by MOH, which indicate 38 percent coverage for measles immunization under age 1 by December 2001. The latest MOH numbers show 53 percent DPT3 coverage for children under 1 year of age.

[49] Malnutrition is measured by the proportion of underweight children, which is based on weight for age.

by weight for height, is used as an indicator of short-term access to adequate food and is therefore affected by seasonal food availability. Over one in ten children are moderately or severely wasted. Stunting, which is measured by height for age, is an indicator of longer-term nutritional deficiency over multiple seasons. One in two children are moderately or severely stunted. This evidence points to a widespread prevalence of chronic malnutrition.

Public Spending in Health

5.34 The program structure used in the health sector allows a rough breakdown of spending by level of service.[50] Tertiary – hospital – services are allocated just under half of CFET health sector spending (Table 5.8). This pattern contrasts with the health policy objective, which is to restrain hospital spending to the range of 35-40% of CFET expenditures. The pattern of spending is even more skewed in favor of tertiary services when TFET spending is taken into account, rising around two-thirds of combined expenditure. However, the bulk of TFET spending on tertiary services are one-off payments for the rehabilitation and re-equipment of hospitals, rather than on-going operational costs. More recent data for FY2003 from the Ministry of Health shows that the share of spending allocated to hospital services has declined to 41 percent[51]. Health spending on hospitals is also high due to the cost of expatriate doctors.

Table 5.8: Health Spending by Source of Funds, Program and Level of Service, FY2002, (%)

Program / level of care	CFET	TEFT	Bilateral	Total
By Program				
Support Ongoing Service Delivery	68	17	25	32
Range and Quality of Service	25	66	35	48
Policy and Management	8	16	40	20
Total	100	100	100	100
By Level of Care				
Primary and Secondary Care	51	31	-	39
Tertiary Care	49	66	-	61
Total	100	100	-	100

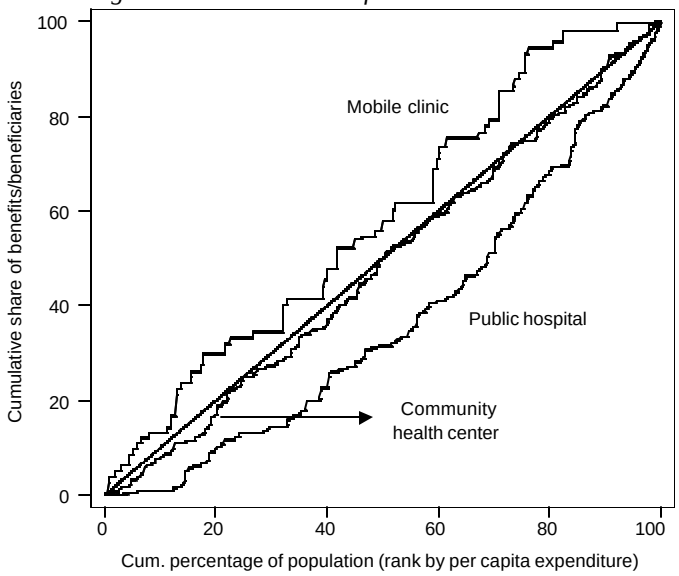
Source: Ministry of Finance and Ministry of Health

5.35 The incidence analysis from the household survey shows that poor households are more likely to visit primary health facilities than public hospitals. Given the difficulty in deriving unit costs by level of provision, the graph shows just the distribution of beneficiaries across different levels of facilities (Figure 5.10). Mobile clinics are the most pro-poor, while community health centers are neutral. Public hospitals are strongly regressive. Mobile clinics, used by 10 percent of the population, are progressive. Larger unit costs for public hospitals would make the distribution of spending even more unequal. These data supports the reallocation of public spending away from hospitals, as put forward in the NDP, to lower level services in order to benefit more the poor.

[50] This section is taken from World Bank (2002b). Unfortunately it is not possible to analyze bilateral projects by service level.

[51] See background paper on the Health Sector for the Timor-Leste Public Expenditure Review.

Figure 5.10: Utilization of Health Facilities



Health Access and Utilization[52]

5.36 ***The Challenge of Building a Health System***. As indicated above, Timor-Leste's health indicators are low. In the past, the population had limited interactions with health services. Low levels of health provider utilization were not a sign of good health but of the general political situation. A sharp decline in monthly contact rates from 14.3 percent in 1997 to 6.8 percent in 1998 is indicative of the instability and distrust of government in those years.[53] The challenge for Timor-Leste is to build a health system that creates demand for health care, particularly preventive services, across all sections of society, and to assure the supply of quality services to meet that demand.

5.37 The household survey confirms the sober view of health service utilization and access. It sets an early baseline against which to measure progress as the health system develops. TLSS data were collected one year after the first health project came into effect, and at a time when responsibility for service provision at the district level was being transferred from the international NGOs to the newly appointed Ministry of Health district management teams. Recruitment of health workers had only recently been completed, and vehicles including the motorbikes for the mobile clinics had just been delivered to the districts. The process of engaging doctors from overseas was in its early stages, with no more than two or three already in position. The district management advisors had not yet been appointed. With implementation of the directions already set out by the Ministry of Health in its policy framework, in particular the emphasis on basic services, and on a 60/40 division of resources for primary and hospital care, tangible improvements should soon be coming through. The health sector is now manned; those with long-term responsibility for central and district health management are in place, and doctors are being hired from overseas to fill the gap before the return from training of doctors from Timor-Leste. Thus, despite slower progress in the early stages in meeting its reconstruction targets, early attention to developing a health policy framework and embedding the reconstruction efforts in that are paying big dividends now.

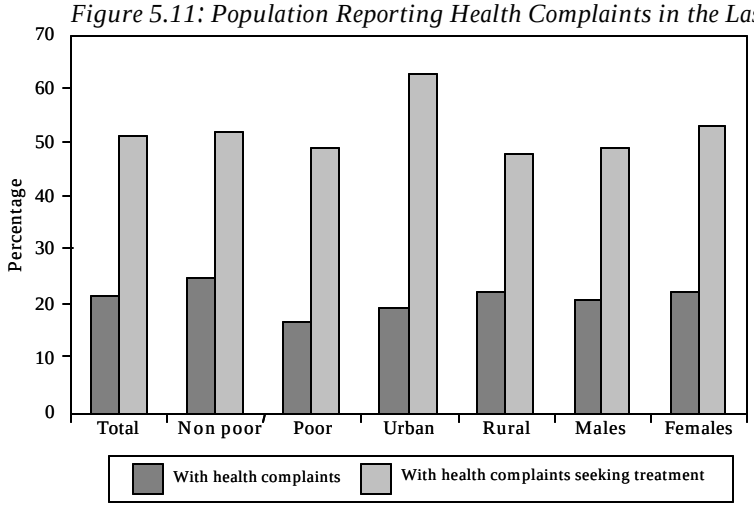
[52] The health analysis from the TLSS is based on Nassim (2002).

[53] Saadah, Pradhan and Surbakti (2000).

The Ministry of Health has been well placed in planning and in prioritizing its policy actions in implementing the NDP, and has been focusing its attention on service delivery. For a time, as the government re-establishes the health system, equity and efficiency objectives will both be served by an emphasis on providing preventive and simple curative services at the community level.

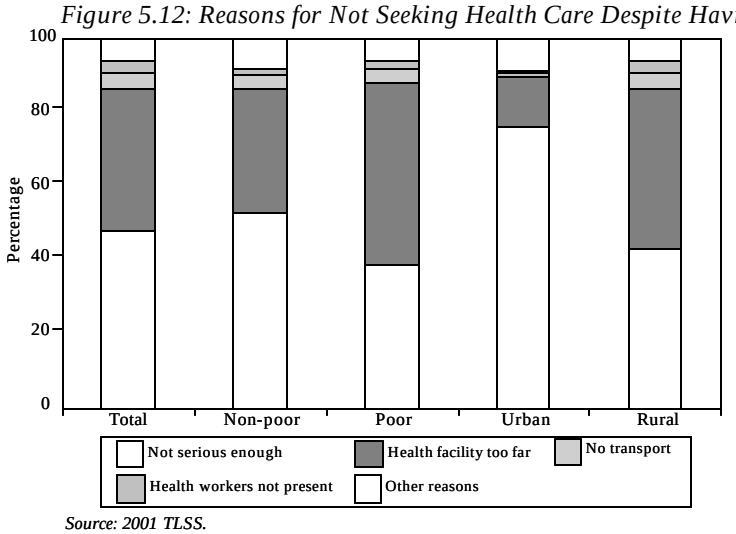
5.38 ***Morbidity and Treatment Seeking***. The poor rate their health as slightly better than the non-poor.[54] The poor are also less likely to report suffering a health complaint in the last 30 days, and, conditional on reporting a complaint, are also slightly less likely to seek treatment (Figure 5.11). Rural residents report slightly higher levels of health problems than people in urban areas, but are much less likely to seek treatment. The main reasons given for not seeking treatment in spite of having a health complaint are that the complaint was not serious enough, or that the distance to the facility was too far (Figure 5.12). The poor are more likely than the non-poor to say the facility was too far away. Not surprisingly, access to facilities is not a major issue for urban residents, though it is a deterrent to seeking health care in rural areas. There is no difference among men and women. Among the population reporting health problems, 40 percent are children under the age of 14 years.

Figure 5.11: Population Reporting Health Complaints in the Last Month



Source: 2001 TLSS.

Figure 5.12: Reasons for Not Seeking Health Care Despite Having a Problem

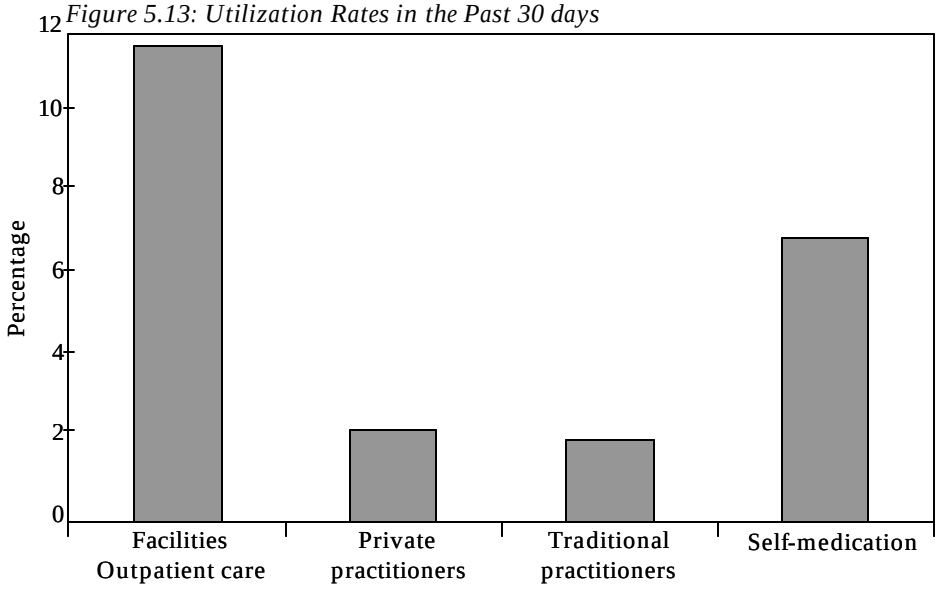


Source: 2001 TLSS.

[54] This, at first, seems unexpected, but may reflect that fact that the wealthy have more interactions with health providers that could raise reports of illness or morbidity.

5.39 ***Utilization of Health Facilities*** The survey asks individuals about their utilization of different types of providers (health facilities, private practitioners) for outpatient care in the past month, the extent of self-medication and inpatient hospitalization rates in the past year. As Figure 5.13 shows, the population relies on health facilities, with very little use of private practitioners for outpatient care. Self-medication is used by 7 percent of the population. Inpatient utilization rates are low at 1%. Only about 12 percent of the population reported utilizing a health facility for outpatient care – treatment or preventive – in the month preceding the survey, only 4 percent more than those seeking treatment for illness (Figure 5.14). This low overall utilization, in particular for preventive services, is the main challenge for the health sector.[55] Large differences are found between the poor and non-poor.[56] There is also a big difference between non-poor and non-poor females (14.9 percent and 9.1 percent respectively).[57] Contact rates are highest in Dili (14 percent).

Figure 5.13: Utilization Rates in the Past 30 days



Source: 2001 TLSS.

5.40 Figure 5.15 shows the distribution of facilities / providers used for those who sought outpatient care in the past 30 days.[58] At present, three quarters of the population utilizes public facilities for outpatient care. There is much greater use of private facilities among the non-poor, with over 29 percent using private or church facilities in contrast to 14 percent among the poor. Given the distribution of the poor, and facilities, there is a big urban–rural divide in the choice of health facility. Urban residents rely on hospitals and private facilities. Half of the rural inhabitants, in contrast, rely primarily on community health centers, while public hospitals and private facilities are used by less than a fifth of the population each. Mobile clinics are most important to the lowest quintile – 20 percent use this facility for outpatient treatment. As the health system is being developed, mobile clinics are being used

[55] The outpatient contact rates are similar to that prevailing in Indonesia before East Timor voted for independence-in 1997 the rate was 14.3 and in 1998, 6.8 percent (Saadah et al, 2000).

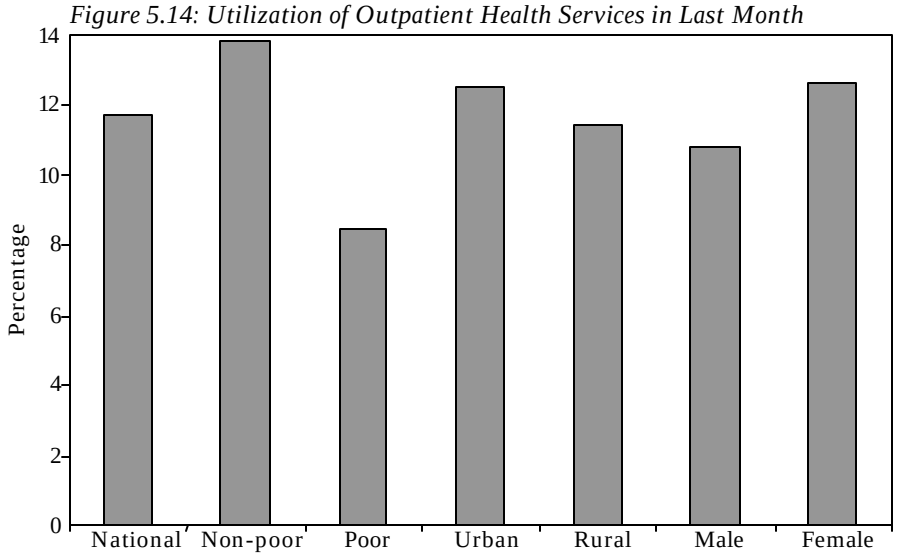
[56] The differences are greater when considering the bottom quintile (8.5 percent) and the richest quintile (15.1 percent). See Nassim (2002).

[57] See Nassim (2002).

[58] The pattern of utilization for those seeking treatment when ill is similar to the outpatient utilization rates, hence, in this volume we only report the former.

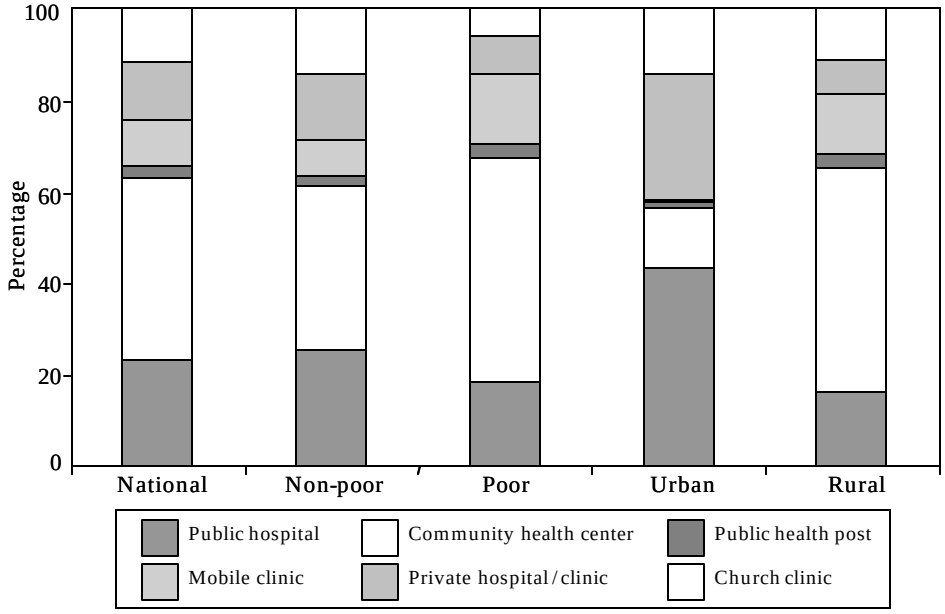
in place of health posts to give time to judge whether improved transport, and/or increased demand for better staffed and equipped community centers will make health posts increasingly unnecessary.[59]

Figure 5.14: Utilization of Outpatient Health Services in Last Month



Source: 2001 TLSS.

Figure 5.15: Distribution of Type of Facility for Outpatient Care



Source: 2001 TLSS.

5.41 This reliance on government services, and the existing socioeconomic differences in using government services, underscore the importance of the Government's commitment to equity objectives - to reaching the poor, and those in rural areas - if these differences are not to become magnified as the health system develops. An important signal is provided by the urban use of public hospitals for outpatient treatment - though the hospitals tended to be the base of NGO operations, and this pattern may be changing. The challenge for policy is to

[59] However, the new mobile clinics are delivered by nurses on motorbikes, rather than the vehicles often with doctors operated by the NGOs. Whether the mobile clinics provided on motorbikes will be as important in providing health care to the poorest groups, and in rural areas generally is an open question.

constrain the use of hospitals for services more appropriately offered in health centers, and to resist the demands of urban populations, typically politically more strongly organized, for resources for hospitals at the expense of primary health care in less well served rural areas.

5.42 Table 5.9 shows the reasons people report for outpatient visits. Just over half of the visits are for medications, with medical check-ups being the second most common reason given (28 percent). The poor are more likely to say they attended for medications than the non-poor. There was little demand for preventive services, except among the better-off. Only 2.5 percent of outpatient visits were for pre- and post natal care or delivery.

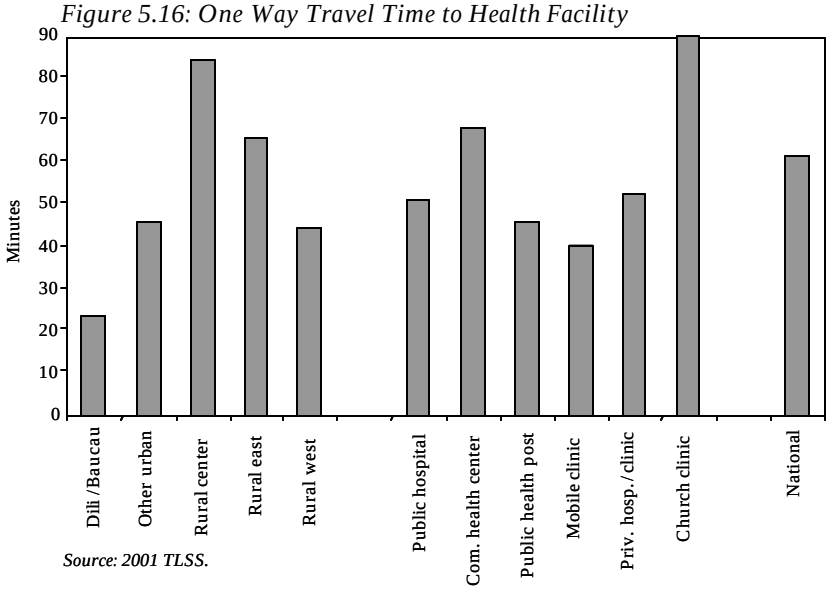
Table 5.9: Reason for Outpatient Visit among Non-poor and Poor

	Non-Poor	Poor	Total
Immunization	0.4	0.4	0.5
Medical check-up	30.5	21.1	27.8
Consultation	10.8	6.5	9.6
Medication	47.5	63.8	52.2
Injections	5.1	5.7	5.3
Treatment for injury / illness	2.9	1.5	1.2
Prenatal case	1.1	0.5	0.9
Delivery of baby	0.4	0.0	0.3
Postnatal care	0.2	0.0	0.1
Other	1.1	0.2	0.9

Source: 2001 TLSS

5.43 ***Costs: Transportation and Services*** While public health care is nominally free, there are costs associated with getting outpatient care. The costs include travel costs (both time and money) and costs for medicines or services, in some cases even while visiting public facilities. On average, individuals pay a little less than US$2 per person per month for the monetary costs of health care. Monetary costs are highest in Dili and the Rural Center and lowest in the Rural West. Among those visiting health facilities, the average one way travel time to the health facility is 62 minutes (Figure 5.16). The most common mode of transport

Figure 5.16: One Way Travel Time to Health Facility



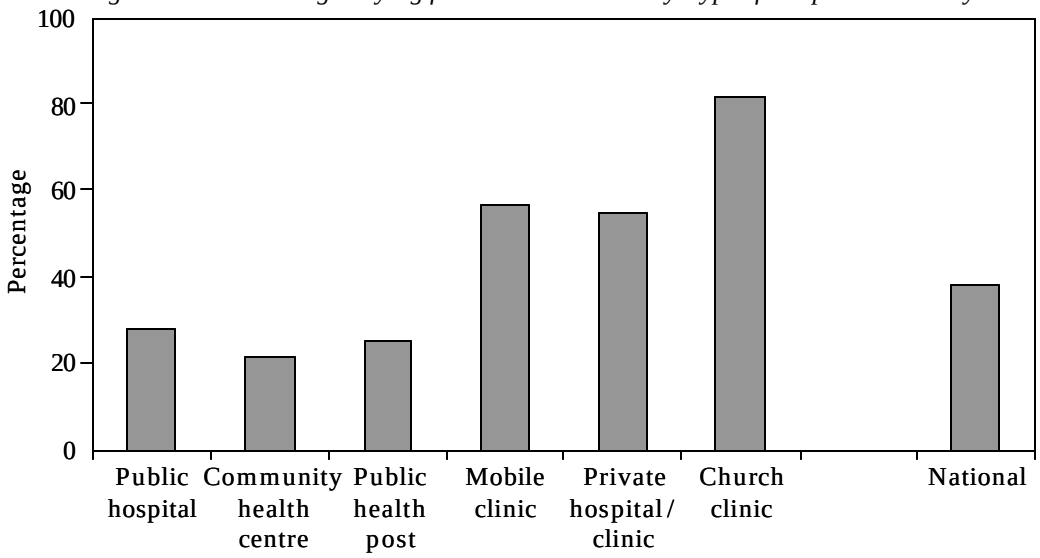
Source: 2001 TLSS.

was walking, for two-thirds of the population. This could be a constraint to seeking care when individuals are sick and unable to walk or in taking small children for preventive or curative care. Travel times vary by location and type of facility, being particularly high in the rural Center.

5.44 Average transport costs are less than a dollar, though two thirds of the population does not pay for transportation cost to get outpatient care. Among those that pay, the cost is twice as high[60]. There are also costs incurred for services and medications – on average US$1, with the non-poor paying US$1.16, and the poor paying 65 cents. They indicate both a willingness to pay, probably at least for medicines. About two fifths pay for medical care and this varies by the type of provider. Even in public health facilities, a quarter pay for health care, and over half pay at mobile clinics.

5.45 With regard to medicines, there has been some concern about the extent of self-medication. TLSS indicates that nearly 10 percent of the non-poor and 2.5 percent of the poor had bought medicines without prescription in the past month, chiefly from kiosks and street vendors, not from pharmacies.

Figure 5.17: Percentage Paying for Medical Services by Type of Outpatient Facility



Source: 2001 TLSS.

5.46 ***Maternal Health***. Only 8 percent of currently married women are using contraception. These statistics are similar to the rates from the SUSENAS data, which show low contraceptive use in Timor-Leste with a rate of 11 to 13 percent among married women 1997-1999. There are only slight urban / rural differences with 9 percent currently using in urban areas and 7.7 percent in rural. The most common reasons for not using contraception were that the woman "wants children" (31 percent), religious beliefs (28 percent), and fear of side effects (13 percent). Similarly low rates are found in the MICS survey. The MICS data also point to the high fertility levels – women have more than seven children, among the highest in the world. Furthermore, the MICS survey highlights low levels of antenatal care and deliveries attended by skilled personnel. As previously noted, only one in four women are assisted by a skilled medical

[60] Excludes two observations with very high transport costs.

practitioner during delivery, one half is assisted by family members or relatives, and one in five had no assistance at all.

SUMMARY AND POLICY ISSUES

5.47 ***Public spending*** in the post-independence period broadly supports service delivery functions, with education accounting for one quarter of CFET spending and health for another 10 percent. CFET per capita spending is US$7.3 for health and US$19 for education, while overall per capita spending for 2002 on education equals US$58, and US$32 for health, substantially more than most low and middle income countries. While these high costs reflect capital expenditures to set up education and health systems, at this stage, Timor-Leste is in the remarkable situation of allocating large sums on social sectors. One issue lies in ensuring sustainability in the future. As external financing declines, operating costs will shift to the budget, which will pose a challenge in maintaining adequate allocations to priority sectors of education and health. Whether these levels of public spending can be sustained in the future needs to be assessed. Cost-recovery measures should be considered for those who can afford to pay, while maintaining affordable services for the poor.

5.48 A second aspect of this is in allocating public resources for services that reach the poor. Within education and health, there is some concern about the proportion of spending allocated to tertiary level services, which largely benefits the rich. Community health centers, the facility most used by the population are by and large neutral, while the incidence of hospital spending is regressive. Implementing the policy directions laid out in the National Development Plan which caps this share at 40 percent is a priority and recent data show that the share of CFET spending on hospitals is in this range. Public primary schooling is progressive in that the share of poor beneficiaries exceeds their share in the population, while secondary and tertiary education are regressive.

5.49 In ***education***, by 2001, the school system was largely rebuilt. Enrollments increased dramatically between 1998 / 99 and 2000 / 2001, especially for the poor, girls and rural children, which led to a narrowing of the gaps between the poorest and richest quintiles, girls and boys and urban and rural areas. The reduction in the private cost of schooling was significant and likely contributed to increasing enrollments. Despite the accomplishments, implementation is hampered by the lack of a policy framework for the sector. While access expanded dramatically, the quality of education, including curricula development and teacher training, received far less attention. In addition, education faces several challenges – (i) the sector has a large school going population and high adult illiteracy; (ii) the internal efficiency of the education system is low, with a large fraction of overage children in the system; and high repetition and drop out rates. The cost per student for 6 years of primary education is about US$300. The cost per graduate, however, is twice as much because of the repetition and dropout rates; and (iii) a quarter of 6-18 year olds have never attended school.

5.50 The National Development Plan's focus on improving the access, especially for the poor and improving the quality of learning and teaching in primary and secondary education is appropriate. Despite the narrowing in the enrolment gaps between the poor and the rich, the out-of-school children are more likely to be poor. The challenge lies in developing a sector-wide policy to guide implementation of the strategy, and in prioritizing actions and

costing them to achieve the objectives in education within the medium term expenditure program. For example, there are trade-offs between expanding access and increasing quality, between expanding access and providing free schooling, and between expanding primary schooling and having an adequate supply of teachers in the future. Supply side issues, which affect demand for education, loom large. There is an insufficient supply of adequately trained teachers and lack of appropriate learning materials. These trade-offs will need to be assessed in the context of the prioritized action plans that the Ministry is preparing currently. Given the large cohort of school age children, financing the education needs in a sustainable manner in the future is a key priority to consider now and these should include measures to improve the internal efficiency of the education system.

5.51 ***Health*** outcomes in Timor-Leste are among the lowest in East Asia. Immunization, which is one of the most cost-effective health measures, had abysmally low coverage in 2001. Health utilization rates, however, are also low. Only 8 percent sought health care despite having a health complaint. While the lack of seriousness was one major reason, distance to the health facility was cited by two-fifths of the population as the major reason for not seeking care. This is particularly a concern in rural areas. Public health facilities are the main provider of health services, especially in rural areas. In urban areas, the private sector plays an important role, with over two-fifths using private facilities or church clinics. There are some costs associated with getting outpatient care. On average, the total cost to households of visiting a health facility is just under US$2 per person per month. Only one third of individuals pay for transportation and for medical services. The poor, on average, pay half the amount paid by the non-poor. The amount still represents a larger share of the expenditures of the poor. Payments for services are higher in private and church facilities, and even public facilities charge fees.

5.52 The National Development Plan stresses the delivery of basic health services, particularly for women and children focusing on expanding preventive programs. These are priorities. The Ministry of Health is also benefiting from the attention paid in the early days to develop a coherent health policy framework and embedding the reconstruction actions within it. The challenge lies in prioritizing actions within the expenditure constraint and in assessing tradeoffs in different policy priorities in health. But, given the strong foundation, the Ministry of Health was well-positioned in the prioritizing and sequencing exercise undertaken as part of this years planning process.

RESEARCH ISSUES

5.53 In education, analyzing the determinants of enrollments, repetition rates and drop-out rates will help in devising strategies to improve education outcomes. Understanding the factors contributing to improving learning outcomes will be critical in focusing resources on the most cost-effective inputs. Education sector work that is currently ongoing will address many of the issues identified here: teacher training, language of instruction and the strategies for expanding secondary school graduates. In addition, it will provide guidance on the appropriate role of public finance in education, with a medium term perspective taking into account budgetary and capacity constraints.

5.54 In health, utilization rates for health services are very low. More work is required to understand whether this is linked to lack of information, distrust, fees, limited access, or other factors. Such analysis will have to take into account the effects of the major administrative reorganization in the health sector undertaken since the time of the survey. A health care financing study can examine options for providing affordable health services for all in a sustainable manner.

6 Household Security

6. HOUSEHOLD SECURITY

6.1 In developing countries, households are exposed to many unforeseen changes of events threatening their livelihoods. Such vulnerability to poverty is an important dimension of deprivation, and can itself become the cause of poverty. In this chapter, we look at two aspects of vulnerability that are emphasized in the Government's Poverty Reduction Strategy (Box 6.1). The first part looks at groups that are especially disadvantaged in dealing with adverse circumstances. The second section turns towards the temporal dimension of vulnerability and presents evidence on food security.

Box 6.1: Poverty Reduction Strategy: Security

Security has been a major concern of the people of Timor-Leste over the past twenty five years, particularly in terms of security of person and property, but also in terms of food security and security of livelihood, and protection against natural disasters. The National Development Plan outlines the broad framework of a social safety net for the vulnerable. The emphasis will be on partnership, with the Government supporting community, NGO and Church initiatives. The NDP highlights a number of key areas of concern.

- Disadvantaged groups, including widows and orphans of the resistance, veterans, child-soldiers and the traumatized, deserve particular attention.
- Overall food availability in the country is to increase and food security at the household level to be improved. The distribution of food to the vulnerable during times of food stress should be continued, together with employment in public works, particularly road maintenance, as a self-targeted form of assistance. Since women and children are particularly at risk, this includes school feeding and targeted provision of milk and food supplements for pregnant women and young children.
- Insecurity of livelihood or employment, caused by the lack of recognition of ownership and tenancy of agricultural land, or lack of access to resources such as forests or other community lands, is to be addressed. Programs, aimed at improving economic participation, will target those affected by economic shocks, including those laid off as UN mission and supporting services wind down.

Source: Planning Commission (2002).

Main Messages

- The analysis shows that female-headed households, widows, and parentless children experience severe hardship. Designing appropriate policy responses to provide support to these disadvantaged groups will be an important element of any poverty alleviation strategy.
- Food insecurity is widespread in Timor-Leste and is aligned to the harvest cycle, with highest levels of insecurity experienced between November and February at the end of the maize harvest and before the rice harvest. Interventions to improve the availability of food during the course of the year are critical to improving household welfare.

DISADVANTAGED GROUPS

6.2 In many Asian countries, some groups are excluded from the benefits of economic developments. Parentless children, elderly, widows, and women are often found to be vulnerable, as economic, social, cultural, and institutional barriers combine to result in low living standards. These groups depend particularly on cooperation from others. Identifying disadvantaged groups is a first step towards developing support strategies that prevent poverty, marginalization, and social disintegration. In this section, we take a closer look at

the TLSS evidence on social and economic inequities experienced by specific groups[61]. We use demographic and family characteristics to categorize the population, and investigate whether particular household groups, or segments within a household, are especially disadvantaged.

Gender

6.3 Gender is an important aspect in the debate on development. While quantitative data may be mixed on the link between poverty and gender, there is growing evidence that societies that discriminate on the basis of gender tend to experience more poverty, slower economic growth, and a lower quality of life than societies in which gender inequality is less pronounced. In all countries, but particularly in the poorest, giving women and men the same rights – allowing them equal access to education, jobs, property and credit, and fostering their participation in public life – produces positive outcomes, such as decreased child mortality, improved public health, and a strengthening of overall economic growth.

6.4 Attempts to estimate the number of women living in poverty has generated a considerable amount of debate around the world. The main stumbling block is the lack of an acceptable indicator for gender comparisons. The basic poverty measures in this report are based on household resources, and incorporate the essentially arbitrary assumption of equal distribution within the household. They do not capture any female poverty deriving from intra-household inequality. With this caveat in mind, it is nevertheless useful to ask whether, under this "conservative" assumption, there is evidence for gender bias in poverty.

Table 6.1: Gender-Age Groups and Welfare (%)

	0 - to 6		7 to 14		15 to 49		50 or older	
	Female	Male	Female	Male	Female	Male	Female	Male
Poverty								
Headcount	42.6	44.7	49.1	45.7	36.0	35.3	31.1	33.1
Poverty Gap	13.0	13.5	15.1	14.1	10.8	10.2	9.3	8.8
Sevenity	5.5	5.6	6.4	6.0	4.5	4.1	3.8	3.3
Immunization								
BCG	52.2	55.8						
Polio	57.9	61.1						
DPT	53.3	57.0						
DPT3	8.3	9.1						
Measles	51.7	49.0						
Vitamin A	6.5	7.6						
Health								
No health complaints last month	73.2	72.7	86.8	87.4	79.0	83.0	61.3	58.2
Subjective health status (1 to 5)			4.0	3.9	3.9	3.9	3.6	3.6
Education								
Net Primary Enrollment Rate			63.4	60.5				
Net Primary Class Enrollment Rate			19.2	17.0				
Schooling			82.1	77.7	47.9	66.2	2.9	12.8
Grade completed (1 to 6)					1.9	2.3	1.0	1.2
Literacy					49.8	67.3	6.1	14.3
Subjective Welfare								
Happiness (1 to 5)					3.16	3.18	3.07	3.15
Change in living standard since violence (1 to 3)					1.80	1.81	1.88	1.83
Economic status (1 to 9)					2.40	2.41	2.16	2.36
Change in economic status since violence (-8 to 8)					0.12	0.15	0.08	0.07
Power status (1 to 9)					3.78	3.90	3.45	3.69
Change in power status since violence (-8 to 8)					2.14	2.24	1.86	2.00

Note: This table is taken from Tables 6.2 and 6.3 in Volume II
Source: 2001 TLSS

[61] This part draws on Chapter 6, Volume II.

6.5 The evidence on gender bias in Timor-Leste is mixed. First, women do not live in poorer households than men (see Table 6.1). Household demographics differ little within each age category, implying that this result is robust to changes in equivalence scales. This finding comes however with a strong caveat. TLSS provides no information on the gender allocation of consumption within the household. More research into intra-household distribution is required to conclude that this household-level finding translates into an absence of gender bias at the individual level.

6.6 In addition, we also find little systematic differences across gender-age groups. Immunization rates are higher for boys, and education indicators better for girls, but the gaps are statistically insignificant. For adults, male educational standards are generally higher, which says more about gender inequalities in the past than today. Finally, subjective indicators tend to rank men higher than women, especially for those 50 years or older, but the differences are small, and the evidence on changes since the violence inconclusive.

Female Headship

6.7 The analysis so far focuses on characteristics of gender-age groups cutting across households. It does not capture deprivations linked to particular households features. One salient household characteristic is the gender of the household head. In this section, we focus on differences in welfare between male and female-headed households. We want to explore, whether, as a result of economic and perhaps cultural constraints, female-headed households experience lower welfare than male-headed households.

6.8 In Timor-Leste, cultural values in general, and traditions of family life specifically, are primarily based on catholic beliefs. In this context, female headship arises for two main reasons. First, some families have lost their male breadwinner as a result of the years of violence during the Indonesian period and the time of the referendum. Second, women have a higher life expectancy than men. In consequence, almost all female heads are widows.[62]

6.9 Both factors suggest that female-headed households have fewer household members than male-headed households, while the second aspect implies that female heads are on average older than male heads, and in turn are likely to have lower child shares. Overall, more than one in seven household heads are women. Female headed households are indeed smaller than male headed households (3.1 members relative to 5.3 members), so in terms of population, about one in ten individuals live in households whose head is a woman. For male headed households, seven in ten individuals have a head who is younger than 50. The corresponding number for female headed households is only 5 in 10. The child share in male headed households is on average 20 percent higher than in female headed households.

[62] However, one third of all widows are not heads of household. In Chapter 6, Volume II, we analyze widows separately.

Table 6.2: Female Headship and Welfare (%)

	0 - to 6		7 to 14		15 to 49		50 or older	
	Female	- Male	Female	- Male	Female	- Male	Female	- Male
Poverty								
Headcount	31.9	44.5	43.8	47.7	26.2	36.6	19.4	34.9
Poverty Gap	8.9	13.6	13.7	14.6	6.4	10.9	5.6	9.8
Sevenity	3.8	5.7	5.8	6.2	2.4	4.5	2.2	3.9
Immunization								
BCG	39.2	54.9						
Polio	40.3	60.6						
DPT	40.7	56.1						
DPT3	5.6	8.9						
Measles	37.5	51.1						
Vitamin A	2.4	7.3						
Health								
No health complaints last month	70.7	73.1	83.7	87.5	77.2	81.4	55.3	60.7
Subjective health status (1 to 5)			3.9	3.9	3.8	3.9	3.3	3.6
Education								
Net Primary Enrollment Rate			57.1	62.4				
Net Primary Class Enrollment Rate			12.8	18.6				
Schooling			76.2	80.2	53.5	57.3	2.3	9.2
Grade completed (1 to 6)					2.1	2.1	1.0	1.1
Literacy					54.1	58.9	5.5	11.3
Subjective Welfare								
Happiness (1 to 5)					3.03	3.19	2.97	3.14
Change in living standard since violence (1 to 3)					1.85	1.80	1.94	1.83
Economic status (1 to 9)					2.17	2.43	1.87	2.35
Change in economic status since violence (-8 to 8)					0.22	0.13	-0.04	0.10
Power status (1 to 9)					3.68	3.86	3.26	3.64
Change in power status since violence (-8 to 8)					2.12	2.20	1.85	1.95

Note: This table is taken from Tables 6.4 and 6.5 in Volume II
Source: 2001 TLSS

6.10 The welfare comparison is shown in (Table 6.2) As before, the findings on poverty are subject to the caveat of lack of information on intra-household distribution. Poverty is between one third to one half higher for male headed households. However, as discussed in the previous paragraph, male and female headed households differ both in size and composition. Especially, allowing for economies of scale can reverse the ranking as male headed households are one third larger than female headed households. We conclude that the poverty rankings of male and female headed households are not robust to changes in equivalence scales across a plausible range.

6.11 With regard to other dimensions of well being, including education, health andsubjective well being, male headed households are consistently better off than female-headed households. In male-headed households, children under 6 have significantly higher immunization rates, and children of school age report less health complaints and better educational indicators. The same holds for both prime age adults and the elderly. Finally, the subjective welfare indicators suggest that adults in male-headed households feel to have a higher economic and power status. Better welfare in male headed households may not be linked to gender bias. It could simply reflect that female-headed households are deprived of one important breadwinner.

Children Without Father or Mother

6.12 The counterpart of female headship, from the point of view of the children generation, is boys and girls without living fathers. In any country, one of the most disadvantaged groups

is children without parents. In Timor-Leste, as a legacy of a long history of violent conflict, over one in ten children have only one or no living parent. The largest group is the children without fathers, accounting for four in five of the children without at least on parent.[63] This part discusses the welfare of parentless children.

6.13 A simple way to identify the impact of having lost a parent is to compare the welfare of children with and without fathers and mothers. We separate three groups: those with both parents alive, those whose father has died and whose mother is still alive, and those whose mother has died and whose father is still alive.[64] The categories represent 89 percent, 6.5 percent, and 3.5 percent of all children under the age of 15, respectively.[65] Let us first consider the two largest groups, children with both parents alive versus those with a living mother and a deceased father.

Table 6.3: Child Welfare and Parental Living Status (%)

	Father and mother alive	Father dead, mother alive	Father alive, mother dead
Poverty			
Headcount	31.9	44.5	43.8
Poverty Gap	8.9	13.6	13.7
Sevenity	3.8	5.7	5.8
Education			
Schooling			57.1
Enrolled in age-specific school			
Enrolled in age-specific grade			
Immunization			
BCG	39.2	54.9	
Polio	40.3	60.6	
DPT	40.7	56.1	
DPT3	5.6	8.9	
Measles	37.5	51.1	
Vitamin A	2.4	7.3	
Health			
No health complaints last month	70.7	73.1	83.7

Note: This table is taken from Tables 6.8 and 6.9 in Volume II.
Children are defined as aged 15 years or younger. Immunization rates refer to children under 5 years of age.
Source: 2001 TLSS.

6.14 Fatherless children live in households without the typical main breadwinner, so we expect high poverty. This is indeed the case (Table 6.3). Child poverty rates are around 15 percent higher for those without a living father than for those where the father has deceased. This ranking is robust to changes in the equivalence scale. In terms of education, we find that children without fathers are worse off than children with both parents alive: they are less likely to have received any schooling; have a lower net enrollment rate, both for primary school as a whole and for each primary school grade. With regard to child health and

[63] Out of the children with both natural parents alive, more than nine in ten of these children live together with both of them, and almost all of them with at least one of them.

[64] Among the children below the age of 15, 19 in 20 children have a living mother.

[65] We do not have a sufficient number of observations on orphaned children (1.0 percent of all children) to present reliable statistics.

immunization, children with both parents report fewer health complications during the last month, and children less than 5 years of age with living fathers are better immunized than other children.

6.15 Turning to children with a living father and a deceased mother, there is little difference in terms of poverty compared to children with both parents alive. However, education, immunization, and health indicators show consistently that children without mother are worse off than those whose both parents are alive.

6.16 This examination is preliminary only and calls for more research to uncover the impact of child care arrangements on the welfare of parentless and orphaned children. Nevertheless, these numbers suggest that the presence of fathers increases welfare for the children involved. In addition, we find that with regard to education and immunization, parentless children, being with a deceased mother or father, are consistently worse of than children with both parents.

FOOD SECURITY

6.17 Poverty means more than inadequate consumption, education, and health. It also means dreading the future. Living with the risk that a crisis may descend at any time, not knowing whether one will cope, is part of life for poor people. Poor people are often among the most vulnerable in society because they are the most exposed to a wide array of risks. Low income implies poor people are less able to save and accumulate assets, which in turn restricts their ability to deal with a crisis when it strikes. Poor people have developed elaborate mechanisms of dealing with risk, some of which offer short-term protection at long-term cost, preventing any escape from poverty.

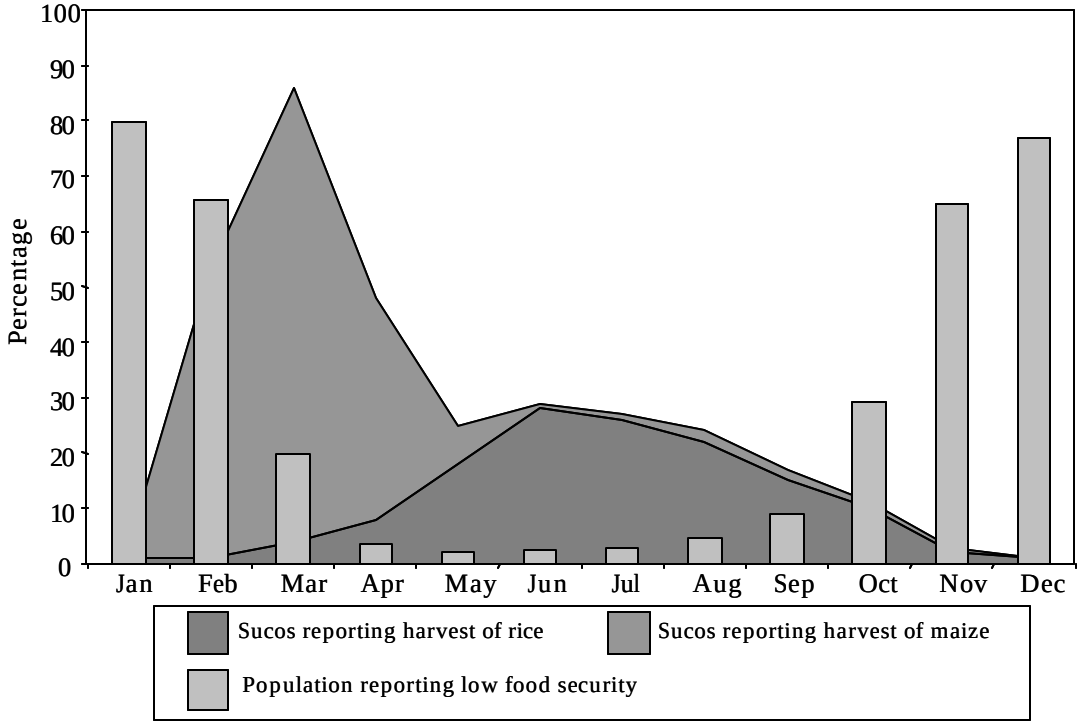
6.18 Risk is a pervasive characteristic of life in developing countries. While it is beyond the scope of this report to discuss the multiple sources of vulnerability comprehensively, TLSS allows us to explore one issue of vulnerability in more detail: food security.[66]

Prevalence

6.19 Food security refers to assured access to enough food at all times for an active and healthy life. Ideally, we would want to base empirical evidence on data collected over the entire course of the year, covering the different stages of the agricultural season. Yet, TLSS surveyed households only between late August to early December, and did not measure dietary intake or malnutrition. However, the survey included a range of questions on the perception of food security. While these subjective indicators raise questions with regard to the comparability of responses, they nevertheless give instructive pointers both to the extent and pattern of food insecurity.

[66] The chapter draws on Chapter 7, Volume II.

Figure 6.1: Household Food Security by Month



Source: 2001 TLSS and Suco Survey.

6.20 Subjective assessments of food adequacy suggest that food insecurity is widespread. Close to nine in ten persons experience inadequate food provision at some point during the year, while fewer than one in two have too much food during any month in the year. Food security is closely tied to having enough rice and maize. Food shortages are aligned with the harvest cycle, as shown in Figure 6.1. They are greatest during November and February, at the end of the rice harvest and before the maize harvest.

6.21 Major urban centers typically have access to just enough food all throughout the year, while other parts of the country face greater fluctuation in food availability, and experience food shortage about twice as often as food excess. One interpretation of this evidence is the difference in capacity to keep consumption constant over the year. The greater reliance on non-agricultural income sources allows households in Dili and Baucau to keep consumption constant at an adequate level across the year. Two factors could explain this ability of consumption smoothing. First, urban incomes are likely to be less variable as they depends less on the agricultural seasons. Second, as they receive a higher share of income in cash, city dwellers may be able to engage more in saving and dis-saving of income.

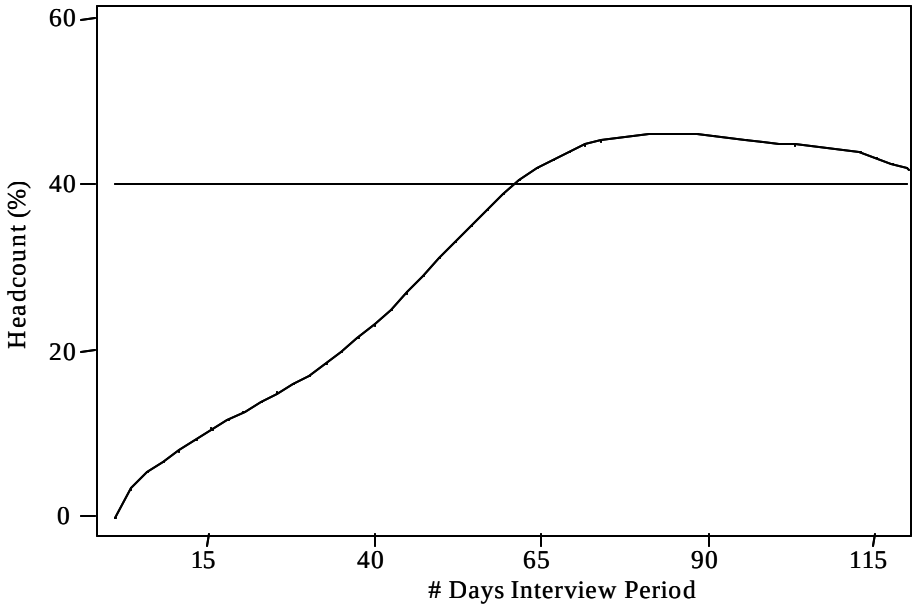
Food Security and Poverty

6.22 Agriculture is of overwhelming importance for living standards. About seven in ten persons live with heads of households who work on a household farm, and over three quarters are with heads whose main occupation is farming. Given this dependence on agricultural seasons, what is the implication of the intra-year cycle of food security for poverty?

6.23 The subjective food security indicators showed that food availability was closely aligned to the harvest cycle. August was the last month of the plentiful season, and lack of

food became more severe from September until the end of the year, and had its peak in January. On the basis of this pattern, we would expect poverty to broadly show an increase from early in the survey to the end of the survey. In Figure 6.2, we display the national pattern, linking the average poverty headcount to a count of the days in the survey. We find indeed a strong dependence of the poverty headcount to the timing of the interview. Fewer than one in ten persons live below the poverty line at the beginning of the survey. The share of the poor rises continuously until about three months after the start of the survey, or about mid-November, peaking at about 45 percent. This share then remains fairly constant during the last month.

Figure 6.2: Poverty and Interview Date



Source: 2001 TLSS.

6.24 This strong evidence for seasonality of poverty raises an immediate question. In the analysis of the poverty profile, we argue that about two fifth of the population live below the poverty line. In view of the intra-year fluctuations of living standards, this estimate is specific to the survey period. How representative is therefore this poverty rate of 40 percent for the year as a whole? In the absence of information of consumption behaviour throughout the year, we have to rely on subjective food security for a rough assessment. We compare the average value of food security for the survey period with the annual average. Taking as weights the percentage shares of interviews conducted in August, September, November, and December, we calculate that the share of not having enough food for the survey period is 30 percent. The annual average for this variable is 34 percent. Overall, this comparison suggests that the "survey" poverty rate is fairly close, and possibly slightly lower, to the "annual" poverty rate.

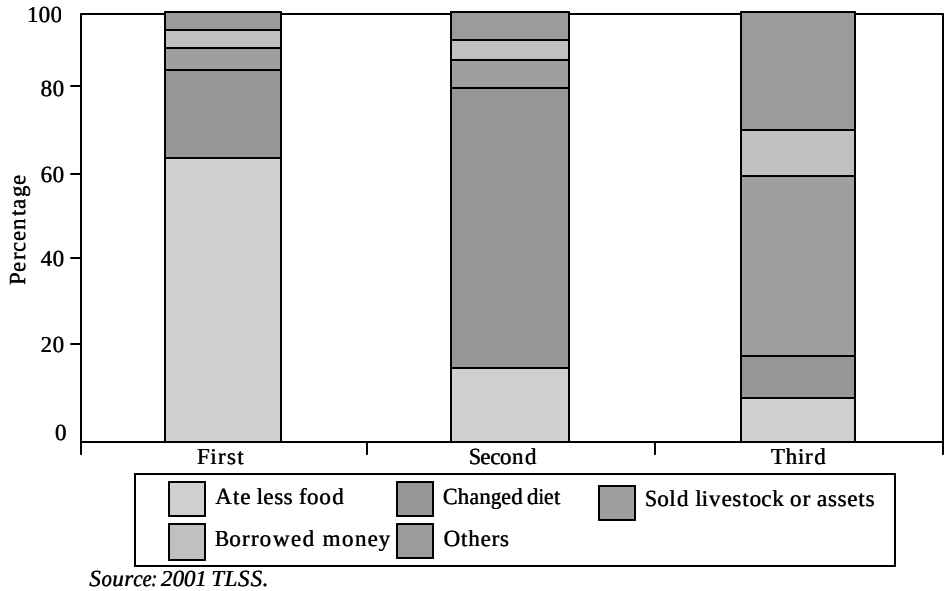
Coping with Food Shortage

6.25 What happens when a family is faced with a risk of food shortages? And how does a household respond to a food crisis? Farmers have always been exposed to weather risks, and for a long time have developed ways of reducing, mitigating, and coping with these risks (Besley 1995, Dercon 2002). Traditional risk management covers actions taken both before

("ex-ante") and after ("ex-post") the risky event occurs (Siegel and Alwang 1999). These strategies are often costly, as they lower vulnerability in the short term at the expense of higher vulnerability over the longer term. For example, diversifying crops may help the farmer to reduce the exposure to complete crop failure, but may also contribute to low productivity and hence to keeping his family in poverty.

6.26 Is food security associated with more ex-ante coping? In Dili/Baucau, the distinguishing feature of households in terms of food security is being employed in the non-agricultural sectors. By contrast, outside Major Urban Centers, dependence on agriculture is almost universal, and food security is related not just to being more diversified, but also having more assets and outputs, in terms of savings, livestock, crops, and jobs.

Figure 6.3: Coping Strategies when Not Enough Food



Source: 2001 TLSS.

6.27 TLSS asked households what actions they undertook in response to a food shortage. Figure 6.3 shows the ex-post actions taken by families when faced with lack of food. Household heads were asked to give up to three responses, ranked by degree of importance. Almost all families (99 percent) reported two actions, and close to 90 percent three actions. The need to resort to multiple strategies is in itself an indication of vulnerability. The number of coping strategies is linked to poverty: of those engaged in at most two actions, only one in four are poor, compared to almost one in two for those reporting three strategies.

6.28 Separating out the coping strategies suggests a sequencing of responses. At first, the household head experiences anxiety about food insufficiency, leading to decisions to reduce the household's food budget by altering the quality or variety of food consumed by the family. Overall, almost all households either change their diet or skip meals when faced with insufficient food. These two actions were not just most widespread, but also took priority over other responses.

6.29 Only if the situation required further adjustment, then households also undertook distress sales of livestock and other farm assets. Every other household reported this response, most of them as third action. Selling productive assets is clearly a last resort. It makes ends meet today at the cost of lowering the future income stream. Furthermore, it requires having

marketable assets in the first place. For example, only one quarter of those without livestock holdings reported asset sales, compared to over half for those owning animals.

6.30 Other strategies played a minor role. Private transfers are informal ways in which individuals exchange cash, food, and clothing, informal loans and assistance with work and child-care. Only about one in fifth families obtained resources from friends, relatives, and neighbors. Over half of the households receiving private transfers state this only as the third line of response. Food aid, either from government, NGOs, or the international community, was irrelevant – only one in a hundred persons benefited from such relief.

6.31 The overwhelming importance of dietary adjustments compared to reliance on asset sales and support from others or is also related to the nature of the risk. Food insecurity is related both to the agricultural cycle and weather-related production risks, and is a "covariate" risk. It concerns many households in a community or region at the same time. Under great stress, informal arrangements tend to break down, as the members of the community, or "risk pool", are commonly affected. The income of the village as a whole is reduced, triggering a collapse of community-based informal insurance arrangements (Morduch 1998). For example, as farmers attempt to sell livestock to make ends meet after a drought, livestock prices will fall as supply outstrips demands. Similarly, the family's neighbors and friends are faced with the same negative income shock, and are likely to be reluctant or incapable to provide loans or grants to them.

6.32 When households cut back on meals or change nutrition, who suffers the most? The survey asked families to identify up to three household members, who are affect most in case of a food shortage. The striking result is that children appear to take the brunt of the adjustment. They account for between three fifth to three quarters of the three most affected individual, even though they represent just over half of all household members. Since malnutrition at young age can lead to long-term health problems, this points to a potentially permanent detrimental consequence of even occasional food shortages.

SUMMARY AND POLICY ISSUES

6.33 Temporal and group-specific vulnerabilities are important dimensions of poverty. The analysis on disadvantaged groups confirms evidence from other countries. Female-headed households, widows, and parentless children experience severe hardship. Possible interventions range from support to traditional community structures; transfers or income-generating activities to widows and targeted support for schooling and health care.

6.34 Subjective assessments of food adequacy suggest that food insecurity is widespread. Food availability is aligned with the harvest cycle at the national and regional level. Major urban centers typically have access to just enough food throughout the year, while other parts of the country face greater fluctuation in food availability, and experience food shortage about twice as often as food excess. Food insecurity during the lean seasons is also associated with higher poverty. Households have multiple ways of dealing with food insecurity, which may lower vulnerability in the short term at the expense of higher vulnerability over the longer term. Almost all households either change their diet or skip meals when faced with insufficient food –to the detriment of especially children.

6.35 Overall, policies should be aimed at helping poor people manage risk better by reducing and mitigating risk and lessening the impact of shocks. These comprise multiple measures, ranging from developing human resources, improving access to productive resources and remunerative employment, expanding markets, infrastructure, credit, and institutions, to sound governance and trade and macroeconomic policies.

RESEARCH ISSUES

6.36 The analysis points to groups that face severe hardships – female headed households, widows and parentless children. More research is required to fully explore the complicated dynamics between family structure, community support, and welfare. This would help in designing appropriate policy responses that complement, not displace, family and community support structures.

6.37 Food insecurity is widespread. The findings on food security call for more survey work explicitly designed to capture the temporal dimension of food security and poverty, and to investigate household coping strategies. Understanding the underlying causes of food security (lack of cash incomes which allow households to purchase food during periods of shortfall, lack of availability of food in markets, or lack of storage) would help design appropriate policies.

7

Development Challenge

7. DEVELOPMENT CHALLENGE

7.1 The world's newest country is faced with a daunting challenge of economic and human development. In spite of the impressive progress made during transition since 1999, the legacy of four centuries of colonial rule, a quarter century of occupation and conflict, and the destruction following the referendum on independence, are still visible. With independence, the people of Timor-Leste have gained the opportunity, and taken on the responsibility, to meet the development challenge of overcoming the multiple deprivations burdening their lives.

7.2 This chapter lays out Timor-Leste's development challenge. First, we take stock of where Timor-Leste stands today with regard to human development, drawing on the latest available indicators for the Millenium Development Goals (MDGs). The second section is forward looking and investigates the overaching MDG on poverty. The third part presents scenarios linking progress in poverty reduction to aggregate growth and inequality. The final part summarizes many key messages of this report, asking what kind of policy and economic changes lead to lower poverty.

MILLENNIUM DEVELOPMENT GOALS

7.3 On September 27, 2002, Timor-Leste became the 191st member of the United Nations, two years after member states of the United Nations unanimously adopted the Millennium Declaration. The Millennium Development Goals (MDGs) are part of the road map for implementing this declaration. They commit the international community to an expanded vision of development, where human development is at the center for sustaining social and economic progress. The key development indicators contained in the NDP explicitly draw on the global MDGs.

7.4 The MDGs comprise seven goals, each of which addresses a main dimension of poverty.[67] The goals are set in transparent and quantifiable terms. The MDGs provide only a global blueprint that has to be tailored to national circumstances. On the basis of such localized numbers, countries, together with their development partners, can chart a course of action to achieve the goals and track progress.

OVERVIEW

7.5 Box 7.1 presents the MDG goals, targets and indicators. Table 7.1 shows the latest available MDG indicators for Timor-Leste and other East Asian countries. We present

[67] An eighth goal concerns the global development partnership.

information on 6 of the 7 goals, 8 out of the 11 targets, and 13 out of the 31 indicators. Many of the indicators represent work in progress. In some cases observations are sparse and still being compiled, or are not yet adequately collected. This information allows us to rank Timor-Leste relative to other countries in East Asia.[68] The numbers confirm that Timor-Leste is among the poorest countries in East Asia. The ranking is very low for child mortality, contraceptive prevalence rate, and education; below average for poverty and environmental sustainability; and average for gender equality.

7.6 These MDGs provide only a global blueprint that has to be tailored to national circumstances. For example, one goal concerns literacy. The population is ethno-linguistically diverse, with more than 30 languages or dialects in use. Timor-Leste has adopted Portuguese and Tetun as official languages, with English and Indonesian accorded the status of working languages. As shown in Figure 7.1, no more than one in twenty are fluent in Portuguese, and only one in ten speak Tetun as a mother tongue, though it is more widely spoken by four in five people. This poses unique challenges of communication between and within the Government and the people.

[68]It is important to bear in mind that MDG targets of countries are formulated in terms of either meeting a certain improvement relative to 1990, or reaching a specific level by 2015.

Box 7.1: MDGs – List of Goals, Targets and Indicators

Goal 1. Eradicate extreme poverty and hunger

Target 1. Halve, between 1990 and 2015, the proportion of people whose income is less than $1-a-day

1. Proportion of population below $1 per day
2. Poverty gap ratio (incidence x depth of poverty)
3. Share of poorest quintile in national consumption

Target 2. Halve, between 1990 and 2015, the proportion of people who suffer from hunger

4. Prevalence of underweight children (under five years of age)
5. Proportion of population below minimum level of dietary energy consumption

Goal 2. Achieve universal primary education

Target 3. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling

6. Net enrolment ratio in primary education
7. Proportion of pupils starting grade 1 who reach grade 5
8. Illiteracy rate of 15 to 24 years old

Goal 3. Promote gender equality and empower women

Target 4. Eliminate gender disparity in primary and secondary education, preferably by 2005, and to all levels of education no later than 2015

9. Ratio of girls to boys in primary, secondary and tertiary education
10. Ratio of literate females to males of 15 –to 24 years old
11. Ratio of women to men in wage employment in the non agricultural sector
12. Proportion of seats held by women in national parliament

Goal 4. Reduce child mortality

Target 5. Reduce by two thirds, between 1990 and 2015, the under-five mortality rate

13. Under-five mortality rate
14. Infant mortality rate
15. Proportion of 1 year-old children immunized against measles

Goal 5. Improve maternal health

Target 6. Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio

16. Maternal mortality ratio
17. Proportion of births attended by skilled health personnel

Goal 6. Combat HIV/AIDS, malaria and other diseases

Target 7. Have halted by 2015 and begun to reverse the spread of HIV/AIDS

18. HIV prevalence among 15 –to 24 years old pregnant women
19. Contraceptive prevalence rate
20. Number of children orphaned by HIV / AIDS

Target 8. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases

21. Prevalence and death rates associated with malaria
22. Proportion of population in malaria risk areas using effective malaria prevention and treatment measures
23. Incidence of tuberculosis (per 100,000 people)
24. Proportion of tuberculosis cases detected and cured under directly observed treatment short course

Goal 7. Ensure environmental sustainability

Target 9. Integrate the principles of sustainable development into country policies and programmes and reverse the losses of environmental resources

25. Proportion of land area covered by forest
26. Land area protected to maintain biological diversity
27. GDP per unit of energy use (as proxy for energy efficiency)
28. Carbon dioxide emissions (per capita)

Target 10. Halve by 2015 the proportion of people without sustainable access to safe drinking water

29. Proportion of population with sustainable access to an improved water source

Target 11. By 2020 to have achieved a significant improvement in the lives of at least 100 million slum dwellers

30. Proportion of people with access to improved sanitation
31. Proportion of people with access to secure tenure (urban / rural)

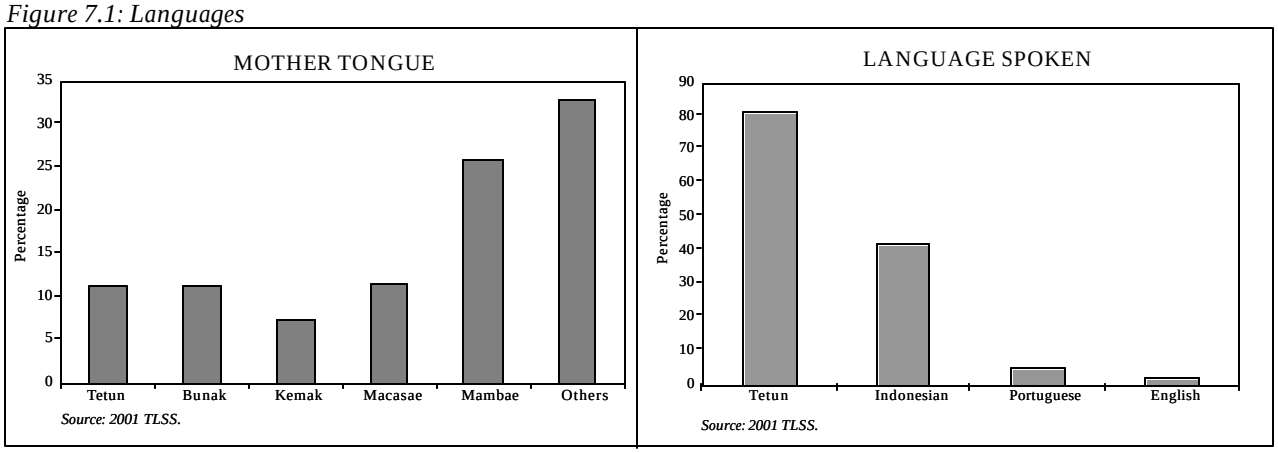
Table 7.1: Millennium Development Goals in East Asia

Goal	1	1	2	2	3	3	4	4	4	6	7	7	7
Target	1	1	3	3	4	4	5	5	5	7	9	10	11
Indicator	1	3	6	8	9	10	13	14	15	19	25	29	30

	Population below $1-a-day (%)	Share of poorest quintile in national consumption	Net enrollment ratio in primary education	Literacy rate 15-24 (%)	Ratio of girls to boys in pimary and secondary education (%)	Ratio of literate females to males of 15-24 (%)	Under-five mortality rate (per 1,000 live births)	Infant mortality rate (per 1,000 live births)	1-yeard-old children immunized against measles (%)	Contraceptive prevalance rate (%)	Land area covered by forest (%)	Population with sustainable access to an improved water source (%)	Population with access to improved sanitation (%)
Timor-Leste	21	7	75	77	97	96	125	88	6	7	58	63	42
East Asia & Pacific	14	-	92	97	89	97	44	35	83	83	27	75	47
Rank Timor-Leste	9	6	13	12	3	22	20	19	21	10	8	14	14
Low Income Countries	-	-	-	76	79	85	114	76	57	-	27	76	45
# of observations	12	12	13	16	13	24	20	21	21	10	22	20	18

Source: UNICEF (2002), World Bank (2002a) and World Bank SIMA database.

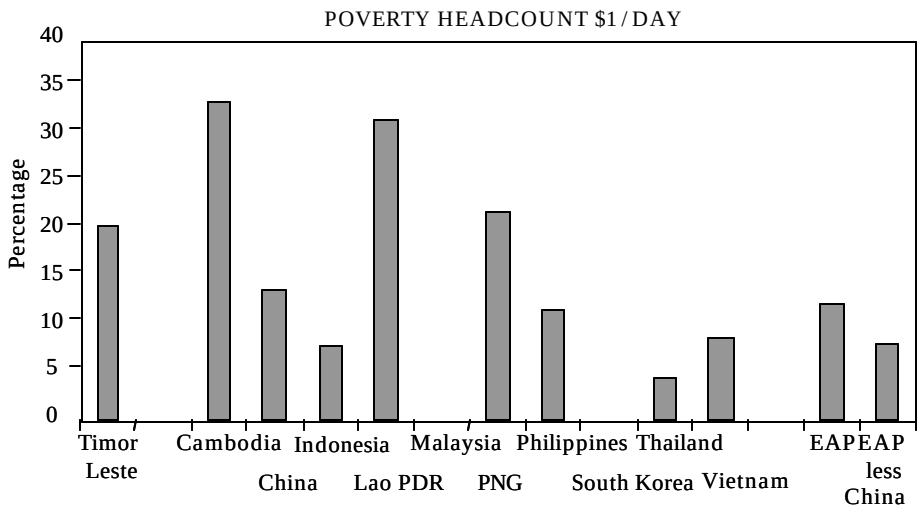
Figure 7.1: Languages



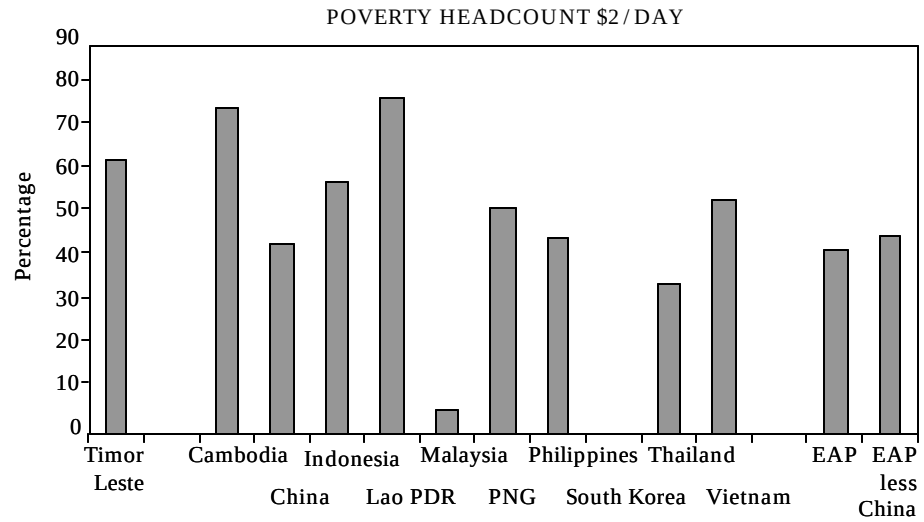
MDG on Poverty

7.7 In the next two sections, we take a closer look at the MDG on poverty. This first, overarching MDG is to halve the proportion of people living in poverty by 2015 compared to 1990. Differences in poverty across countries can reflect differences in economic development, the distribution of assets, the quality and responsiveness of state institutions, the degree of inclusiveness in societies, and risk management. Highlighting the diversity in outcomes is important. It allows the identification of successes and failures in poverty reduction, and thereby enhances our understanding of what causes poverty and how best to reduce it. Awareness of these differences will help policymakers set priorities, concentrating actions where they are most needed.

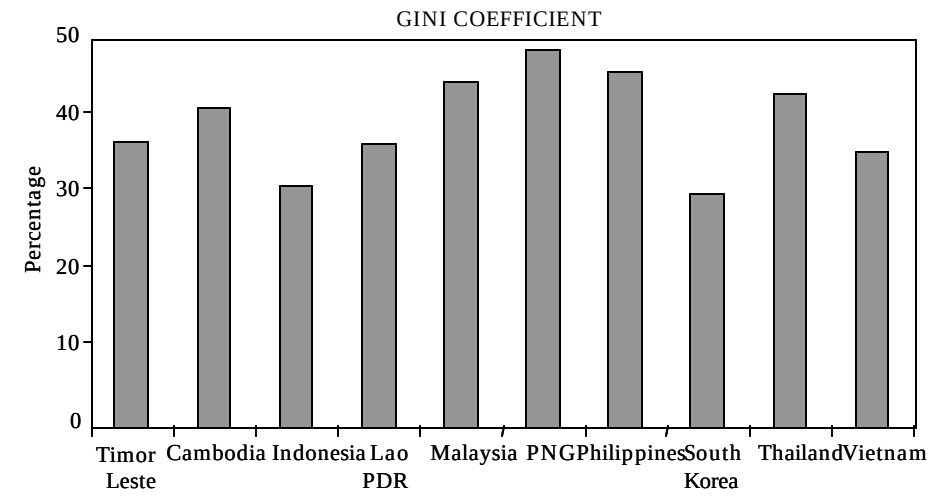
Figure 7.2: Poverty in East Asia



Source: 2001 TLSS and World Bank (2002a).



Source: 2001 TLSS and World Bank (2002a).



Source: 2001 TLSS and World Bank (2002a).

7.8 How does Timor-Leste compare to other countries in the region? For international comparisons of poverty, we use the international poverty lines fixed at roughly US$1-a-day and US$2-a-day.[69] The country and regional estimates of the poverty headcounts for these two different poverty lines, based on the latest available household surveys, are shown in Figure 7.2. The US$1-a-day estimates indicate substantially higher poverty in Timor-Leste than in East Asia as a whole (20 percent versus 12 percent). Out of the eleven countries listed, Timor-Leste is the fourth poorest country, with only Lao PDR, Cambodia, and PNG showing an even starker deprivation. At US$2-a-day, the difference to East Asia is equally pronounced (63 percent versus 42 percent). Lao PDR and Cambodia are still poorer, but PNG now has lower poverty than Timor-Leste. Overall, the figures confirm Timor-Leste's status as one of the poorest countries in East Asia. While the discussion in this section was just based on one poverty indicator, this conclusion would still hold if we considered other standard poverty measures.

7.9 Poverty reduction takes place within a broader process of the distribution of returns to economic activity. Obviously, poverty and inequality are very closely linked – for given economic resources, the more unequal its distribution, the larger the percentage of the population living in poverty. Figure 7.2 also shows the Gini inequality coefficient. The value of 38 places Timor-Leste in the East Asian context in the middle rank, with consumption inequality substantially higher than in South Korea and Indonesia, and substantially lower than in PNG and the Philippines[70].

POVERTY, GROWTH, AND INEQUALITY: PROJECTIONS

7.10 Can Timor-Leste meet the MDG challenge? In Timor-Leste, there is a large clustering of the population in the neighborhood of the poverty line, which suggests that poverty would be very responsive to growth. About a seventh of all individuals lie within 10 percent of the poverty line. Economic growth, especially in agriculture, can have a strong effect on lifting those just below the poverty line out of poverty. However, overall economic growth rarely translates into equal increases in income for all the people in a country. The overall impact of aggregate growth on poverty depends also on population growth and on how the additional income is distributed within a country. If an economic expansion is accompanied by lower inequality, then this pro-poor growth will led to fast advances in poverty reduction.

[69] These poverty estimates differ from the national poverty rates, as they are based on other poverty lines. To be precise, the poverty lines are set at US$1.08 and US$2.15 per person per day for all countries. They use Purchasing Power Parity (PPP) exchange rates for 1993 to convert local currencies to constant values. The Timor-Leste national poverty line, evaluated at PPP, is equal to about US$1.5-a-day. Therefore, the poverty headcount at the national poverty line equals roughly to the midpoint (40 percent) to the numbers at US$1-a-day and US$2-a-day. Furthermore, national poverty lines typically allow for spatial cost of living differentials within countries, which are omitted in the calculations of Figure 7.2 to maintain a consistent methodology across countries.

[70] The Gini index increases with inequality. A Gini index of zero indicates perfect equality, and an index of 100 perfect inequality. The Gini coefficient is 38 based on nominal per capita consumption expenditure and 37 based on per capita consumption expenditure adjusted for spatial cost-of-living differences. Cross-country comparisons of inequality are however beset with a variety of problems relating to differences in the definition of the underlying measure of welfare, recall periods, survey design and survey implementation.

7.11 This interdependence between poverty, inequality, economic and population growth is borne out by four illustrative projections for Timor-Leste. The first MDG foresees the halving of poverty over a 25 year period. This implies that by 2007, the last year covered by the NDP, no more than 35 percent of the population lives below the national poverty line.[71] Will Timor-Leste meet this target? The simulations indicate that this depends crucially on three factors: high growth, low inequality, and moderate population growth. Table 7.2 presents four cases. The first scenario fully incorporates the assumptions of the NDP medium term economic framework. GDP contracts during 2002 and 2003, largely due to the phased withdrawal of international personnel and the winding down of reconstruction investment. The economy then recovers to reach a 5.6 percent growth rate by 2007, and less than 2 percent growth annually over the NDP period. However, assuming the population expands at a rate similar to the first half of the 1990s, this implies an average per capita growth rate of just below zero.

Table 7.2: Poverty, Growth, and Inequality - Scenarios, 2002-2007

	Actual	Projections											
		NDP-Baseline			Sluggish Growth			Rising Inequality			Expanding Population		
	2001	2002-03	2004-07	2007	2002-03	2004-07	2007	2002-03	2004-07	2007	2002-03	2004-07	2007
Real GDP growth	18.3	-1.4	4.2	6.1	-2.2	3.3	5.2	-1.4	4.2	6.1	-1.4	4.2	6.1
Real per capita GDP growth	15.9	-3.8	1.8	3.7	-4.6	0.9	2.8	-3.8	1.8	3.7	-4.6	1.0	2.9
Gini coefficient	37.0	36.3	35.6	35.5	36.6	36.2	36.3	37.5	39.2	40.4	36.3	35.6	35.5
Headcount	39.7	39.2	33.6	29.5	41.8	41.5	39.9	40.2	37.6	35.1	40.0	36.2	32.8
Poverty gap	11.9	11.5	9.5	8.1	12.6	12.5	11.9	12.7	12.9	12.7	11.9	10.4	9.1
Severity	4.9	4.7	3.7	3.1	5.3	5.2	4.9	5.5	6.3	6.5	4.9	4.1	3.6
Number of poor ('000)	329	337	309	282	358	382	381	345	346	335	347	345	328

Note: NDP-Baseline represents the assumptions of the NDP medium term economic framework.
Sluggish Growth modifies NDP-Baseline by reducing the annual growth rate in agriculture by 3 percent.
Rising Inequality modifies NDP-Baseline by increasing the Gini coefficient in agriculture by 1.5 percent annually.
Expanding Population modifies NDP-Baseline by increasing the annual growth rate of the population from 2.4 to 3.2 percent.
Source: Staff estimates.

7.12 In spite of a slight contraction in per capita GDP over the entire period, poverty rates are simulated to fall thanks to strong agriculture growth, the prime source of livelihood for four in five poor. The NDP assumes for this sector an annual growth rate of close to 6 percent over the entire period. This leads overall to a reduction of poverty to just below 30 percent by 2007, about five percent less than the MDG target. Taking into account population growth, the absolute number of poor in 2007 would drop about 40,000 below the level of 2001. Inequality declines too, as agriculture catches up relative to industry and services.

7.13 Given past agricultural growth rates and international experience, it may be unlikely for agriculture to grow at 6 percent per annum over the Plan period. Therefore, we simulate an alternative scenario with sluggish economic growth, especially in agriculture. In this second projection, we stipulate a slower overall recovery due to a lower growth path for agriculture, which expands three percent less than assumed by the NDP. With per capita GDP now contracting annually by around 1 percent, the number of poor increases by almost 60,000, and the headcount remains unchanged at 40 percent. Inequality still declines, as agriculture outgrows the other sectors, but the reduction is smaller than in the first case.

[71] This translates into reducing the headcount to 20 percent by 2026. A more ambitious target would be to halve the share of the poor by 2015, the standard reference point for reaching the MDGs. The target headcount index for 2007 would then be 31 percent.

7.14 The poverty-reducing impact of growth can also be offset by a rise in inequality. In Scenario 3, we assume the same growth path as for the NDP-scenario, but incorporate a widening in the income distribution in agriculture, assuming that agricultural growth leaves out subsistence farmers. The Gini coefficient now rises above the 2001 level. Poverty reaches 35 percent in 2007, about one percent above the MDG target, and the number of poor remains unchanged compared to 2001.

7.15 Finally, progress in poverty alleviation is dependent on population growth: the more mouths there are to fill, the less is available for each of them. In the first three scenarios, we assumed that the population will expand at 2.4 percent, matching the experience during the first half of the nineties. However, the 2002 MICS found that women in Timor-Leste have fertility rates that are among the highest in the world, with on average more than seven children born at the end of a woman's child-bearing age. Scenario 4 takes the assumptions of the NDP-scenario, modified by incorporating population growth of 3.2 percent, one third higher than previously. While the share of the poor in the total population falls to 33 percent by 2007, in line with the MDG target, and inequality drops, the absolute number of the poor remains unchanged at about one third of a million.

DETERMINANTS OF POVERTY[72]

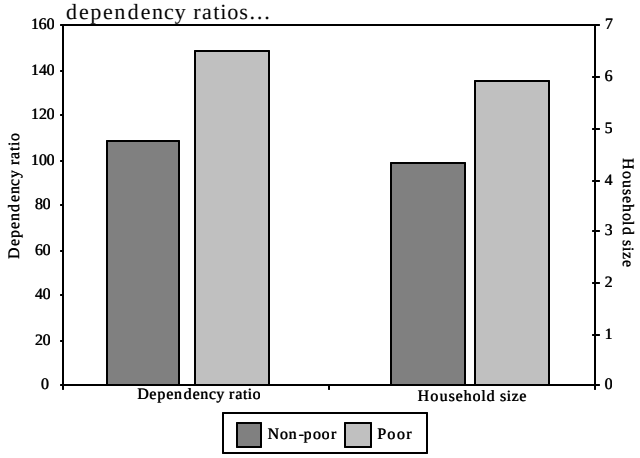
7.16 The previous section emphasized the importance of broad-based growth for poverty reduction. Yet, what are the economic, social, and policy changes required to boost economic activity? How can agricultural growth of 6 percent be achieved? This part presents an analysis to disentangle the various determinants on poverty. Two-way tables, as shown in previous chapters of this report, are only of limited value to identify such sources of pro-poor growth. Box 7.2 summarizes key characteristics of the poor. Although these two-way relationships are informative about associations between factors, they cannot answer the key question whether these relationships hold up when other influences are held constant. For example, there is a clear correlation between the education of the household head and poverty. But this link could be due to third factors related to both education and poverty, like occupation or household assets.

7.17 The standard tool to address this issue is to conduct a multivariate analysis of the determinants of living standards. Such examination can be helpful in identifying correlations between variables, such as those between consumption, characteristics of the household head, household demographics and assets, and community features. In this section, we analyze the determinants of one particular dimension of living standards: household consumption per capita and the implied probability of being consumption-poor.

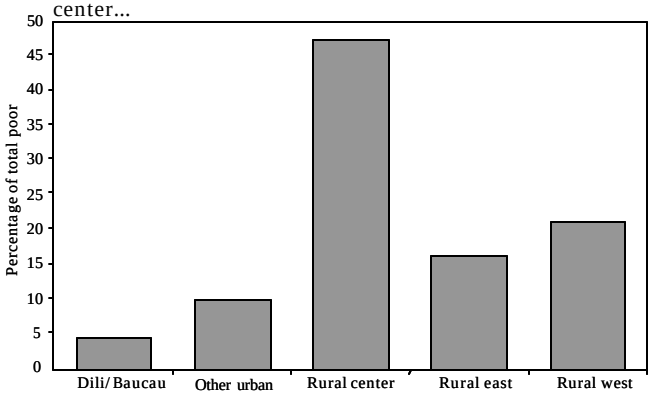
[72] This section draws on Chapter 8, Volume II.

Box 7.2: Who are the Poor?

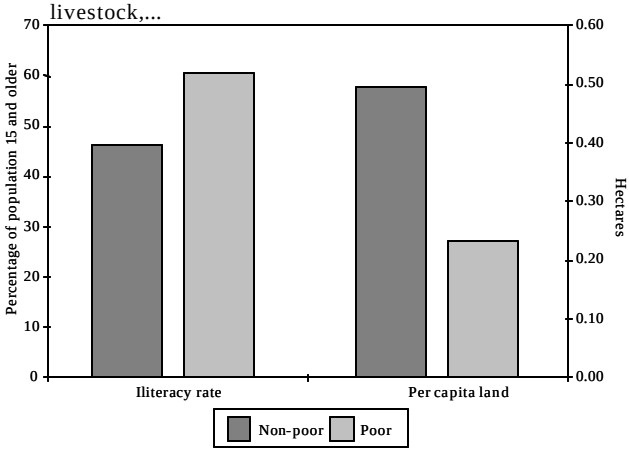
The poor live in large households and have higher dependency ratios…



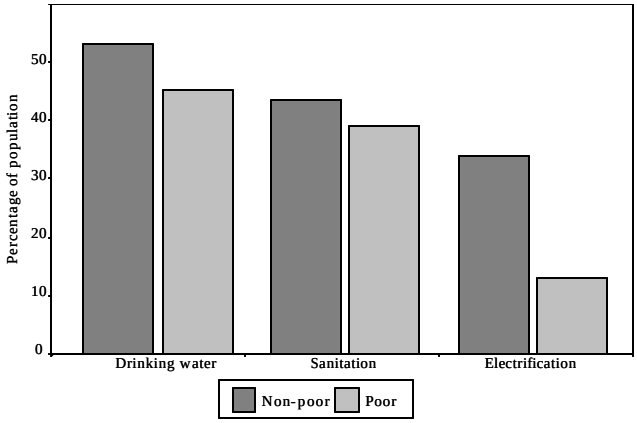
And reside predominantly in rural areas, particularly the center...



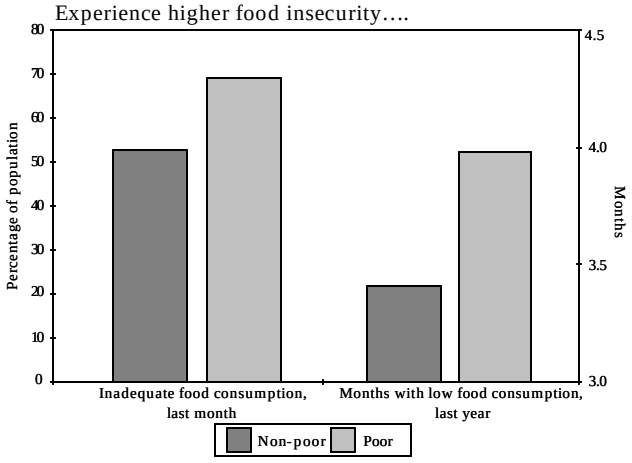
Have less assets – less human capital, land and livestock,...



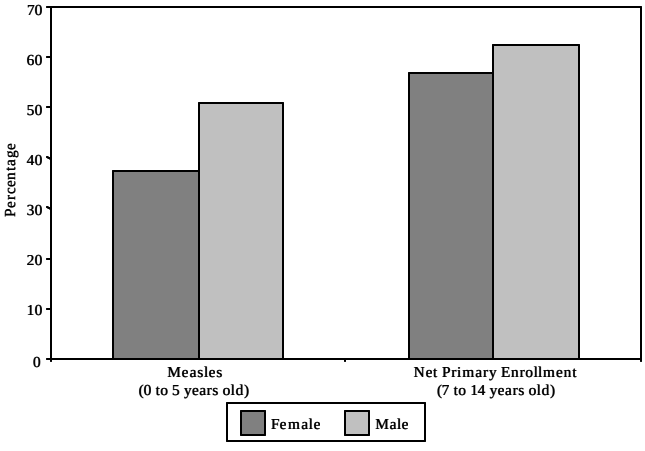
And more limited access to infrastructure services…



Experience higher food insecurity….



And are more vulnerable, for example, children living in female headed households have lower enrolment and immunization rates.



Simulation Model

7.18 In this section, we describe the basic approach to modeling the determinants of poverty and deriving simulations. We adopt a three-step procedure.[73] First, we regress the real per capita consumption on a range of determinants. Then, we derive from this regression the predicted poverty headcount. We allow for regional differences by estimating the regression separately for Dili / Baucau, Other Urban Centers, Rural West, Rural Center, and Rural East. Finally, we use this estimated model to predict the impact of changes of these determinants on poverty.

7.19 In order to estimate the regression, we have to specify the determinants of consumption. The selection of variables is driven by five considerations. First, the empirical analysis is obviously limited to factors that are observed and measured in the TLSS and the Suco Survey. As such, it cannot identify all of the various determinants and correlates of poverty. In particular, the role of exclusion and social capital in promoting poverty cannot be adequately analyzed due to gaps in the available data sets. Second, the bivariate analysis on the welfare profile suggested a number of key drivers for consumption and poverty that we should take account of in the analysis. Third, we also include a set of community level determinants, both at the Aldeia (12 variables) and Suco level (10 variables). This not only ensures that the household level factors are purged from observed community-level determinants, but it also allows us later to simulate the impact of community level variables on household consumption.

7.20 The determinants can be grouped into the following categories:

a. Household demographics: household size (number of persons) and number of persons in these age groups (under 6, 7 – 14, 15 – 49, and 50 plus).

b. Head characteristics: gender, age, age squared, five education categories (no schooling, lower primary (year 1 – 3), upper primary (year 4 – 6), lower secondary, and post-lower secondary (including university)), and six occupation categories (housework, farmer, non-farm worker, trader, teacher / civil servant, and other).

c. Spouse characteristics: indicator variable for spouse present, age and age squared, and the five education categories.

d. Agriculture and assets: value of total crop production, livestock holdings, and savings, all in Rupiah per capita; land holding per capita (hectare); and three indicators for crop mix (coffee, rice, and maize).

e. Housing: indicator variable for house ownership, and number of years lived in this dwelling.

f. Infrastructure: three indicator variables on household access to safe drinking water, sanitation, and electricity.

g. Access: minutes from dwelling to vehicle passable road, indicator whether this road is accessible during the rainy season, and distance in kilometer from aldeia to suco center (from Suco Survey).

[73] This approach follows Chaudhuri (2000), Datt and Jolliffe (2001), Hentschel et al (2000), IFPRI (1998) and Ravallion (1996).

h. *Aldeia:* twelve indicator variables on community facilities (primary school, secondary school, health center, church, kiosk, shop, everyday market, periodic market, bank, mill, vehicle passable road, paved road).

i. *Suco:* indicator variable on irrigation, also interacted whether household is rice producing; indicator variable on presence of major private employer (more than five employees); ratios of number of teachers per student and number of classrooms per teacher; ratios of number of midwives and traditional birth attendants per population and days in month of operating health service per population.

j. *Community Leaders:* average characteristics of respondents in Suco Survey in terms of years of age, years of education, and years lived in Suco.

7.21 Our simulations illustrate the impact on poverty of changes of both policy variables and other determinants. Looking at factors beyond those directly under the control of decision makers is also important for policy purposes, as it can give useful information for targeting public resources to population or regional subgroups. Yet, they are unlikely to provide us with the key counterfactual living standard, resulting from a particular policy or economic change, due to seven caveats. First, we only consider one dimension of living standards. Other welfare outcomes are also important and have to be taking into account when assessing the relative merits of policy interventions. Second, the quality of the simulations can only be as good as the underlying model. Our model accounts overall for three fifth of consumption variability, implying that two fifth are due to factors we do not control for. Furthermore, our estimates do not as such uncover causal relationship, but only conditional correlations. In particular, our model draws only on data from one point in time and cannot reveal dynamic interaction between factors. Third, the simulations are conducted under the "ceteris paribus" assumption, implying that the considered change in the determinant does not affect the model parameters or other variables. This assumption may be defendable for marginal or incremental changes, but it becomes implausible for large policy reforms. For example, changing the occupation of one person from farmer to trader is unlikely to affect market outcomes. By contrast, if many farmers are involved, the remuneration of these occupations and prices of products will adjust, and households, even those originally unaffected, will modify their behavior in response. Such "general equilibrium effects" make it difficult to predict the impact of major policy and economic adjustments.

7.22 Fourth, the impact of a change in one determinant is likely to differ across households. However, our model accounts only for the differential impacts by regions through separate regional parameters, applying the same mean effect to all households affected by the change within regions. Fifth, the determinants differ with regard to both the extent to which they are amenable to policy decisions, and the time horizon in which they are likely to adjust. One the one hand, factors that are directly affected by policy with a fast response time can contribute most to poverty alleviation over the short horizon. This group includes infrastructure and health variables. On the other hand, some determinants, like demographic variables, are more removed from policy intervention and slow to change, yet they still may be important for reducing poverty from one generation to another. Sixth, the simulations concentrate only on the potential benefits in terms of poverty reduction, but ignore any cost differences across the various interventions. For example, we will find that expanding electricity to the entire

population reduces poverty by more than providing all households with basic sanitation. Yet, the first intervention may well be more costly than the second one. This difference could be large enough so that in the end, for a given level of resources, poverty will drop more if the government invests into basic sanitation rather than electricity. Finally, Timor-Leste has already changed substantially since the time of the survey - when it still was called East Timor. Yet, the model reflects the economic environment during late 2001.

Poverty Simulations

7.23 The findings from the simulations are shown in Table 7.3. We consider simulations over five groups of variables (demography, education, agriculture, infrastructure, and economy). The results are presented for six different populations: nationwide, and urban and rural separately, both for the total population and for the "affected" population only, i.e. those households for whom the value of at least one right-hand side variable was changed. The table displays the percentage changes of both per-capita consumption and poverty. In our discussion of the results, we concentrate on the poverty impacts.

7.24 *Demography*. Household size, composition, and, in urban areas, gender of the head matter for poverty. Reducing household size by one for all households with more than one member lowers poverty by 7 percent nationwide, and more in urban than in rural areas. By contrast, changing household composition by replacing one child up to age 6 by one prime-aged adult reduces poverty by about twice as much in households with at least one child, and the effect is larger in rural than in urban areas. Finally, male headed households have lower poverty only in urban areas. These findings imply that, compared to urban households, rural families are less affected by size and gender of the head, but more by age composition. While demographic characteristics evolve over generations, this information can still be used for targeting public assistance or investment programs.

7.25 *Education*. Building human capital of heads and spouses leads to lower poverty. This is confirmed in Simulations 4 and 5, where we look at the impact of lifting all heads, and all spouses, to at least four years of schooling. This is a large experiment - it affects about seven in ten heads and spouses – with substantial payoff: poverty drops by about 12 to 15 percent nationwide. In view of the large number of affected people, it is clearly unrealistic that the returns to education remain unchanged, casting doubt over the point estimates. Nevertheless, even for small changes, three messages remain. First, education lowers poverty. Second, the overall gains are larger from the increase of the education grade of spouses than from those of heads. Third, while the effect of spouse education is the same for urban and rural areas, head's education matters about twice as much in cities than in villages. One possible explanation is that heads are the main breadwinner, and the returns to education of occupations are higher in urban than in rural areas.

7.26 *Agriculture*. Non-agricultural activity, high-valued crops, and irrigation are three main exits from rural poverty, as shown in Simulations 6 to 12. Again, we illustrate the impact of large reforms, so our main focus is on the direction rather than the point estimate of the changes. Switching heads from being farmers, accounting for about three quarters of the population, to traders triggers a drop in poverty of one quarter (Simulation 6). The benefits are especially marked in urban areas, suggesting that trading is more profitable in cities than

in villages. The right crop portfolio is essential: maize farmers are poor, while coffee farmers are non-poor. For given inputs and crop production, improving the crop mix to high value crops, as simulated through cultivating coffee or ceasing maize production reduces poverty by 15 percent (Simulations 7 and 8). However, keeping the crop mix constant, boosting productivity, cultivating more land, or increasing livestock holdings, reduces poverty by no more than 1 to 4 percent (Simulations 9 to 11). Finally, expanding around-the-year irrigation to all sucos lowers poverty in affected areas, representing about two fifth of all households, by about 10 percent (Simulation 12).

7.27 *Infrastructure.* Sanitation and electricity are important to improve living standards. Providing basic sanitation to all households lower poverty by 9 percent among the newly covered families, and by up to 20 percent among those households in cities (Simulation 13). Giving electricity to all households, a financially more expensive intervention than expanding sanitation, reduces poverty by more than one quarter among the beneficiaries (Simulation 14). By contrast, improving access to vehicle passable roads has little payoff, partly because most households are already within less than 10 minutes walking distance to such roads (Simulation 15).

7.28 *Economy*. Infrastructure other than irrigation can also provide substantial benefits to communities. This is illustrated in two simulations, even though a high covariation of community factors makes it problematic to isolate a particular intervention. Presence of major private employers reduces the poverty headcount by almost one tenth, and more than one fifth in urban areas (Simulation 16). Establishing full-fledged periodic markets in all sucos is associated with poverty reductions of more than 30 percent in rural areas (Simulation 17).

7.29 As the government has limited resources, not all of these policies can be implemented at the same time. This raises the question of prioritization. Should the measure with the largest estimated impact be taken first? No, these simulations are only illustrative, and the other aspects highlighted before need to be taken into careful consideration. In Table 7.4, the measures are classified in terms of four additional dimensions apart from their likely impact on poverty. First, the impact of a change in one determinant differs across households. Some households are directly affected from a measure, other only indirectly, and others not at all. Second, the determinants differ with regard to both the extent to which they are amenable to policy decisions, and the time horizon in which they are likely to adjust. Third, the simulations concentrate only on the potential benefits in terms of poverty reduction but ignore any cost differences across the various interventions. Fourth, most measures have an impact on more than one MDG, and such synergies would have to be taken into account when assessing the relative merits of policy interventions

Table 7.3: Simulations on Changes in Consumption and Poverty (%)

	Description	Indicator	Entire Population			Affected Population		
			National	Rural	Urban	National	Rural	Urban
Demography								
1	Reduce by one the number of household members	PCC	5.0	4.0	7.2	5.1	4.0	7.2
		POV	-6.7	-5.9	-10.6	-6.7	-5.9	-10.6
		POP	100	100	100	100	100	100
2	Replace one child aged 0-6 by one adult aged 15-49	PCC	3.8	6.5	-1.4	8.6	11.6	2.8
		POV	-9.1	-10.5	-1.3	-13.8	-15.0	-7.1
		POP	100	100	100	72	72	71
3	Move headship from female to male	PCC	0.3	-0.2	1.3	2.5	-1.9	14.3
		POV	-0.3	0.1	-2.6	-3.8	2.0	-30.9
		POP	100	100	100	10	10	9
Education								
4	Increase head's education to 4-6 years of primary school	PCC	8.0	6.8	10.4	13.9	9.9	30.5
		POV	-11.5	-9.9	-20.4	-15.3	-12.8	-31.2
		POP	100	100	100	66	72	46
5	Increase spouse's education to 4-6 years of primary school	PCC	8.6	10.4	5.2	13.5	14.1	11.4
		POV	-15.0	-15.3	-13.3	-18.8	-18.8	-18.8
		POP	100	100	100	71	77	55
Agriculture								
6	Move head's occupation from farmer to trader	PCC	20.1	17.8	24.6	30.9	21.7	79.3
		POV	-26.1	-23.3	-41.8	-30.3	-25.8	-64.0
		POP	100	100	100	76	86	44
7	Introduce coffee for all crop-producing households	PCC	12.0	8.6	18.8	23.6	14.1	58.7
		POV	-16.1	-14.7	-24.0	-23.6	-21.5	-35.5
		POP	100	100	100	59	64	45
8	Abolish maize for all crop-producing households	PCC	8.4	12.3	0.6	12.4	14.8	1.7
		POV	-14.3	-16.9	0.0	-16.3	-18.8	0.0
		POP	100	100	100	78	86	52
9	Increase crop production by 50% for all crop-producing households	PCC	0.9	1.5	-0.2	1.2	1.6	-0.6
		POV	-0.7	-1.0	1.1	-0.7	-1.1	1.3
		POP	100	100	100	85	95	55
10	Increase landholdings by 0.1 ha per capita for all land-holding households	PCC	1.3	1.8	0.5	1.8	1.9	1.2
		POV	-3.4	-3.7	-1.4	-3.6	-3.8	-1.7
		POP	100	100	100	86	95	55
11	Increase animal holdings by 50% for all animal holding households	PCC	1.5	2.3	-0.2	1.8	2.5	-0.3
		POV	-1.6	-1.6	-1.4	-1.8	-1.8	-1.7
		POP	100	100	100	85	90	71
12	Expand around-the-year irrigation to all sucos	PCC	5.8	5.1	7.4	14.8	11.8	22.7
		POV	-4.1	-2.9	-10.6	-9.5	-6.8	-25.2
		POP	100	100	100	41	43	36
Infrastructure								
13	Expand basic sanitation to all households	PCC	4.4	4.7	3.7	8.4	7.0	16.6
		POV	-5.5	-5.0	-8.3	-8.9	-7.6	-20.0
		POP	100	100	100	58	67	30
14	Expand electricity to all households	PCC	12.9	17.0	4.9	20.9	20.2	28.8
		POV	-22.3	-23.8	-14.1	-25.7	-25.5	-28.0
		POP	100	100	100	74	89	28
15	Reduce time to nearest road by 10% for all households	PCC	0.0	0.0	0.1	0.1	0.1	0.1
		POV	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
		POP	100	100	100	80	81	77
Economy								
16	Expand private employer (more than 5 employees) to all sucos	PCC	11.1	14.9	3.6	14.8	17.3	6.7
		POV	-7.7	-6.7	-13.1	-9.2	-7.6	-22.1
		POP	100	100	100	79	87	53
17	Expand periodic market to all sucos	PCC	22.9	22.7	23.2	28.2	28.6	27.5
		POV	-25.0	-26.2	-18.0	-30.4	-32.3	-20.7
		POP	100	100	100	81	80	85

Note: PCC stands for real per capita consumption, POV for poverty headcount, and POP for population.
Source: 2001 TLSS.

Table 7.4: Five Dimensions of Public Action

Measure	Description	Poverty	Population Subgroup	Policy Influence	Costs	MDGs
Agriculture	Farmer to trader	-26	Farmers	Low	High	Environment
Economy	Suco markets	-25	Rural areas	High	Low	
Infrastructure	Electricity	-22	Families w/o electricity	High	High	Environment
Agriculture	Coffee	-16	Farmers	Low	High	Environment
Education	Spouse education	-15	Spouses	High	Low	Education, Gender, Health
Agriculture	No maize	-14	Poor farmers	Low	High	Environment
Education	Head education	-12	Heads	High	Low	Education
Demography	Child to adult	-9	Families	Low	Low	Environment
Economy	Private employer	-8	Rural areas	Low	Low	Gender, Health
Demography	Household size	-7	Families	Low	Low	
Infrastructure	Sanitation	-5	Families w/o sanitation	High	High	Gender, Health
Agriculture	Irrigation	-4	Rural areas	High	High	Environment

Source: 2001 TLSS, World Bank.

SUMMARY AND POLICY ISSUES

7.30 Timor-Leste faces an enormous development challenge. Poverty is high and human and physical capital are depleted. One in five people in Timor-Leste live below US$1-a-day, and three in five below US$2-a-day. Timor-Leste is among the least developed countries in East Asia on most social indicators. Timor-Leste is not just a young nation, it is also a young people: one in two persons are below the age of 15. This nation of about 830,000 people will grow rapidly as large young cohorts move through the reproductive ages.

7.31 Illustrative projections show that even a relatively modest target of halving the poverty headcount over 25 years depends on strong per-capita growth, especially in agriculture, and a broad participation of the population in the opportunities of an expanding economy. We highlight some of the key determinants of pro-poor growth, using a statistical model that pulls together some of the key findings of this report. However, we have to interpret these results with great caution, as the approach suffers from a number of limitations. With those qualifications in mind, the simulations confirm important messages. Lowering the dependency ratio and size of households, boosting male and female human capital, promoting non-farm activities, encouraging the production of high-value crops, developing extension services like irrigation, constructing sanitation and electricity infrastructure, creating a favorable business environment for private employers, and improving market networks all help to lower poverty. Future work planned under the public expenditure study will help cost different policy options.

7.32 While the social agenda is daunting, Timor-Leste has the solid prospects of future flows from the country's natural resource wealth, and the commitment of donors including the World Bank to support its development. Achieving sustained social improvement will raise the quality and pace of long-term growth and ensure that the economy will not develop wholly dependent on oil and aid. As emphasized in the NDP, allocating aid and off-shore resources towards high priority development objectives in an effective manner will be critical. The MDGs can provide the framework for prioritizing and monitoring human development. A "localization" of MDGs to Timor-Leste will be an important tool for making the poverty reduction policies effective. This involves identifying indicators that are appropriate for

assessing progress against the MDG goals in Timor-Leste and setting targets that are realistic (see Chapter 8). This can be done in the context of action plans being prepared by the Ministries on the basis of the NDP. Communities and civil society will have to play a central role in this process. Furthermore, the medium term expenditure framework can enhance the realism of the anti-poverty policies. The key challenges will be to ensure adequate linkages from the poverty reduction strategies to the operational budget level. Budget decisions should be driven by policy priorities on poverty, and policy choices in turn have to be disciplined by resource and implementation realities over the medium term.

8 Poverty Monitoring

8.POVERTY MONITORING

8.1 Monitoring and evaluation systems enable the government to assess whether a poverty reduction strategy is effective in reducing poverty. Monitoring concerns the issue of measuring the progress towards poverty reduction goals. The evaluation of policies and programs determines the extent to which improvements in outcomes are due to specific public actions. The National Development Plan highlights the importance of monitoring and evaluation as an essential element for assessing progress towards the goals articulated in the Plan.

8.2 Monitoring progress on poverty reduction for Timor-Leste will entail institutionalizing a system of data collection, analysis and reporting on a set of well-defined indicators. This involves defining key indicators, tracking them over time, and seeing what changes have taken place. As part of the implementation of the National Development, work is ongoing on developing such a set of measurable indicators and targets. In compiling such a data base, a number of issues will have to be considered. First, it is important to include various types of information, ranging from quantitative and qualitative surveys to administrative and budget data. Box 8.1 provides an overview over the existing data sources that can be drawn on to provide a baseline against which progress can be monitored.

Box 8.1: Poverty Data Sources

Timor-Leste Living Standards Survey: The nationally representative household survey of 1800 households provides data on consumption, education, health, labor markets and agriculture. The survey was conducted end August-November, 2001. The survey is representative for the big cities (Dili / Baucau), other urban centers and rural areas. Within rural areas, it provides information for the East, Center and West. These data were collected by the Statistics Office in the Ministry of Planning and Finance.

Survey of Sucos: The survey of all 498 sucos in Timor-Leste provided an inventory of infrastructure and population characteristics in early 2001. These data were collected by the Statistics Office in the Ministry of Planning and Finance.

Multiple Indicators Cluster Survey: The nationally representative survey of 4000 households provides data on maternal and child health, in particular on infant and child mortality, education, water and sanitation, child health and malnutrition and reproductive health. The data collection was completed during August-mid September 2002. These data were collected by the Statistics Office in the Ministry of Planning and Finance.

School Mapping: Data were collected in 2001 on all schools in Timor-Leste. Information was collected on the enrollment by grade and by age, number of students, the number of teachers (for both public and private schools), and the percentage of classrooms in operation.

Administrative Data: Ministries collect performance indicators that relate to the provision of services. Data often relate to the outputs (such as the number of classrooms, number of teachers) and sometimes to outcomes, such as enrolment rates or immunization rates. The relevance, quality and timeliness of the data collected are uneven across Ministries and in some cases are at odds with the data collected through household surveys.

Budget Data: Budget allocations, and more importantly, actual spending by different Ministries on their programs provide important input indicators on whether the resources are being spend, and on the different components (e.g. on teacher salaries, purchase of textbooks, school construction) on which they are being spent.

8.3 Second, the objective of data collection should determine the type, frequency, and level of disaggregation. The principal purpose of a monitoring system is to track the changes in poverty over time to assess the overall effect of the development strategy. Given the multi-dimensional nature of poverty and the commitment to the Millennium Development Goals, this requires monitoring both consumption-based poverty and other dimensions of well-being, like access to basic services (such as education, health, safe drinking water). Disaggregated information by region and household characteristics is essential for understanding how overall trends are related to the welfare of specific groups. The changes in poverty can then be compared to changes in public expenditures to assess the impact of government policies. A more ambitious objective of understanding the determinants of poverty requires additional information. Aspects related to how the poor earn their living, gain access to assets and credit, such as land, education or transfers from family and friends, are all relevant in this context. This requires different types of data, from detailed household surveys to community surveys of social and economic infrastructure. The same holds for other dimensions of poverty. For example, to investigate why some children go to school and others do not, it is important to know the characteristics of the child, like age and gender, of the household, like household size and composition, asset ownership, educational attainment and occupation of household members, in addition to information about the distance and cost of going to the school and the quality of the school, such as the qualification of teachers and the student-teacher ratios. This requires information from household and school surveys to community surveys of social and economic infrastructure.

8.4 Third, monitoring activities need to be carried out by institutions that are competent and that have strong links to key decision-makers, if they are to be useful in the design and implementation of the NDP. Much monitoring and evaluation takes place without adequate development of in-country capacity and without strong links to key decision-making processes. Precious opportunities to learn what works and what does not are then lost. It is therefore important to build capacity and in particular strengthen the processes that provide policy makers and others with feedback on the impact of policies and programs.

8.5 Furthermore, dissemination of results is critical for use. Results that are not widely disseminated, through mechanisms tailored to different groups in civil society, will not be used, and the resources that were spent in getting such results will be wasted. Non-governmental actors, be they research institutions, civil society organizations, special-interest and advocacy groups, or others, have an important role to play in the design of the monitoring and evaluation system, in actually carrying out monitoring and evaluation activities, and in using the results.

8.6 Looking forward, it will be important to build on the existing database for up-to-date assessments of the progress in the implementation of the NDP. Different data tools can contribute to a rich monitoring system:

- *Population Census*: The Census planned for 2004 is critical. It will present updated information on the characteristics of the population, and provide the master sample frame from which the sampling for future surveys can be undertaken. In designing the Population Census, it would be useful to consider the option of developing

"poverty maps", which combine household surveys and the Population Census to provide expenditure-poverty estimates for small geographic units, like sucos.

- *Living Standards Survey*: In view of the rapidly evolving economic situation in Timor-Leste, it would be desirable to conduct a second integrated household survey over the next two years to obtain updated estimates of expenditure-poverty, other indicators, and their determinants. To ensure comparability with the poverty estimates for 2001, it will be important to maintain as much as possible the questionnaire of the first household survey, and to conduct the survey during the same time period in the year (August – November) to avoid biases arising from seasonality. The household survey should be jointly fielded with a community (suco) and price survey to provide information on the economic environment of households. These surveys should be implemented at regular intervals of three to five years.
- *Special Purpose Surveys*: In addition to the living standards survey, special purpose surveys may be needed (such as the Demographic and Health Survey or Multiple Indicators Cluster Surveys) that focus on child and maternal health.
- *Administrative Data*: While expenditure-poverty estimates are typically collected on a multi-year cycle it is generally desirable to collect some indicators (either through administrative sources, or community level data collection) on a more frequent basis. Such regular monitoring can provide an early indication of emerging economic problems. For example, information of prices of key commodities and rural wages could be collected on a monthly basis, health and education data from administrative data on a semi-annual or annual basis. This will also ensure the provision of timely information as input into the annual budget planning process.
- *Participatory Surveys*: The formulation of Timor-Leste's vision and the NDP was informed by extensive consultations with its people. Continued involved of different stakeholders in monitoring and implementation of the NDP, through a systematic plan that lays out the different elements and methodology for this consultation would be desirable.

8.7 In summary, Timor-Leste has many varied data sources that present a coherent picture of poverty and provide a baseline for monitoring progress in poverty reduction, as outlined in the National Development Plan. The key challenge lies in formulating a monitoring plan that includes both quantitative and participatory elements, and the institutional arrangements for data analysis and reporting to ensure that the data collected inform policymaking and program design.

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ANNEX

TABLE A.1: PROFILE BY REGION

		National	Dili / Baucau	Other Urban	Rural		
					Center	East	West
Poverty, inequality and expenditure							
Headcount		39.7	13.9	38.4	49.3	32.0	47.5
Gap		11.9	3.8	10.0	15.8	9.4	13.2
Severity		4.9	1.6	3.7	6.9	3.8	5.2
Food poverty rates (food expenditure vs food line)							
Headcount		39.5	34.3	35.2	42.6	34.1	45.5
Gap		11.6	10.4	9.6	13.0	10.2	12.2
Severity		4.7	4.1	3.4	5.4	4.0	4.8
Gini *		37.0	36.4	36.0	35.8	32.6	29.7
Per capita expenditure (US Dollars per month)		24.2	40.1	25.9	20.5	24.6	18.9
Food (% of total expenditure)		63	41	57	75	65	69
Purchases		34	36	33	35	31	37
Home production		24	3	21	34	30	29
In-kind		4	1	3	6	4	4
Rent (% of total expenditure)		22	42	23	15	14	20
Others (% of total expenditure)		15	18	20	10	20	10
Household composition **							
Household size		4.9	6.0	4.9	5.0	4.3	4.5
Dependency ratio (%)		125	102	117	139	117	123
Children (% household size)		45	41	43	49	43	45
Infrastructure							
Drinking water (% population)	a /	50	84	51	48	32	50
Sanitation (% population)	b /	42	86	52	39	25	30
Electrification (% population)	c /	26	90	50	10	16	9
Housing damage and rehabilitation							
Damaged in violence (% households)		29	28	48	17	10	58
Totally damaged (as % of damaged)		85	52	82	90	90	88
Rehabilitated (as % of damaged)		62	49	60	65	75	63
Totally rehabilitated (as % of damaged)		21	11	24	22	48	18
Access							
Distance to the aldeia center (km)		1.9	1.3	1.4	1.3	4.7	0.7
Distance from the aldeia center (km)							
Everyday market		20.6	1.6	6.2	28.9	25.7	14.5
Periodic market		8.5	3.8	4.3	9.5	11.6	4.8
Vehicle-passable road		0.7	0.1	0.4	0.8	1.4	0.1
Paved road		3.1	0.1	0.6	5.3	3.1	1.1
Education							
Iliteracy rate (% of 15 and older)		51	20	46	58	55	62
Education of the head (years)		3.1	6.7	3.4	2.4	2.6	2.2
Primary, Net enrollment rate	d /	73	77	80	71	70	75
Junior Secondary, Net enrollment rate	d /	25	49	43	15	23	23

TABLE A.1: PROFILE BY REGION

		National	Dili / Baucau	Other Urban	Rural		
					Center	East	West
Health							
Immunization (% children less than 1 year-old)							
BCG		33	52	47	28	18	35
Measles		6	7	13	4	0	9
DPT (complete)		9	16	20	3	4	17
Polio (complete)		6	10	13	3	2	9
Health complaints last month (% population)		22	22	17	22	26	20
Utilization rates (% population)							
Public outpatient care		12	14	10	12	11	10
Private care		2	2	3	1	4	2
Traditional care practitioner		2	1	2	1	6	3
Self-medication		7	9	6	8	5	5
Employment	e /						
Participation rate		60	48	59	68	55	61
Female participation rate		40	29	41	50	30	38
Unemployment rate		5.3	19.7	4.4	3.7	2.7	3.1
Weekly working hours	f /						
Mean		40	47	41	37	44	36
Median		41	48	42	38	48	36
Weekly working hours (%)	f /						
Up to 15		3	2	1	2	4	2
16 to 35		29	18	23	33	13	45
36 to 50		54	44	64	58	56	41
More than 50		15	35	12	7	26	12
Agriculture	g /						
Per capita land (ha)	h /	0.38		0.26	0.48	0.33	0.29
Per capita irrigated (ha)	h /	0.08		0.06	0.06	0.15	0.05
Among land holders:							
Average per capita land (ha)	h /	0.41		0.29	0.51	0.36	0.31
Average per capita irrigated land (ha)	h /	0.09		0.06	0.06	0.16	0.06
% of irrigated land	h /	18		12	17	28	13
Average value of land per ha (US Dollars) ***	i /	7.2		7.7	6.6	10.2	4.5
Median value of land per ha (US Dollars) ***	i /	1.5		1.3	1.6	1.2	1.1
Production uses (as % of total value)							
Sales		29		30	45	3	24
Barter		2		2	2	0	1
Lost		4		5	3	9	3
Payments		1		1	1	1	0
Self-consumption		62		61	48	81	72
Subsistence (% population)	j /	33		29	11	81	32
Agricultural inputs (% households)							
Use of manure, fertilizers, pesticides or herbicides		3		3	0	5	5
Purchased or received maize, rice or bean seeds		25		18	17	33	35
Use any of the above inputs		27		20	17	37	39

TABLE A.1: PROFILE BY REGION

	National	Dili / Baucau	Other Urban	Rural		
				Center	East	West
Livestock g /						
Average per capita value of 2001 livestock (US Dollars)	95		87	81	143	74
Median per capita value of 2001 livestock (US Dollars)	35		42	35	44	21
Average per capita value of 1999 livestock (US Dollars)	221		214	137	196	434
Median per capita value of 1999 livestock (US Dollars)	62		65	51	57	116
Among 2001 livestock holders:						
Average per capita value of 2001 livestock (US Dollars)	106		96	88	151	93
Median per capita value of 2001 livestock (US Dollars)	40		48	39	48	28
Average per capita value of 1999 livestock (US Dollars)	242		237	147	206	524
Median per capita value of 1999 livestock (US Dollars)	72		78	56	60	173
Subjective well-being						
Life compared to 1999 (% population 15 and more)						
Much better	29	37	35	26	25	31
Same	60	52	55	66	62	56
Much worse	11	11	10	8	13	14
Economic mobility (% population 15 and more)						
Downward	23	22	25	23	12	34
None	43	34	42	45	58	26
Upward	35	44	33	32	29	40
Power mobility (% population 15 and more)						
Downward	6	3	5	6	3	10
None	10	10	9	11	6	12
Upward	85	86	87	82	91	78
Food security						
Food consumption less than adequate, last month (% population)	59	35	52	68	66	54
Months with low food consumption, last year	3.6	1.8	3.7	3.7	4.2	3.9
Months with not enough rice or maize to eat during last year	3.6	1.8	3.7	3.8	4.2	3.9

Note: The districts of Oecussi, Bobonaro and Cova Lima constitute the West; Baucau, Lautem and Viqueque represent the East; and Aileu, Ainaro, Dili, Ermera, Liquica, Manufahi and Manatuto belong to the Center.

a/ Bottled water, tap water, pump, protected well or protected spring.b/ Flush toilet, traditional latrine or septic tank.

c/ Public or private. *d/ 2001/02 academic year.*

e/ Considers people aged 15-64 and a last week recall period. *f/ Excludes people who did not work last week but do have a job.*

g/ Excludes Dili/Baucau. *h/ Considers land classify as Annual crops or fallow and Plantation.*

i/ Weighted first by area within the household and then by household.

j/ A household is considered a subsistance one if it only uses its crop production for selfconsumption, as means of payment or for barter.

** Excludes six observations with monthly real per capita consumption greater than 200 US$.** Weighted by household.*

**** Excludes seven observations with values of land per ha of at least 1,000 US$/ha.*

Source: 2001 TLSS.

A.2: URBAN AND RURAL PROFILE BY POVERTY

		National			Urban			Rural		
		Total	Non-poor	Poor	Total	Non-poor	Poor	Total	Non-poor	Poor
Inequality and expenditure										
Gini *		37.0	28.7	15.3	38.9	32.5	14.3	34.2	25.2	15.5
Per capita expenditure (US Dollars per month)		24.2	33.0	10.8	33.8	41.2	11.4	21.2	29.6	10.7
Food (% of total expenditure)		63	60	76	46	44	71	71	69	77
Purchases		34	34	35	35	34	43	34	34	33
Home production		24	22	37	9	8	25	32	29	39
In-kind		4	4	5	2	2	3	5	5	5
Rent (% of total expenditure)		22	25	11	35	37	16	16	17	10
Others (% of total expenditure)		15	16	13	18	19	13	14	14	12
Household composition **										
Household size		4.9	4.3	5.9	5.4	5.2	6.2	4.7	4.1	5.9
Dependency ratio (%)		125	109	148	109	103	126	130	112	152
Children (% household size)		45	41	52	42	40	48	46	41	53
Infrastructure										
Drinking water (% population)	a/	50	53	45	69	75	52	44	44	44
Sanitation (% population)	b/	42	44	39	70	75	55	33	30	36
Electrification (% population)	c/	26	34	13	72	82	45	11	14	8
Housing damage and rehabilitation										
Damaged in violence (% households)		29	28	29	39	36	49	26	26	26
Totally damaged (as % of damaged)		85	82	91	72	65	91	89	89	90
Rehabilitated (as % of damaged)		62	61	66	56	53	66	64	64	66
Totally rehabilitated (as % of damaged)		21	21	22	20	16	31	22	23	19
Access										
Distance to the aldeia center (km)		1.9	2.2	1.4	1.3	1.5	0.9	2.0	2.5	1.5
Distance from the aldeia center (km)										
Everyday market		20.6	19.3	22.7	4.0	4.0	4.1	25.1	24.6	25.8
Periodic market		8.5	8.3	8.7	4.2	3.6	5.4	9.3	9.3	9.2
Vehicle-passable road		0.7	0.7	0.7	0.3	0.2	0.5	0.8	0.9	0.7
Paved road		3.1	2.4	4.2	0.3	0.3	0.6	3.8	3.1	4.8
Education										
Iliteracy rate (% of 15 and older)		51	46	61	31	26	49	58	55	63
Education of the head (years)		3.1	3.9	1.9	5.3	6.1	2.7	2.4	3.0	1.7
Primary, Net enrollment rate	d/	73	72	73	78	79	76	72	70	73
Junior Secondary, Net enrollment rate	d/	25	31	18	46	50	32	19	22	16
Health										
Immunization (% children less than 1 year-old)										
BCG		33	39	23	50	52	42	27	32	19
Measles		6	5	6	9	8	12	4	4	5
DPT (complete)		9	12	4	18	21	10	6	8	3
Polio (complete)		6	9	2	11	14	5	4	6	1

A.2: URBAN AND RURAL PROFILE BY POVERTY

		National			Urban			Rural		
		Total	Non-poor	Poor	Total	Non-poor	Poor	Total	Non-poor	Poor
Health complaints last month (% population)		22	25	17	20	21	16	23	27	17
Utilization rates (% population)										
Public outpatient care		12	14	8	12	13	9	11	14	8
Private care		2	3	1	2	3	1	2	3	1
Traditional care practitioner		2	3	2	1	2	1	3	3	2
Self-medication		7	10	3	8	9	3	7	10	2
Employment	e/									
Participation rate		60	61	58	53	53	55	62	65	59
Female participation rate		40	41	36	35	34	37	41	44	36
Unemployment rate		5.3	6.1	3.9	12.4	13.4	8.7	3.3	3.5	3.0
Weekly working hours	f/									
Mean		40	41	39	44	45	41	39	39	38
Median		41	42	40	45	47	42	40	41	40
Weekly working hours (%)	f/									
Up to 15		3	3	2	2	1	2	3	3	2
16 to 35		29	28	30	21	21	19	31	30	31
36 to 50		54	52	58	55	52	63	54	52	57
More than 50		15	17	10	23	26	15	13	15	9
Agriculture	g/									
Per capita land (ha)	h/	0.38	0.50	0.23	0.26	0.30	0.19	0.40	0.53	0.23
Per capita irrigated (ha)	h/	0.08	0.11	0.04	0.06	0.06	0.05	0.08	0.12	0.04
Among land holders:										
Average per capita land (ha)	h/	0.41	0.54	0.24	0.29	0.35	0.20	0.42	0.57	0.24
Average per capita irrigated land (ha)	h/	0.09	0.12	0.04	0.06	0.07	0.05	0.09	0.13	0.04
% of irrigated land	h/	18	20	17	12	10	15	19	21	17
Average value of land per ha (US Dollars) ***	i/	7.2	8.6	4.6	7.7	6.3	10.3	7.1	8.9	3.9
Median value of land per ha (US Dollars) ***	i/	1.5	1.4	1.5	1.3	1.3	1.4	1.5	1.4	1.5
Production uses (as % of total value)										
Sales		29	31	27	30	33	26	29	31	27
Barter		2	1	2	2	2	2	2	1	2
Lost		4	4	5	5	4	6	4	4	5
Payments		1	1	1	1	1	1	1	1	1
Self-consumption		62	61	63	61	59	64	62	61	63
Subsistence (% population)	j/	33	36	31	29	30	28	34	36	31
Agricultural inputs (% households)										
Use of manure, fertilizers, pesticides or herbicides		3	4	1	3	3	3	3	4	0
Purchased or received maize, rice or bean seeds		25	28	19	18	22	9	26	29	20
Use any of the above inputs		27	32	19	20	24	11	28	33	20

A.2: URBAN AND RURAL PROFILE BY POVERTY

	National			Urban			Rural		
	Total	Non-poor	Poor	Total	Non-poor	Poor	Total	Non-poor	Poor
Livestock g/									
Average per capita value of 2001 livestock (US Dollars)	95	124	56	87	104	58	96	127	56
Median per capita value of 2001 livestock (US Dollars)	35	40	29	42	48	34	34	39	28
Average per capita value of 1999 livestock (US Dollars)	221	296	124	214	289	95	222	298	127
Median per capita value of 1999 livestock (US Dollars)	62	80	51	65	94	46	61	79	51
Among 2001 livestock holders:									
Average per capita value of 2001 livestock (US Dollars)	106	137	64	96	119	62	107	140	64
Median per capita value of 2001 livestock (US Dollars)	40	47	35	48	56	35	39	45	35
Average per capita value of 1999 livestock (US Dollars)	242	320	138	237	329	99	242	319	143
Median per capita value of 1999 livestock (US Dollars)	72	96	58	78	106	46	72	94	59
Subjective well-being									
Life compared to 1999 (% population 15 and more)									
Much better	29	27	32	36	35	40	27	24	31
Same	60	61	59	54	53	56	63	65	60
Much worse	11	12	9	10	12	4	11	11	9
Economic mobility (% population 15 and more)									
Downward	23	25	18	23	24	19	22	25	18
None	43	38	50	37	33	52	44	41	50
Upward	35	37	32	40	43	29	33	34	32
Power mobility (% population 15 and more)									
Downward	6	6	4	4	4	4	6	7	5
None	10	8	13	10	9	12	10	8	13
Upward	85	86	83	86	87	84	84	85	82
Food security									
Food consumption less than adequate, last month (% population)	59	53	69	43	36	65	64	60	70
Months with low food consumption, last year	3.6	3.4	4.0	2.6	2.3	3.5	3.9	3.8	4.0
Months with not enough rice or maize to eat during last year	3.6	3.4	4.0	2.7	2.4	3.5	3.9	3.8	4.1

a/ Bottled water, tap water, pump, protected well or protected spring.
b/ Flush toilet, traditional latrine or septic tank.
c/ Public or private.
d/ 2001/02 academic year.
e/ Considers people aged 15-64 and a last week recall period.
f/ Excludes people who did not work last week but do have a job.
g/ Excludes Dili/Baucau.
h/ Considers land classify as Annual crops or fallow and Plantation.
i/ Weighted first by area within the household and then by household.
j/ A household is considered a subsistance one if it only uses its crop production for selfconsumption, as means of payment or for barter.

** Excludes six observations with values of monthly real per capita consumption greater than 200 US$.** Weighted by household.*
**** Excludes seven observations with values of land per ha of at least 1,000 US$/ha.*
Source: 2001 TLSS.

TABLE A.3: REGIONAL PROFILE BY POVERTY

		National		Dili/Baucau		Other Urban		Rural					
								Center		East		West	
		Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Inequality and expenditure													
Gini *		28.7	15.3	31.8	16.2	29.5	13.3	26.3	16.2	24.3	14.5	22.3	14.2
Per capita expenditure (US Dollars per month)		33.0	10.8	44.8	11.2	34.9	11.4	30.3	10.5	31.0	10.9	25.8	11.2
Food (% of total expenditure)		60	76	40	62	53	75	73	78	64	75	66	77
Purchases		34	35	36	48	31	41	36	32	31	30	36	39
Home production		22	37	3	13	19	30	31	41	28	40	27	33
In-kind		4	5	1	1	3	4	6	5	4	4	3	5
Rent (% of total expenditure)		25	11	42	22	25	13	16	10	15	8	23	13
Others (% of total expenditure)		16	13	18	16	22	12	10	11	21	18	10	11
Household composition **													
Household size		4.3	5.9	5.9	6.7	4.4	5.9	4.3	6.1	3.9	5.5	3.8	5.8
Dependency ratio (%)		109	148	100	117	108	131	117	162	103	148	113	135
Children (% household size)		41	52	40	46	40	49	44	54	38	51	41	49
Infrastructure													
Drinking water (% population)	a/	53	45	85	78	59	40	48	48	30	36	57	43
Sanitation (% population)	b/	44	39	88	70	53	49	32	46	27	21	32	27
Electrification (% population)	c/	34	13	93	69	61	34	11	8	21	7	12	6
Housing damage and rehabilitation													
Damaged in violence (% households)		28	29	30	13	43	61	18	16	10	8	60	56
Totally damaged (as % of damaged)		82	91	49	100	77	91	90	89	90	92	87	91
Rehabilitated (as % of damaged)		61	66	47	81	56	65	64	66	71	92	63	64
Totally rehabilitated (as % of damaged)		21	22	11	10	20	32	23	18	52	31	18	19
Access													
Distance to the aldeia center (km)		2.2	1.4	1.4	0.6	1.6	1.0	1.5	1.0	4.9	4.3	0.8	0.6
Distance from the aldeia center (km)													
Everyday market		19.3	22.7	1.1	4.2	7.5	4.1	29.1	28.7	24.7	27.9	13.9	15.2
Periodic market		8.3	8.7	2.7	7.2	3.8	5.1	7.5	11.8	13.5	7.5	5.6	3.8
Vehicle-passable road		0.7	0.7	0.1	0.2	0.3	0.6	0.6	0.9	1.6	0.8	0.0	0.1
Paved road		2.4	4.2	0.1	0.2	0.5	0.7	4.3	6.3	2.6	4.2	1.3	0.8
Education													
Iliteracy rate (% of 15 and older)		46	61	17	45	43	50	56	61	54	58	55	70
Education of the head (years)		3.9	1.9	7.4	2.3	3.7	2.9	3.0	1.8	3.0	1.8	2.9	1.5
Primary, Net enrollment rate	d/	72	73	78	72	81	78	65	75	74	63	74	76
Junior Secondary, Net enrollment rate	d/	31	18	51	34	49	31	18	12	23	22	27	19
Health													
Immunization (% children less than 1 year-old)													
BCG		39	23	52	50	53	40	32	24	23	9	45	18
Measles		5	6	7	0	10	15	2	7	0	0	12	4
DPT (complete)		12	4	15	21	31	7	6	0	3	5	21	10
Polio (complete)		9	2	10	10	21	4	6	0	0	5	15	0

TABLE A.3: REGIONAL PROFILE BY POVERTY

		National		Dili/Baucau		Other Urban		Rural					
								Center		East		West	
		Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Health complaints last month (% population)		25	17	22	22	18	14	27	17	29	20	23	16
Utilization rates (% population)													
Public outpatient care		14	8	15	13	11	8	16	9	13	7	11	8
Private care		3	1	2	1	3	2	1	1	5	2	3	2
Traditional care practitioner		3	2	1	1	2	1	1	1	7	3	2	4
Self-medication		10	3	10	3	7	3	13	3	6	2	8	2
Employment	e/												
Participation rate		61	58	48	51	61	56	72	63	56	51	62	58
Female participation rate		41	36	28	36	43	38	57	40	33	23	37	40
Unemployment rate		6.1	3.9	20.2	17	4	5.1	3.3	4.3	3.3	0.8	4.1	1.8
Weekly working hours	f/												
Mean		41	39	47	46	41	40	37	38	44	45	38	35
Median		42	40	48	48	42	41	36	39	48	48	37	36
Weekly working hours (%)	f/												
Up to 15		3	2	2	4	0	2	3	2	5	1	1	4
16 to 35		28	30	18	16	24	21	34	31	14	10	44	46
36 to 50		52	58	44	46	61	70	56	61	53	66	39	44
More than 50		17	10	36	35	14	7	7	6	27	23	16	6
Agriculture	g/												
Per capita land (ha)	h/	0.50	0.23			0.30	0.19	0.71	0.24	0.40	0.19	0.34	0.23
Per capita irrigated (ha)	h/	0.11	0.04			0.06	0.05	0.09	0.03	0.19	0.07	0.06	0.04
Among land holders:													
Average per capita land (ha)	h/	0.54	0.24			0.35	0.20	0.76	0.25	0.44	0.20	0.36	0.25
Average per capita irrigated land (ha)	h/	0.12	0.04			0.07	0.05	0.10	0.03	0.21	0.07	0.07	0.05
% of irrigated land	h/	20	17			10	15	19	15	28	28	15	11
Average value of land per ha (US Dollars) ***	i/	8.6	4.6			6.3	10.3	9.3	2.9	10.9	8.3	5.6	2.6
Median value of land per ha (US Dollars) ***	i/	1.4	1.5			1.3	1.4	1.5	1.8	1.1	1.6	1.3	1.0
Production uses (as % of total value)													
Sales		31	27			33	26	53	36	4	3	23	24
Barter		1	2			2	2	1	4	0	1	1	1
Lost		4	5			4	6	2	3	9	7	1	6
Payments		1	1			1	1	1	2	1	2	1	0
Self-consumption		61	63			59	64	41	54	81	82	74	69
Subsistence (% population)	j/	36	31			30	28	8	13	81	82	31	34
Agricultural inputs (% households)													
Use of manure, fertilizers, pesticides or herbicides		4	1			3	3	0	0	6	1	8	0
Purchased or received maize, rice or bean seeds		28	19			22	9	18	14	34	30	42	24
Use any of the above inputs		32	19			24	11	18	14	40	30	48	24

TABLE A.3: REGIONAL PROFILE BY POVERTY

	National		Dili/Baucau		Other Urban		Rural					
							Center		East		West	
	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor	Poor
Livestock g/												
Average per capita value of 2001 livestock (US Dollars)	124	56			104	58	106	55	177	70	99	48
Median per capita value of 2001 livestock (US Dollars)	40	29			48	34	40	33	52	31	26	17
Average per capita value of 1999 livestock (US Dollars)	296	124			289	95	180	94	249	83	614	235
Median per capita value of 1999 livestock (US Dollars)	80	51			94	46	59	45	82	37	257	78
Among 2001 livestock holders:												
Average per capita value of 2001 livestock (US Dollars)	137	64			119	62	114	61	188	73	117	63
Median per capita value of 2001 livestock (US Dollars)	47	35			56	35	44	37	56	34	30	25
Average per capita value of 1999 livestock (US Dollars)	320	138			329	99	191	101	264	86	702	306
Median per capita value of 1999 livestock (US Dollars)	96	58			106	46	67	48	89	41	280	111
Subjective well-being												
Life compared to 1999 (% population 15 and more)												
Much better	27	32	38	29	30	45	20	34	25	26	32	29
Same	61	59	51	65	57	52	72	59	63	60	51	61
Much worse	12	9	11	6	13	3	8	8	12	14	17	9
Economic mobility (% population 15 and more)												
Downward	25	18	22	19	28	19	26	18	14	8	41	24
None	38	50	31	52	36	52	39	53	57	62	19	35
Upward	37	32	47	30	36	29	35	29	29	30	39	41
Power mobility (% population 15 and more)												
Downward	6	4	3	5	5	4	8	4	4	2	11	7
None	8	13	10	16	8	10	10	13	4	10	9	16
Upward	86	83	87	79	87	87	82	83	92	88	80	77
Food security												
Food consumption less than adequate, last month (% populati	53	69	30	71	46	62	63	74	61	76	51	58
Months with low food consumption, last year 3.4	4.0	1.6	3.2	3.7	3.6	3.7	3.9	4.1	4.4	3.7	4.2	
Months with not enough rice or maize to eat during last year	3.4	4.0	1.6	3.2	3.7	3.7	3.6	3.9	4.1	4.4	3.7	4.2

Note: The districts of Oecussi, Bobonaro and Cova Lima constitute the West; Baucau, Lautem and Viqueque represent the East; and Aileu, Ainaro, Dili, Ermera, Liquica, Manufahi and Manatuto belong to the Center.
a/ Bottled water, tap water, pump, protected well or protected spring.b/ Flush toilet, traditional latrine or septic tank.
c/ Public or private. d/ 2001/02 academic year.
e/ Considers people aged 15-64 and a last week recall period.f/ Excludes people who did not work last week but do have a job.
g/ Excludes Dili/Baucau. h/ Considers land classify as Annual crops or fallow and Plantation.
i/ Weighted first by area within the household and then by household.j/ A household is considered a subsistance one if it only uses its crop production for selfconsumption, as means of payment or for barter.
** Excludes six observations with values of monthly real per capita consumption greater than 200 US$.** Weighted by household.*
**** Excludes seven observations with values of land per ha of at least 1,000 US$/ha.*
Source: 2001 TLSS.

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