

TIMOR-LESTE



National Human Development Report 2018

Planning the Opportunities for a Youthful Population



A traditional
Tara Bandu ceremony.
© Jin Ni



Women from Cafe
Cooperativa Timor factory
sort out coffee beans in Dili.
© Martine Perret

A girl carrying her good after
return from Suai market.
© Bernardino Soares

Francisco Lobo, a final year
student at UNTL, accessing
books in the university library.
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National Human Development Report 2018

Planning the Opportunities for a Youthful Population



*Empowered lives.
Resilient nations.*

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Message from the Prime Minister

It is my pleasure and honour to introduce the Timor-Leste National Human Development Report 2018, with the theme of “Providing Opportunities for a Youthful Population”. This is the 4th National Human Development Report since the restoration of our independence in 2002 and it states the simple yet powerful idea that the youth of Timor-Leste are the real wealth of our nation and the engines of sustainable development. Hence, their well-being is pivotal for the prosperity and progress of our country.

Timor-Leste is on the march towards a more prosperous future in which all its citizens, young, old, male, female, rural, urban, of all faiths and backgrounds are empowered to realize their full potential, live with satisfaction and feel proud of their country. This endeavor, regardless of how challenging it may be, is highlighted in our vision that guides our National Strategic Development Plan 2011-2030.

While many milestones have already been achieved, we still have a long way to go to achieve a robust economy, a resilient environment and a cohesive society that have high levels of human development and well-being.

This report highlights that Timor-Leste has one of the youngest populations in the Asia-Pacific region, with 74 per cent below the age of 35. Unemployment among our youth is wide-spread and the majority remain idle. Mean years of schooling is fewer than 5 and even shorter for our young girls. Unfortunately, the gender gap in employment and education is a reality. Hence, it is our shared responsibility to enable youth to gain the knowledge, skills and experiences that they need to lead the lives that they value.

We now have a demographic opportunity at our door step since the proportion of our economically productive age group in the total population is increasing. This can have a multiplier effect on sustainable human development if we foster smart policies now to significantly reduce the vulnerabilities of the youth. Many of our neighboring countries in Asia have benefited from the demographic window of opportunity, a phenomenon which only opens once for each country and lasts for about four to five decades. This opportunity arises when the share of people in productive working years exceeds the share of dependents, namely children and elderly.

The Timor-Leste National Human Development Report 2018 is a timely and useful contribution to the policy debate on how to develop our country’s greatest asset, the young people, and unlock their potential to harness this demographic opportunity for accelerated economic and human development gains.

With its wealth of insights and data, this report assesses youth’s strengths and challenges using a well-being framework that is holistic and multi-dimensional in its approach. It sheds light on youths’ well-being vulnerabilities that constitute a barrier for achieving a demographic dividend. It stresses the importance of closing the youth well-being gap and the timeliness for more dedicated pro-youth investments now to yield a greater return for sustainable development in the future.

It is indeed our duty to implement smart policies and investments without any delay to address young people’s challenges on multiple fronts, from decent employment and quality education to youth friendly health services and active citizenship. Gaps in education and skills are forcing too many young people, particularly young girls, to leave education at an early age, unprepared for work and life. A progressive and peaceful Timor-Leste requires an empowered generation of youth who are skilled, well-educated, and emotionally, physically, culturally and spiritually ready to contribute to the nation building process of Timor-Leste.

The responsibility rests on our nation, citizens and leaders alike to invest in youth and unlock their potential to help transform this unique nation for a sustainable and prosperous future. The evidence base that this report provides is a significant contribution for our efforts to promote human development, reduce inequalities, and ensure sound foundations for sustainable economic growth.

I am confident that the readers of this report will share the inspiration and dedication for working together towards improved youth well-being in Timor-Leste and unleash their potential to advance human development for all. It is my sincere hope that an inclusive and sustainable economic paradigm that truly serves the solidarity and well-being of our people as recommended by this report will firmly take root in Timor-Leste society and continue to be the guiding principle for our country’s development strategies and policies.



Dr. Marí Bim Amude Alkatiri

Prime Minister

Democratic Republic of Timor-Leste

Foreword

Human development is first and foremost about allowing people to lead lives that they value and enabling them to realize their potential as human beings. The Sustainable Development Goals, an internationally agreed set of time-bound goals for reducing extreme poverty, extending gender equality and advancing opportunities for health and education set out the framework for human development. Progress towards Timor-Leste's own Strategic Development Plan objectives provides a benchmark for assessing the country's resolve in translating commitments into action. More than that, it is a condition for building shared prosperity and consolidating the culture of peace and democracy.

Timor-Leste's 4th National Human Development Report looks at well-being and identifies options for seizing the demographic dividend, an issue that profoundly influences human potential and sustainable development. Timor-Leste, a young and vibrant democracy, is the second most youthful country in the Asia-Pacific region. The large proportion of a young population of working age combined with a declining dependency ratio provides a unique development opportunity. How the Government responds to this reality will define the shift from a "youth bulge" into a "youth dividend".

A youth bulge, is many times associated with high youth unemployment and widespread inequality—a recipe for political instability. Frustrated by the lack of opportunities, many young people in countries with these characteristics risk their lives on perilous journeys in search of a better life abroad. Pools of idle youth are a magnet for recruiters from organized crime or extremist groups. Fortunately, Timor-Leste has successfully managed the transition from conflict to peace. The recent electoral processes are a testament to the improvement in state institutions' capacity as well as the country's democratic capital strength.

Timor-Leste's economy has grown steadily in the past decade. The population projections show that Timor-Leste is predominantly a young country. For the year 2015 more than 65 percent of the population was below 25 years of age. The changing characteristics of the population growth in the country show that the demographic window of opportunity opens sooner than projected allowing the country to achieve the demographic dividend subject to implementation of adequate policies. This demographic dividend is an opportunity to advance the quality of primary and secondary education

cycles and generates the demand to improve the productive capacities of the population to expand formal employment, develop a local economy, increasing and diversifying domestic revenue and improving the conditions of the active population, especially that of young people between 15 and 35 years of age.

The social and economic costs of long-term unemployment and poverty are not only measured in terms of income support. They include loss of output, erosion of skills, reduced levels of economic activity, and increased social divisions. Unemployment wastes some of the scarce resources used in training workers. Many studies have shown there is a strong correlation between health and education conditions amongst the population and economic growth. Investments aimed at creating human capital - for example, improving access to preventive or curative health services, or improving the coverage, quality and relevance of education - result in a better trained, more productive population with greater potential to contribute to strengthening national competitiveness.

Globalisation and the transition toward an information society mean that societies depend increasingly on their competitiveness and this, in turn, relies on the incorporation of intelligence and knowledge into the productive system. As a result, economic development requires fast and wide-ranging changes in education.

These and other issues are carefully examined in the report. The challenges it sets out are complex, but the authors offer policy options and recommendations. The report informs the need for action, transformative policies and programmes now to seize the demographic opportunity that is in Timor-Leste's horizon. As the evidence suggests, Timor-Leste's progress towards its Strategic Development Plan goals could be further accelerated ensuring an even brighter and prosperous future.



Claudio Providas

Resident Representative (a.i)

United Nations Development Programme Timor-Leste

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This report is an outcome of sustained determination, dedication, hard work and commitment of the report's production team towards making a meaningful contribution to the nation building process of Asia's newest nation. This report could not have been produced without the excellent support and guidance of the Sixth and Seventh Constitutional Governments of the Democratic Republic of Timor-Leste.

Associate Professor Dr. Udoy Saikia, the Lead Author and Dr. Merve Hosgelen, Project Manager and Principal Author of this report would like to express sincere gratitude particularly to H.E. Agio Pereira, the current Minister in the Office of the Prime Minister for Delimitation of Borders of the Seventh Constitutional Government and his office for providing strong support and guidance for the initiation and implementation of this project during the past two years.

Special thanks go to the Ministry of Finance for the substantial contribution to the financing of this project and the General Directorate of Statistics for taking on board the important task of collecting primary data to inform the report's theme. The rolling out and quality assurance of the Timor-Leste 2016 Youth Well-Being Survey would not be possible without the excellent assistance of Director General Mr. Elias dos Santos, the National Director Silvino Lopes and the directorate's dedicated team of enumerators who have reached out to all corners of the country.

This report reflects the voices of the youth in Timor-Leste who have been consulted through various processes. We would like to take the opportunity to thank youth who have participated in the survey for their time and effort to voice their perceptions, opinions and aspirations. We would like to extend our thanks to the Secretary of State for Youth and Sports, in particular National Director David de Deus for assisting the project team to connect to various youth centres which helped us deepen the analysis of this report. We thank the youth centre managers for assisting us in organising the focus group discussions in the municipalities and Mr. Avito Julio Hendriques for helping us facilitate these.

The UNDP, through the production of various HDRs, assists many countries in policy making towards higher levels of human development and well-being. The support we have received from the UNDP country team, particularly from the former Resident Representative Mr. Knut Ostby and his Deputy Ms. Noura Hamladji for the initiation of this report has been a strong indication of UNDP's stand towards advancing human development in Timor-Leste. We also would like to express sincere thanks to Mr Claudio Providas, the Country Director of UNDP for his on-going guidance and wisdom throughout the preparation process of this report.

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The list of names provided below is an attempt to acknowledge the contribution of individuals for this important endeavour we truly feel passionate about. The youth of Timor-Leste is at the heart of this work. We sincerely hope that youth themselves will take ownership of this report and its recommendations.

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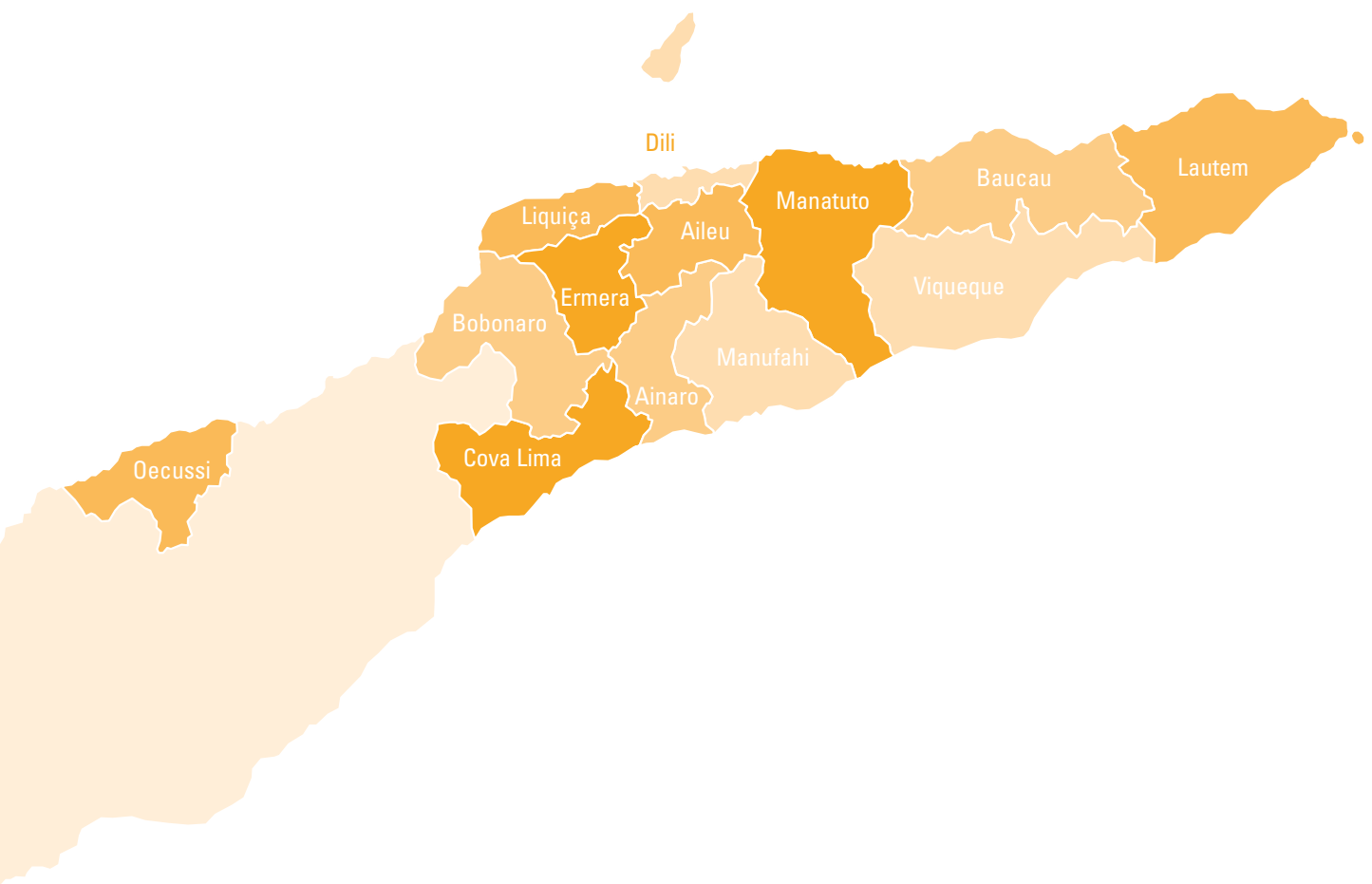
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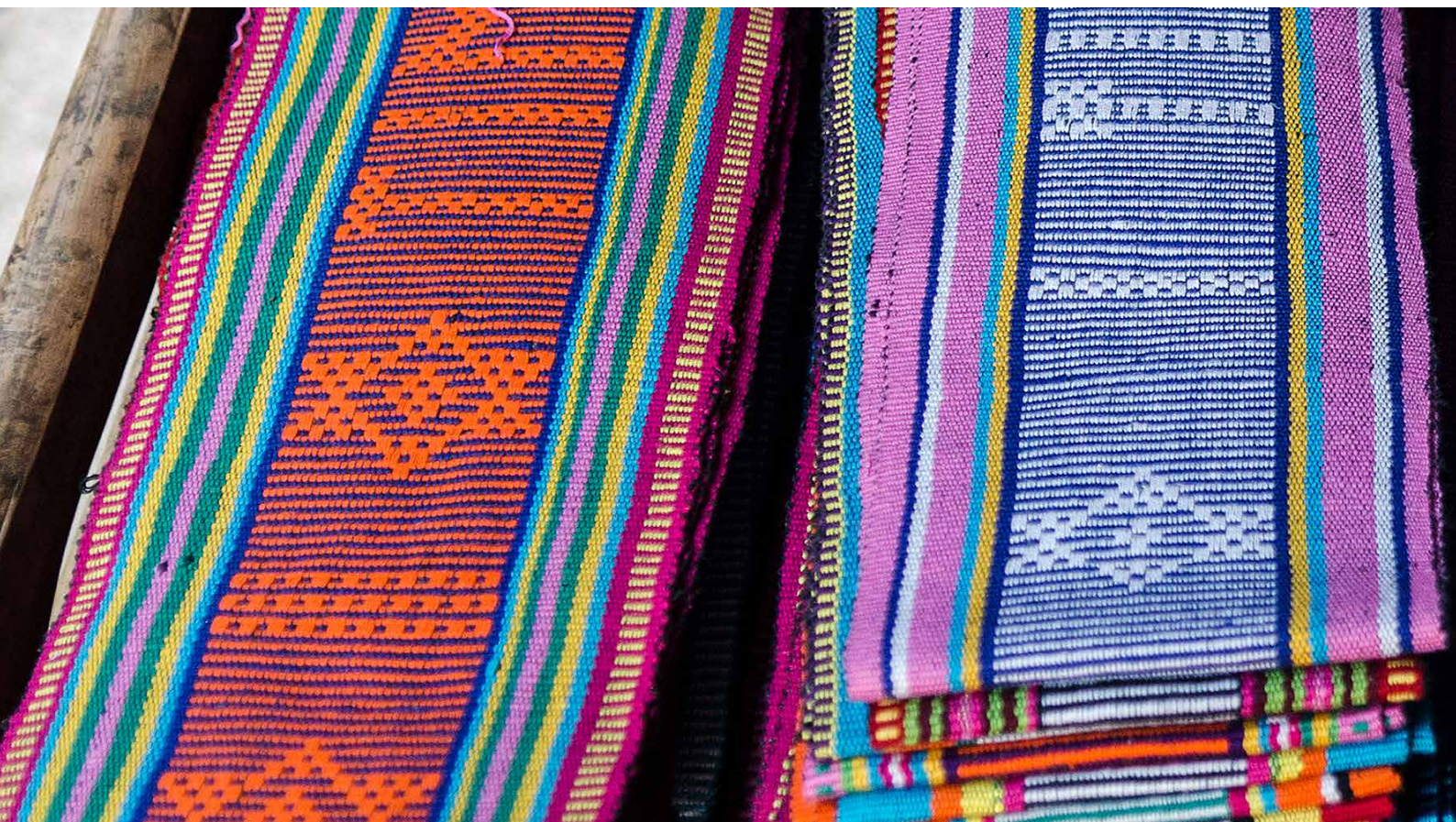
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Maps



Abbreviations

FAO	Food and Agriculture Organization of the United Nations	SAR	Special Administrative Region (China)
GDI	gender development index	SDG	Sustainable Development Goal
GDP	gross domestic product	SEPFOPE	Secretaria de Estado para a Política da Formação Profissional e Emprego (Secretariat of State for Vocational Training Policy and Employment)
HDI	human development index	SMEs	small and medium enterprises
HDR	<i>Human Development Report</i>	TVET	technical and vocational education and training
ICT	information and communication technology	UNDP	United Nations Development Programme
ILO	International Labour Organization	UNESCO	United Nations Educational, Scientific and Cultural Organization
IT	information technology	UNTL	Universidade Nacional Timor-Lorosa'e (National University of Timor-Leste)
NEET	not in education, employment, or training		
NGO	non-governmental organization		
OECD	Organisation for Economic Co-operation and Development		



Glossary

Administrative units	Timor-Leste is divided into districts (first level), subdistricts (or administrative posts) (second level), villages (sukus) (third level) and hamlets (aldeias).	Rama ambon	A sort of slingshot used to launch a dart of the same name. The dart is usually 15–20 centimeters long and tipped with a barb. It is the preferred weapon among gangs in Dili, where the darts are often coated in battery acid to render them more deadly. The weapon may have first been deployed on Ambon, an island in Indonesia. Thus the name, which means branch of Ambon in Portuguese.
Carnation Revolution	Launched on 25 April 1974 as a military coup against a dictatorship that had ruled Portugal since the 1930s, the Revolução dos Cravos (Carnation Revolution) soon involved a popular campaign of civil resistance that peacefully returned democracy to the country and eventually led to the withdrawal of Portugal from most of its colonies, including Timor-Leste.	Tais	A cloth produced through a traditional weaving method.
Lulik	Sacred traditions, including the uma lulik, sacred huts that dot the countryside.	Tara bandu	Traditional practices with practical outcomes in environmental protection.
Oecussi-Ambeno	A coastal enclave separated from the rest of Timor-Leste by West Timor, part of East Nusa Tenggara, the southernmost province of Indonesia.	Tetum	An Austronesian language, Tetum is spoken on the island of Timor. Along with Portuguese, it is an official language of Timor-Leste.
		Timor-Leste	The official name of the country. It is Portuguese for East Timor.
		Timór Lorosa'e	The Tetum name for Timor-Leste. It means “Timor of the rising sun”.
		Topasses	Ethnically mixed Portuguese who dominated Timor in the 1700s and 1800s.



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EXECUTIVE SUMMARY



Youth in Baucau District await the arrival of riders participating in Tour de Timor, an annual mountain bike race.

© Antoninho Bernardino

Executive Summary

The Human Development Report (HDR), pioneered by the United Nations Development Programme (UNDP) in 1990, has influenced the development debate worldwide for more than a quarter of a century by placing the richness of human life above the richness of the economy. The global HDR appears every year, and national and regional HDRs are prepared periodically. The *Timor-Leste National Human Development Report 2018: Planning the Opportunities for a Youthful Population* is the fourth national HDR of Timor-Leste.

This *National Human Development Report* (National HDR) puts the well-being of young people at the centre of the policy agenda. Why youth? Timor-Leste has one of the youngest populations in the Asia and Pacific region, with a median age of 17.4 years. This makes Timor-Leste the 15th youngest in the world, behind only Afghanistan and a group of African nations. The population below age 35 accounts for 74 percent of the total population. Hence, this report responds to the development aspirations of the youth of Timor-Leste, the drivers of the nation's future development.

Why well-being? Economists are increasingly recognizing that a better quality of life is the goal of development, while economic prosperity is a means to this goal. Poverty and human well-being are closely related, and multidimensional poverty is another way of describing failures in well-being. A well-being approach is not limited to economic considerations. It provides a much more holistic perspective on policy by acknowledging that development outcomes are a result of a confluence of the socio-economic, political, cultural and environmental factors shaped by historical contexts.

By applying a well-being approach, this report provides the opportunity for policymakers to adopt policies, programmes and strategic investments targeted at young women and men based on an in-depth understanding of their aspirations, attitudes and behaviours.

The report is highly innovative: it places the measurement of well-being at the centre of analysis, alongside the human development index (HDI). It supplies indices of both well-being and human development among the youth of Timor-Leste, in addition to the HDI of the entire population. Moreover, it uses the well-being framework as a policy tool to guide efforts

to achieve higher levels of human development among youth and prepare the conditions needed for the nation to translate demographic opportunities into socio-economic dividends.

The ultimate aim of this National HDR is to guide decision makers along socially inclusive and innovative pathways to achieve the country's national development aspirations through more productive and engaged youth whose contributions to the economy and society are commensurate with the potential of young people.

Why should policymakers assign importance to youth?

The shifting age structure of the population of Timor-Leste in recent years has finally brought policy options to a crossroads. The current demographic situation has the potential to play an extremely important role in shaping the country's development in the near future.

Because of an exceptionally high birth rate in the recent past, the population currently has a large proportion, nearly 40 percent, of children under age 15. This creates a substantial burden on the working-age population (15–64). The country's high dependency ratio reflects the amount of economic pressure exerted by the dependent population (children and the elderly, typically ages 0–14 and 65 or above) on the productive population.

According to the 2015 census, Timor-Leste's dependency ratio is 82. This means that every 100 persons of working age must support 82 individuals who are not of working age, in addition to supporting themselves. The dependency ratios in other South-East Asian countries, such as Indonesia, Singapore and Thailand, are much lower than the ratio in Timor-Leste, as low as 37. This indicates that, because of its structure, the population of Timor-Leste is currently experiencing a much larger economic burden than the populations of its neighbours.

Every country experiences changes in demographic structure and in the dependency ratio as mortality and fertility rates decline. A declining dependency ratio leads to a demographic window of opportunity that lasts 30 to 40 years. If this opportunity is seized through sound policies, countries can enjoy a demographic dividend, which creates enormous socio-economic

benefits for society. Many countries in the Asia and Pacific region have benefited from a demographic dividend, while others have missed out on translating opportunities into reality. In the region between 1970 and 2017, the demographic dividend accounted for about 42 percent of the economic growth in developed countries and 39 percent in developing countries.

The population of Timor-Leste has been experiencing a reduction in fertility, leading to the possibility of a declining dependency ratio. The total fertility rate decreased from 7.8 to 4.3 children per woman of reproductive age between 2003 and 2016. If this declining trend continues, a demographic window of opportunity will open for Timor-Leste in the next three decades. This will allow more resources to be generated by the economically active population for investment in education, health care and other productive sectors for sustainable development. According to a recent study based on an analysis of national transfer accounts (economic support ratio), a demographic window of opportunity has opened recently in Timor-Leste and will remain open for the next four decades.

The achievement of a demographic dividend is not automatic. Converting demographic opportunities into a demographic dividend depends on strategic policies, good governance and productive employment. Patterns of public investment must respond to demographic changes. Hastening the onset of the demographic transition and realizing the full potential of a dividend depend largely on policy choices that affect the process. Thus, there is a need for a distinct focus on policies and investments now to improve the well-being of young men and women.

What does the report's analysis say about the current well-being of youth?

The realization of sound policies and tailored investments for improved well-being requires an in-depth understanding of young people's values, behaviours and aspirations and the ways young people perceive their own life satisfaction and experiences. Responding to the need for such evidence, this report presents analyses of the state of youth well-being in Timor-Leste based on a nationwide survey conducted by Timor-Leste's National Statistics Directorate in August 2016. The Timor-Leste 2016 Youth

Well-Being Survey focuses on eight aspects (or domains) of well-being that play a crucial role in shaping a young person's life and are considered vital for the sustainable future of Timor-Leste. These eight domains are *physical health, psychological health, education, community vitality, cultural diversity, governance, ecological stewardship* and *living standards*.

The survey is designed to include people between 15 and 34 years of age as the sample of the nation's youth. This is for two reasons. First, a broader age category provides the opportunity to study issues related to older youth, while still allowing a disaggregation among the 15–24 age group, which is defined as youth in the National Youth Policy of Timor-Leste. Second, many studies exploring the relationship between a country's population structure and the greater likelihood of conflict show that 25- to 34-year-olds exert a large influence on peace and stability.

The results of the Timor-Leste 2016 Youth Well-Being Survey highlight promising achievements in the overall well-being of youth. Nearly three quarters of the total youth population in Timor-Leste, around 74 percent, enjoy moderate to high satisfaction across all eight dimensions of well-being. This rate is 71 percent among men and 76 percent among women. By contrast, approximately 32,550 of youth (10 percent of the 15–34 age group) are deprived in well-being, that is, they are multidimensionally poor. A larger share of men experience well-being deprivations, at 11 percent compared with 9 percent among women. Geographically, Ainaro District has the largest proportion of deprived youth, followed by the districts of Manatuto and Dili. In terms of gender differences in the achievement of well-being across municipalities, Oecussi-Ambeno exhibits the largest difference, at 26 percentage points to the advantage of men, followed by Bobonaro and Manufahi, at around 18 percentage points to the advantage of women.

An exploration of the survey results to identify the dimensions that drag down the well-being of youth makes clear that major deprivations are faced in the domains of education and community vitality. A majority of young men and women, around 88 percent, experience deprivations in education. Youth in Timor-Leste are performing extremely poorly in areas of education, such as literacy, core civic values, 21st Century knowledge and skills, including public speaking, the ability to manage finances, the use of basic information

and communication technology (ICT) and knowledge about good practices in hygiene, nutrition and health. The results also show that youth are not participating in an adequate quality and variety of education, training and skills development opportunities to be able to transit successfully from education to work. Among the survey respondents, 82 percent (87 percent of women and 77 percent of men) did not have jobs, and only 46 percent were studying or undergoing training at the time of the survey (44 percent of women and 49 percent of men), suggesting that a large share of youth are idle.

In community vitality, the results indicate a 90 percent deprivation. This outcome reflects eroded community relations among youth, alongside low levels of perceived security and limited social support. For example, the survey highlights that both young women and young men are greatly concerned about their safety and security in their communities (though the levels are slightly higher among women), while justifying the use of violence. The social support currently being provided to youth by their communities is inadequate.

Deprivations in the domains of education and community vitality strongly point to the existence of a societal condition described as anomie. Experienced particularly in societies recovering from a long conflict, anomie arises if the morally acceptable means of achieving institutionalized goals fail, and people start to use unethical or illegitimate means to achieve their goals (see below). In a state of anomie, goals become so important that people persist in striving to achieve them at any cost. As a result of anomie, one may expect to encounter frequent delinquency, crime and violent interpersonal behaviour within a society. This National HDR highlights that these symptoms of anomie are embraced by Timorese youth and considered normal. This report proposes policy pathways to remedy anomie and reduce young people's deprivations in well-being.

How do HDI analyses on youth and on a whole population differ?

This report measures the Timor-Leste 2016 HDI relying exclusively on the most up-to-date national data. It finds an HDI of 0.585 for the entire population and 0.600 for the youth population.¹ The HDI measures the overall level of human development in a society based on three key components, namely, the

capabilities necessary to lead a long and healthy life, to achieve a decent standard of living and to gain access to education. The two HDIs place Timor-Leste and its young population in the medium human development range.

Simply because of their age, youth enjoy better health relative to older cohorts. They also have more opportunities to go to school. However, youth have much less access to decent standards of living compared with the general population because of their lower earnings relative to older working adults. This is mainly driven by the large share of youth who are out of the labour force or unemployed and thus assumed to be living on subsistence incomes. Young women show poorer human development indices (0.571) compared with young men (0.625), but the inequalities are wider across the total population.

What policies promote the demographic dividend and youth well-being?

Based on the HDI and an assessment of well-being among youth and in light of the demographic opportunities that are on the horizon, this National HDR posits three broad policy pathways to realize progress.

Greater investment in health care, education and the economy is needed now

Through multisectoral investments and progressive policies in health care, education and the economy, Timor-Leste can be projected to achieve large human development gains and a high human development index of 0.88 by 2050, a level that is enjoyed by the 20 countries with the highest human development scores in the world today. This would be possible with a policy scenario that includes the following:

- Increases in the mean and expected years of schooling among both men and women to 10 and 17 years, respectively, by 2050, thereby removing the gender gap in education
- A rise in the prevalence of contraception use from 24 percent in 2015 to 39 percent by 2030 and 58 percent by 2050
- Overall improvements in public sector effectiveness through greater labour market flexibility, financial market efficiency and the greater application of ICT

Other socio-economic dividends that are projected to be accrued from the above policy scenario between 2015 and 2050 include the following:

- The dependency ratio will decline from 83 percent to 50 percent.
- The lives of 62,000 infants and 70,000 children under age 5 will be saved.²
- A total of 5,100 possible maternal deaths will be averted.
- Both men and women will gain an additional six years of life expectancy.
- The advances in the economy will be profound because the value of gross domestic product (GDP) per capita will grow by a factor of 6 in 15 years. It will rise from \$2,619 in 2015 to \$15,374 in 2030.
- These projections make clear that the largest human development gains and the largest demographic dividend can be achieved if interventions in education and the economy are complemented by the use of appropriate family planning programmes. It is therefore vital for the Government to pursue simultaneous policies and investments now to enlarge young people's access to family planning programmes, encourage the greater use of contraceptives, ensure that young people stay in education around five years longer, and improve the economic environment.

Embrace an economic model to remedy youth deprivations in well-being

The economic model will need to encourage young people to obtain knowledge and skills to work in solidarity with their peers and communities to create social, economic and environmental benefits. The construction of such an economic system ought to focus on knitting together the social fabric, embedding social ethics within society and enhancing national interest, all of which were suppressed during the long period of Portuguese colonization and the 24 years of Indonesian occupation. This economic system requires cultivating values of democracy, justice, empowerment, creativity, participation and self-management.

The leaders of the country must help shape and nurture this alternative economic system to guide young people's social and economic behaviour in desirable ways, to restore a shared common identity and common goals and to promote the creation of self-generated work opportunities whereby young people

develop their human potential, while providing local solutions to the challenges faced by their communities.

The lack of jobs has been a perennial issue in Timor-Leste. Timorese youth currently have extremely limited opportunities for formal employment. These are mainly concentrated in the public sector, which is already crowded. Among youth, 50 percent believe that they do not enjoy equal access to public jobs, and 10 percent feel they are being discriminated against predominantly because of their age, language skills, religion, or sex. These data highlight the need to remove such barriers and empower youth, especially young women, to occupy public sector jobs and develop their skills.

The private sector is in the early stages of development and provides employment to only 5 percent of the workforce. Agriculture is the main occupation of 63 percent of men and 66 percent of women. However, the majority of youth in subsistence agriculture want to leave. In 2015, 45 percent of the working-age population was inactive, that is, they were predominantly students or home-makers. There is a widespread expectation among school-leavers that their education should lead to jobs in the formal sector. However, this is not the case even among graduates of technical and vocational education and training (TVET). According to the 2015 census, the youth unemployment rate in urban areas peaked at 26 percent. Because of a substantial gender division in labour, women are only half as likely as men to find work. In the context of approximately 20,000 new entrants to the labour market each year and limited job opportunities, nearly 70 percent of youth are dissatisfied with the number and variety of livelihood opportunities available to them. Effective strategies are needed now to address the growing mismatch between the available jobs and the supply of labour. Policies need to target job and opportunity creation among youth to equip young people with the knowledge and skills to achieve the goals they value.

While industries are developing, concentrated efforts are needed to nourish innovative ways to promote social entrepreneurship among youth and alter young people's attitudes so that the potential of generating incomes through small enterprises and other entrepreneurial initiatives can be more willingly sought in agriculture and other sectors of the economy that show potential for growth. There is promise for transforming

job-seekers and the economically inactive into entrepreneurs, especially among the 62 percent of the population currently below age 25. Social entrepreneurship can also help foster the desired qualities and motivations among youth to inspire them to seek community benefits rather than individual profit. This is only possible if enabling incentives and pro-youth investments are undertaken to improve young people's access to financial capital, ICTs and opportunities for human capital development.

Some youth already possess work-ready skills through participation in donor-supported, work-ready training programmes or migrant work in more competitive environments overseas. While they need to be encouraged to put their skills into practice, there is a lot to be done in terms of enhancing young people's access to business and technical skill development opportunities. Moreover, responsibility for promoting social enterprises should be assigned to the districts, not only in Dili. This will enable more young people to gain the skills, confidence and pride they require to embark on social enterprise development that will assist their communities in exiting from poverty.

To promote economic development through social enterprises, the Government might adopt incentives within a cluster development strategy for job creation, while links among industries are being formed. This would help establish strategic clusters as focal points for investment. This National HDR suggests that one focus of cluster development should be rural livelihoods and food security, which would draw on the country's relative strength in customary land tenure and small farming.

Other significant categories of cluster development are health care, community development and ecotourism. This cluster would rely on the country's relative strengths through the well-staffed, but underfinanced national health care system, community resilience and immense tourist potential, while eliminating the deficiencies in public health care, community vitality and tourism development.

Investment in youth education and development for a knowledge-based society

A major precondition for reaping benefit from the demographic dividend and achieving greater human development in any country is

public investment in knowledge-producing services. This ensures accessibility to opportunities among all individuals at the earliest stages of life and throughout the life cycle. The people of Timor-Leste aspire to a society that is literate, knowledgeable and skilled. The National Strategic Development Plan of Timor-Leste sets out a vision to ensure universal secondary school completion through grade 12 by 2030. To implement this vision, however, the Government would have to more than double public investment in education, including substantial investment in teacher training, high-quality education facilities and appropriate teacher employment. This National HDR suggests that the Government draw on international best practice and consider allocating 25 percent of the budget to education and training to ensure access to quality education among young women and men. This would enhance meaningful human capability.

Increasing public expenditure alone cannot guarantee high-quality education. Investment must ensure that the education system is supported by skilled teachers and appropriate and good-quality facilities, including access to libraries, resource materials, and equipment. Education must also be guided by a well-balanced curriculum that fosters theoretical and practical application.

Experience elsewhere shows that raising school completion rates up to grade 12 can become a major factor in reducing youth unemployment. There is now an ongoing deficit in education in Timor-Leste because of a gender disadvantage. This National HDR suggests that the gender gap in education should be addressed through a comprehensive approach aimed at eliminating all school fees, providing training and creating employment for sufficient numbers of teachers, and extending the coverage of school feeding programmes into secondary schools through grade 12. Through inclusive education policies and practices, a nurturing schooling environment that responds to the diversity of student needs must be ensured to create a learning environment that makes youth feel safe and motivated. The value of education needs to be continuously communicated to parents and communities to improve student retention, particularly among young girls reaching puberty. Other educational reforms are also needed that would benefit from a substantial youth dividend in Timor-Leste.

The education system should motivate young people to engage actively in society before they leave school and to take more responsibility for thinking about their future. For this to happen, young people should be given the appropriate support through high-quality formal and non-formal education, ICT literacy programmes, information centres and advice from career professionals.

Agriculture is the largest employer in the country; so education should be geared towards benefiting the workforce in this sector. A new and innovative approach to learning about rural livelihoods that is oriented towards problem-solving can strengthen and intensify subsistence agriculture to produce a reliable surplus, create a local market for food products and address nutrition issues. New teaching units should also be offered that have practical relevance for economic opportunities in rural areas, such as tourism, fishing, clean energy solutions, crafts, and dress-making.

High schools should ensure skills development in planning, organization and management, and bookkeeping and financial record-keeping, including the use of electronic tools. These skills are required for any profession, whether the student becomes a farmer, a construction worker, a food service worker, a sustainable energy specialist, or a director in a public service department. Efforts should also be undertaken to build skills not readily taught in the classroom, such as teamwork, public speaking, organizational skills, democratic decision-making, outdoor adventure, and conflict resolution. This can be achieved through supplementary work placements or non-formal education to engage youth in the solidarity economy before they leave school.

Elevating the financial literacy of youth is also important and needs to be tackled by formal and non-formal educational, banking and non-banking institutions. If access to finance is assured through greater financial literacy, young people will be more well equipped to participate in the solidarity economy and take up enterprise development initiatives.

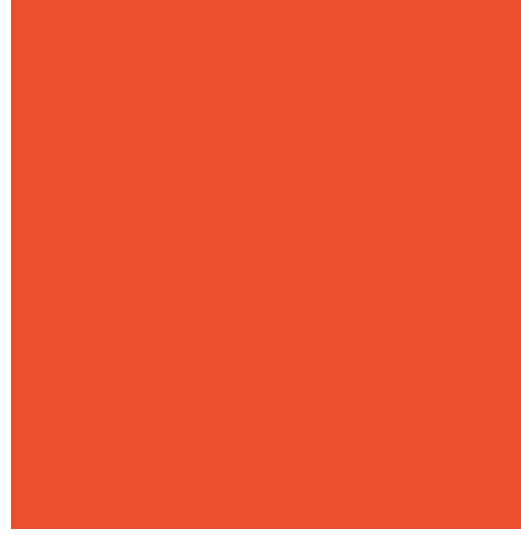
New types of training institutions outside Dili should be established to create local hubs to generate and facilitate discussions among employers, educators and district authorities. Analysis of the skills and enterprises required in the districts and the generation of new ideas can take place in these local hubs where young school-leavers are exposed to an orientation process for life after school. Social and

solidarity economy organizations, such as local coffee co-operatives, microfinance client groups, credit unions and fair-trade offices, could play a key role in helping students at these new types of learning centres to hone their organizational and management skills.

In Timor-Leste, most people have not yet benefited from the industrial revolutions that have swept across the world since the 18th Century. Most villages rely on low technology, and young people's access to ICT is limited. During the fourth industrial revolution, which involves robotics, artificial intelligence, biotechnology, and other innovative technologies in the digital age, neighbouring countries in the region are developing suitable digital strategies, adopting smart governance policies and building a digital network infrastructure to strengthen the human resource base. It is clear that knowledge- and innovation-driven societies and human ingenuity are key to developing smart solutions to the complex problems of humanity. To take advantage of the latest advances in technology, Timor-Leste requires a dramatic increase in the scale of investment in an ICT ecosystem that diffuses knowledge sharing and human development among youth. Technology can help lift values around creativity, entrepreneurship and stewardship in Timorese society. However, the ICT environment needs to be more supportive of decentralized networking for peer communication, knowledge sharing and education. Training in simple digital or e-literacy alone is not sufficient. The Government must engage in purposeful strategies that encourage e-citizenship, alongside policies that lead to greater public access to ICT, which can then promote meaningful citizen participation, innovation and social enterprise development.

This National HDR re-emphasizes the importance of adequate and well-targeted public investment in human development in Timor-Leste in the next three decades. The aim is to enable all individuals to develop a range of physical, emotional, and social capabilities that foster the achievement of greater well-being. The guiding principle is decisive trust in the resourcefulness of the Timorese people and the human and collective necessity of human development. This intrinsic human development will feed back into collective socio-economic values, thus forming a virtuous circle. It is crucial that this newest nation in Asia adopt human development as a precondition to nation-building.





CHAPTER 1

PLANNING THE OPPORTUNITIES FOR YOUTH



Planning the Opportunities for Youth

Timor-Leste has built a more inclusive political environment since 2006 and expanded tangible public services among the people. The resulting political stability and greater confidence in government have yielded many opportunities for success; however, many complex development challenges remain.

The Human Development Report (HDR), pioneered by the United Nations Development Programme (UNDP) in 1990, has been appearing annually for more than a quarter century to aid planners, policymakers, non-governmental organizations (NGOs) and social analysts in their decision-making and research. The first HDR introduced the holistic approach to the measurement of human development through a composite index known as the human development index (HDI). The HDI encapsulates the capabilities approach promoted by Amartya Sen to understand human well-being. The approach is based on key capabilities measured by proxies of the access to three achievements of development, namely, health care, education and a decent standard of living. The human development approach is focused on people and their opportunities and choices, and it provides baseline information about expanding the richness of human life, rather than simply the richness of economies. The legacy of the HDRs resides in their consistent effort to highlight the importance of human choices in development and to create effective ways of measuring the results of these choices.

UNDP has promoted the concept and approaches of human development in Timor-Leste. It has published three *National Human Development Reports* (National HDR) since 2002. The first National HDR, *Ukun Rasik A'an: The Way Ahead*, was published that year (UNDP 2002). It was followed by the second National HDR, *The Path Out of Poverty: Integrated Rural Development*, launched in 2006, and the third National HDR, *Managing Natural Resources for Human Development: Developing the Non-oil Economy to Achieve the MDGs*, published in 2011 (UNDP 2006, 2011). The theme of this, the fourth Timor-Leste National HDR is planning the opportunities for youth through investment in youth well-being and the transition to a demographic dividend.

Emerging from crisis and instability as an independent nation on 20 May 2002,

Timor-Leste is making gradual progress towards sustainable development. After four centuries of Portuguese colonial rule and 24 years of Indonesian occupation characterized by constant violence and further unrest in 2006, the country has learned that peace and security go hand in hand with development. The role of youth in maintaining peace is crucial.

Timor-Leste has built a more inclusive political environment since 2006 and expanded tangible public services among the people. The resulting political stability and greater confidence in government have yielded many opportunities for success; however, many complex development challenges remain. Timor-Leste is one of the poorest countries in the region; 42 percent of the population were living below the national poverty line in 2014 (World Bank 2016). The population is one of the youngest in the world; 74 percent of the people are under age 35 (DGE 2015). A majority of youth are economically inactive, lack adequate education opportunities and are ill equipped to participate in the socio-economic and political life of the nation.

The economy is supported largely by oil revenues; the Petroleum Fund of Timor-Leste was valued at \$16.2 billion at the end of 2015 (IMF 2016). While the prospects for the production of oil and gas from new fields are uncertain, ongoing production, which began in 2014, is forecasted to end in 2021 (SDG Working Group 2017). There is tremendous pressure on oil revenue because of a rapidly growing population with limited human resources and negligible diversification in the economy.

The broader priorities of the Government for the country now and in the near future include the development of social capital, particularly investment in capacity-building and in the education and health of the population; expansion of basic infrastructure; development of the economy, especially agriculture, tourism and the petroleum industry; and consolidation of an institutional framework by continuing to promote

gender equality, good governance and initiating the decentralization process. This National HDR is aimed at providing policy recommendations aligned with these priorities by placing youth and the creation or identification of appropriate opportunities for youth at the core of the development agenda.

Adopted in February 2016, the National Youth Policy articulates the Government’s vision for young people as healthy, well-educated, competitive, active and responsible citizens who are proud to be Timorese. The policy aims to promote and support the fundamental rights of young people in five areas of intervention: a healthy lifestyle, education, employment and employability, civic participation, and violence and crime. Despite government efforts, many challenges remain among young people in these areas.

Approved in June 2017, the National Employment Strategy 2017–2030 emphasizes that “productive employment is the basis for improving household livelihoods and [the] prosperity of the country as a whole, where equal participation of men and women will be the only way of achieving inclusive economic growth and social development” (NES Secretariat 2017, p. III-5). The creation of the new office of the Secretary of State for Youth and Employment in September 2017 clearly demonstrates the Seventh Constitutional Government’s strong commitment to accelerating efforts to create work opportunities among youth. This report aims to complement and support these national initiatives by highlighting pathways to fostering healthy, creative and productive youth who can help Timor-Leste reap the demographic dividend.

Timor-Leste has been experiencing an expanding youth bulge because of historically high fertility rates. However, it is now going through the initial stages of a demographic transition as fertility rates decline and life expectancy increases. A generation-wide window of opportunity will soon open, or has already opened gauged by the economic support ratio (Lee 2017), leading to the possibility of achieving accelerated economic growth and human development gains that may help realize the nation’s development aspirations. The key trigger of the demographic dividend is a demographic phenomenon: the decline

in the dependent population, such as children and the elderly, relative to the working-age population. This can occur if, for example, fewer children are born each year, leading to a change in the age structure of the population so that there are more workers relative to dependants. However, to achieve the demographic dividend, any favourable changes in the age structure must be accompanied by judicious policies in education and training, health care, infrastructure development and productive employment creation with particular attention to the subgroups of youth lagging furthest behind. If such policies are not adopted and implemented, then the youth bulge created by the changes in the age structure would become a demographic liability, possibly leading to civil unrest. Demographic change, together with sound policies in education, health care and employment, has been a key stimulus for the impressive economic gains that many Asian and Latin American countries have experienced over the last two decades.

The framework for well-being presented in this report lays out pathways for achieving the demographic dividend in Timor-Leste. It represents a holistic approach to policy whereby development outcomes are not limited to economic considerations, but are the result of a confluence of historical and political trends and social and cultural characteristics. Economists are increasingly recognizing that a better quality of life is the goal of development, while economic prosperity is a means to reach the goal. The well-being approach offers a key opportunity for policymakers to adapt policies and programmes to help realize young people’s aspirations and influence the attitudes and behaviours of youth as part of the preparation to benefit from the demographic dividend.

The aim of the report

This report aims to assist decision makers in the process of achieving the goals of development and to highlight policy priorities in the effort to advance improvements in the quality of life, especially among youth to enhance their human development. The main objective of this report is to promote public discussion of youth

Adopted in February 2016, the National Youth Policy articulates the Government’s vision for young people as healthy, well-educated, competitive, active and responsible citizens who are proud to be Timorese.

A generation-wide window of opportunity will soon open, or has already opened gauged by the economic support ratio (Lee 2017), leading to the possibility of achieving accelerated economic growth and human development gains that may help realize the nation’s development aspirations.

The main objective of this report is to promote public discussion of youth well-being, identify socially inclusive and innovative ways to diversify the workplace, and realize the potential youth dividend that may become available in Timor-Leste.

well-being, identify socially inclusive and innovative ways to diversify the workplace, and realize the potential youth dividend that may become available in Timor-Leste. A comprehensive, unifying approach to strategic investments to boost youth employment and strengthen youth's inclusion in socio-economic and political life has been lacking. The report provides a systematic, phased approach towards encouraging more productive and engaged youth whose contributions to the economy and society are commensurate with the potential of young people. It explores ways to mobilize youth to build a sustainable economy by creating a sense of trust, self-confidence and cooperation among youth and between youth and the Government.

This National HDR is designed to stimulate debate on the challenges involved in the realization of the demographic dividend in Timor-Leste. The report highlights two preconditions for opening the window of opportunity for a demographic dividend. The first is an acceleration in the reduction of the fertility rate. The analysis is based on United Nations Sustainable Development Goal (SDG), to ensure healthy lives and promote well-being for all at all ages.³ SDG 3 seeks, for instance, to empower women to make the choices they have reason to value. As the case of the Republic of Korea shows, sustainable development depends partly on governments taking positive steps to facilitate women's empowerment. Korea was among the first group of countries to reap the demographic dividend. The trigger was the achievement of a favourable age structure in the population. In 1965, Korea had a high fertility rate (similar to the rate in Timor-Leste today), but, by the early 1980s, it had brought the fertility rate down to below the replacement level, so that the population was shrinking. Together with a socially inclusive policy agenda, this helped trigger a remarkable improvement in economic productivity. If society has fewer people to support, this would increase the likelihood of the realization of the demographic dividend, but only if appropriate social and economic policies and investments are developed and undertaken now.

The other key precondition for achieving the demographic dividend revolves around education, training and jobs that foster

the productivity and well-being of youth. The prospects of youth seeking jobs have been problematic everywhere. As Joseph Stiglitz (2012) has recognized, too many people have not shared in the benefits of globalization. The factor that contributes the most to the emergence of a low-skilled, impoverished youth population is the lack of quality education and training that provide the skills needed on the labour market. This and deficiencies in vocational education and training foster unemployment. Economic development strategies are another factor. The difficulties in identifying viable economic development strategies are tremendous. The problem is that corporations in the developed countries contract export products from factories in developing countries, but the latter are able to compete only by offering lower labour and manufacturing prices, which is less conducive to a vibrant, dynamic economy. Relatively little money is available in small developing countries, particularly for technology. This results in a shortage of skilled labour able to compete at an advanced level in the global economy.

The National HDR investigates economic development strategies that could navigate these concerns. It considers the relevance for Timor-Leste of new thinking on the integration of economic diversification and youth employability. This National HDR is focused on the means to create work among youth through access to quality education and training, financial resources and opportunities within a more diversified economy.

Well-being plays a big role in this National HDR. The report is highly innovative as it provides both well-being and human development indices for the youth of Timor-Leste, in addition to the traditional HDI for the whole population. The report relies on primary data on individuals, which enables the analysis of the satisfaction of youth with their lives, especially in the context of work. This matters for policymakers because how people feel about their lives often determines how they behave. The report measures both subjective dimensions (life satisfaction and well-being) and objective dimensions of capability.

The preparation and distribution of this National HDR is being accompanied by initiatives to enhance domestic skills and

capabilities in understanding, analysing and interpreting human development, well-being and demographic concepts. This has been partly achieved through training programmes delivered by UNDP Timor-Leste and Flinders University, Adelaide, Australia. The focus of the training programmes is an effort to expand the national capacity to gather, analyse and make use of complex data on population dynamics. An additional value that informs this report revolves around these data, which shape perceptions on how youth encounter development and represent their lived experiences, rather than the opinions of outside experts. The training sessions were delivered in two stages and involved the participation of various entities, including the Directorate of Statistics, the Youth Council, United Nations agencies, relevant NGOs and educational institutions. They had two specific purposes:

- To train field enumerators and supervisors in the collection of quantitative and qualitative information for the Timor-Leste Human Development and Well-Being Survey, which has been carried out as part of the National HDR
- To train government actors, non-governmental agencies, including national universities and research institutions, and youth in the basic concepts of demography and human well-being and their relationship with national security, economic growth and sustainable development

The training programmes also aim to build the skills of public officials in conducting data analyses and drafting sound policies. This National HDR has been prepared through various consultative processes. A brief summary of the preparation process is detailed in appendix A.

The policy focus of this National HDR

Economic diversification

The National HDR analysis of diversification is aligned with the United Nations Secretary-General's report on the post-2015 development agenda, which calls for a transformative policy approach (United Nations 2013). Transformative approaches are adopted after it has become clear that old

paradigms cannot solve important problems or have begun to create more problems than they solve. Gender inequality, social and economic exclusion, distrust of government, and environmental damage are challenging issues everywhere.

New models of industrialization were the subject of the World Economic Forum in Davos, Switzerland, in early 2016 (Elliott 2016). At the forum were gathered technology pioneers, business leaders and political leaders to discuss the fourth industrial revolution. The revolution, the participants felt, will usher in a different sort of economy. Leaving everything to the market was one of the great risks highlighted at the forum. This would have grave implications for achieving the SDGs. The growth created by the fourth industrial revolution will not trickle down. In a white paper, UBS (2016, p. 14) warned of “polarization of the labour force as low-skill jobs continue to be automated, and this trend increasingly spreads to middle-skill jobs.”

Improving youth employability is an especially big challenge in the context of a major shift in the nature of industrialization and the workplace. The post-2015 global SDG agenda addresses this shift. On the transformation of the workplace, the recommendations of this National HDR align with SDG 8, to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. A key target of SDG 8 is diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors.⁴ Another SDG 8 target is equally influential in the analytical framework of this National HDR, namely, to adopt policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation and encourage the establishment and expansion of microenterprises and small and medium enterprises (SMEs), including through access to financial services.

The National HDR policy analysis is also informed by key policy messages produced by a meeting on the demographic dividend and youth employment, which was held at United Nations headquarters in New York in June 2015.⁵ Interventions the delegates identified have been successful in linking young people with work opportunities in various countries.

The recommendations of this National HDR align with SDG 8, to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Of special interest in this National HDR are social enterprises as a means of diversifying the economy to provide decent work opportunities that serve both individuals and groups in an inclusive way.

As a tool for achieving these SDGs, social entrepreneurship has a distinctive ability to blend social and economic objectives to respond to the multidimensional nature of poverty.

They include public support for the growth of microenterprises, small enterprises, and social enterprises as the main engines of job creation.

Social enterprises

Of special interest in this National HDR are social enterprises as a means of diversifying the economy to provide decent work opportunities that serve both individuals and groups in an inclusive way. Social enterprises supply socially important goods not adequately produced by public agencies or private markets. The report investigates social enterprises that range from private and co-operative social enterprises to various types of NGOs that support women and children. Both individual and co-operative social enterprises may seek profits, but the main characteristic of these enterprises is that they are mission driven to tackle poverty. Thus, the coffee co-operatives share the benefits of development equally across participating groups. An example of a private social enterprise examined in the report is a Latin American social enterprise that deals in solar products, such as lighting, phone chargers, and household solar power systems. Through access to microfinance, the social enterprise offers a village access to, say, a solar lighting system at an affordable price. The enterprise also harvests rather than exploits the environment. This is because social enterprises typically prioritize social and environmental benefits above financial profit. Surpluses are used to advance the social aims of the beneficiary group or community and are not distributed to individuals with a controlling interest in the enterprise (Haugh and Tracey 2004).

Which social issues would social enterprises target? The effort would be operationalized within the framework of SDGs 2 and 3, respectively, to end hunger, achieve food security and improved nutrition and promote sustainable agriculture and to ensure healthy lives and promote well-being for all at all ages.⁶ As a tool for achieving these SDGs, social entrepreneurship has a distinctive ability to blend social and economic objectives to respond to the multidimensional nature of poverty. Social enterprises are characteristically inclusive in ways that benefit youth in

poor rural communities. Helping diversify the economy by aligning profit-making with individual and group well-being is an inclusive pro-poor policy. Social enterprises have the potential to transform the welfare system, too, while reducing vulnerability. Social enterprises provide people with social protection that contributes appreciably to the costs of welfare. Note that the demographic dividend may raise the costs of welfare if jobs are not created.

Area-based approaches to development

The National HDR examines area-based approaches to diversifying the economy, while ensuring that rural youth and their communities participate in the country's development. Area-based approaches to development focus on identifying and addressing the problems in specific geographical areas in an integrated, inclusive and participatory manner. This approach enables governments and their partners to meet the development needs of rural areas by maximizing local resources and expertise. The approach can be combined productively and inclusively with efforts to engage youth and their communities in planning, implementing and monitoring large-scale projects. This has been demonstrated in post-conflict situations, such as through the Development Programme for Displaced Persons, Refugees and Returnees in Central America, which ran from 1989 to 1995 and helped reintegrate people whose lives had been affected by decades of civil war.

Local entrepreneurship stimulus programmes

Another diversification strategy highlighted in the National HDR aims to support locally produced and marketed goods in each subdistrict in Timor-Leste. This approach has been successful elsewhere in the region. In Japan, it is run through the One Village, One Product Movement, a regional development programme. In Thailand, the approach has been adapted as the One Tambon, One Product Programme. These initiatives involve a range of local products, including traditional handicrafts, cotton and silk garments, pottery, fashion accessories, household items, food and coffee.



Public financing

The number of social investment funds has been rising worldwide. These funds are playing an essential role in bridging the financial access gap that was once a barrier to starting up SMEs, particularly among rural youth and their communities. External investment is an essential part of social enterprise. This implies the need to improve the investment environment through the legal and regulatory framework, transparent public institutions and the rule of law. There is an additional need to rely on the involvement of youth and their local communities and to engage with the real potential that emerges if people own their own development.

This National HDR investigates a funding innovation related to public investment in youth education and training. The innovation is linked to the development of social enterprises in Timor-Leste. It focuses on appropriate ways government financing might be used to support incubators for social enterprises among youth.

The cluster development model

Without discounting the possibility of supporting many youth initiatives, there seems to be a powerful logic in the focus of the limited resources of the country on specific areas in which there is potential for cross-fertilization and complementary development. The nation should build on its existing strengths. Building on strengths and effective organizations is consistent with UNDP's Youth Strategy 2014–2017, which stresses the “capacity development of young people and youth organizations”, alongside national strategies to support and empower young men and women (UNDP 2014, p. 4). Cluster development is a well-established method of growing comparative advantage and nurturing employment through SMEs. Such clusters might be launched by building on the country's strengths to address the country's fragilities. The National HDR examines possible cluster development pathways, while identifying fragilities that need to be addressed.

Education and training for the new world of work

The demands on the education system in preparing students for the workforce in the 21st Century have been significant in several ways. The pace of change in society is accelerating in the economy and in technology as business models shift in all sectors, leading to substantial job destruction, but also job creation, including new forms of work. Education and training systems, having been largely static and underfinanced for decades, are inadequate for meeting the new needs (WEF 2017).

Poorly developed adult training and skilling systems in most economies delay the speed of adjustment to the new context by failing to prepare youth, thereby exacerbating skills gaps and unemployment in the current and future workforce. Moreover, outdated, but prevailing cultural norms and institutional inertia are creating roadblocks, particularly on gender issues. Despite rising levels of educational attainment, women continue to be underrepresented in the workforce.

The accelerating pace of technological change and globalization has opened up new opportunities, but also highlighted the importance of aligning company practices, public policy and education and training systems with the skill needs of today. A shared agenda linking governments, businesses and the education sector must be identified. While education systems are highly context specific, a consensus is emerging on key principles and core features that can best meet the challenges and maximize the opportunities of the fourth industrial revolution, the digital revolution.

Operationalized within the framework of SDG 4, quality education for all, this National HDR focuses on relevant and responsive reforms in the education ecosystem that can meet the needs of today and tomorrow's labour market.

The report highlights that the emphasis should be on how the country might harness the demographic dividend. The promotion of the well-being of all youth and the integration of youth into the development process are crucial in this effort. The National HDR therefore adopts a strategic approach to the identification of appropriate

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This National HDR explores the importance of the social inclusion of youth in socio-economic and political life as a precondition for achieving the demographic dividend.

recommendations. This is because the decline in the fertility rate and the favourable changes in the age structure of the population may require two to three decades to realize the demographic dividend. Education is also a longer-term process. The demographic dividend can only be redeemed if there is a highly skilled, knowledgeable and economically productive working-age population. Achieving the dividend calls for strategic investment early on. This will be vital in the reaching the SDGs.

Social inclusion

This National HDR explores the importance of the social inclusion of youth in socio-economic and political life as a precondition for achieving the demographic dividend. Through the well-being framework, special attention is paid to young people's access to, perception of and civic participation in social services and social networks. Relevant recommendations are put forward within the framework of SDG 5, achieving gender equality, social inclusion and human rights for all, with explicit targets on ending discrimination and reducing relative deprivations in well-being and other inequalities.

Despite the substantial progress, gender inequality persists in many societies, including Timor-Leste, and violence against women and girls remains widespread. The lack of access to secondary education and to sexual and reproductive health services among girls and women is a key driver of gender inequality. Women often lack decision-making power and have limited financial autonomy. Harmful gender norms depicting the lower status of women in society also affect the opportunities among women.

Gender inequality and other forms of discrimination violate the universal standards of justice enshrined in the Universal Declaration of Human Rights and Timor-Leste's Constitution. Societies that discriminate against women and social groups obstruct the economic potential of large shares of their populations, which hinders economic growth and limits poverty reduction. Pervasive discrimination and wide gaps in equality are also associated with greater risks of conflict and violence.

This report focuses on positive steps that may be taken to facilitate young people's empowerment and the meaningful participation of young men and women in society and in the development process.

Outline summary of the report

This National HDR is organized into six chapters. This chapter introduces the theme, the selection of which has been guided by contemporary directions in public policy and the relevance of these policies within the context of Timor-Leste.

Chapter 2 introduces the framework of well-being and surveys the state of human development among Timorese youth based on the findings of the Timor-Leste 2016 Youth Well-Being Survey. The chapter provides three policy scenarios and the related potential demographic dividends that the country may experience by 2050. It highlights areas for investment to guide policymakers in the effort to achieve the agenda to leave no one behind and to help prepare the nation to realize the demographic dividend on the horizon. It also analyses the HDI for youth in comparison with the HDI for the overall population, both of which have been calculated based on the most recent data.

Chapter 3 offers policy recommendations to enhance the investments that the Government should make to achieve the social and economic inclusion of youth by strengthening the solidarity economy. It shows that improving youth employability requires that the skill mismatch be eliminated between the supply of skilled labour and the demand for skills. The chapter also sets out the reasons why social enterprises are especially important in this effort.

Chapter 4 explores the ways educational initiatives and policies may inspire and prepare young people to gain the skills and training necessary for sustainable livelihoods that can contribute to communities. In particular, it examines the crucial role that education and training must play in developing the flow of 21st Century knowledge and skills and tackling the inequality that is likely to accompany the fourth industrial revolution. The analysis presents the proposition that, while education starts or renews

Relevant recommendations are put forward within the framework of SDG 5, achieving gender equality, social inclusion and human rights for all, with explicit targets on ending discrimination and reducing relative deprivations in well-being and other inequalities.

the knowledge production process among individuals, social enterprises play an essential role as a conduit for skills.

Chapter 5 examines the support information and communication technologies (ICTs) might supply to the creation and promotion of social enterprises in Timor-Leste. Data are presented that highlight the extent of national ICT coverage, access and use, and the analysis addresses issues revolving around the digital divide that constrain public access to information and the ability to benefit from social networking. The chapter shows that ICTs have buttressed the social enterprise sector in Timor-Leste and provides comparative examples of successful initiatives in other contexts. The chapter considers the types of national training

programmes, some of which are ICT based, that may offer future social entrepreneurs adequate skills to develop, promote and extend a social enterprise.

Chapter 6 surveys important considerations on public investment in education and training initiatives aimed at developing social enterprises among youth in Timor-Leste. It investigates appropriate ways through which the Petroleum Fund of Timor-Leste might be used for public investment in youth, including in the incubation of social enterprises. It argues that public investment in these initiatives as a crucial means of bridging the financial gap in access that prevents the launch of SMEs, particularly among rural youth and their communities.







CHAPTER 2

YOUTH WELL-BEING AND THE DEMOGRAPHIC DIVIDEND



The young girl and boy enjoy listening to the music in the dusk at Bidau Santana, Dili.

© Yuichi Ishida

Youth Well-Being and the Demographic Dividend

The population of Timor-Leste is one of the youngest in the Asia and Pacific region. The median age is 17.4 years, and the country is the 15th youngest in the world, behind a group of African nations and Afghanistan.

Why focus on youth?

The population of Timor-Leste is one of the youngest in the Asia and Pacific region. The median age is 17.4 years, and the country is the 15th youngest in the world, behind a group of African nations and Afghanistan.⁷ According to the 2015 Population and Housing Census, the age of approximately 74 percent of the population is below 35 years (DGE 2015).

The most recent census recorded the total population at 1,183,643 in 2015 (DGE 2015). This was an increase of 117,000 over 2010, representing a 10 percent rise in five years. The annual population growth rates have been high since independence, 2.6 percent between 2010 and 2015. Timor-Leste is the most rapidly growing country in South-East Asia and one of the most rapidly growing countries in the world.

A major factor in the high population growth rates has been the remarkably high total fertility rate among women, especially during the first 10 years since independence (Saikia and Hosgelen 2010). According to the 2009–2010 Timor-Leste Demographic and Health Survey, the rate was 5.7, indicating that the average woman of reproductive age (15–49 years) could be expected to have 5.7 children during her lifetime (DGE, MOF, and ICF Macro 2010). A rate of 5.7 is regarded as high, but this is a considerable decline from the previous estimate of 7.8 during the five years before 2003, which was considered one of the highest rates in the world at the time (MOH et al. 2004). The latest Demographic and Health Survey finds another noticeable drop, to a rate of 4.2.⁸

The rapid decrease is a positive sign, but studies have shown that the preference for large families has always been the tradition in Timor-Leste. Among the population, 98 percent identify as Roman Catholic. Family planning methods are used much less often compared with other countries in the region.

Modern contraceptive prevalence was reported at 24 percent in 2016 (DGE and ICF Macro 2017). The legal age for marriage among girls is 16 years. The median age at marriage was 20.9 years in 2010, marking a decline since 2003 (DGE, MOF, and ICF Macro 2010). Limited contraceptive use and early age at marriage, coupled with a short average duration of breastfeeding, are the predominant factors contributing to high fertility rates in Timor-Leste (Saikia, Dasvarma, and Wells-Brown 2009).

The high fertility rate has led to a population age structure that shows a bulge among children and youth and a considerable narrowing among the elderly. While 39 percent of the population is below the age of 15, a small share—6 percent—is over age 65. Every country experiences a demographic transition as mortality and fertility rates decline, leading to changes in the population age structure. The population age structure is particularly important for economic and human development because it determines the dependency ratio, that is, the ratio of the non-working population, typically ages 0–14 and 65 or above, to the working population, ages 15–64, and, thus, the prospects for a demographic window of opportunity and a demographic dividend.

The dependency ratio reflects the amount of economic pressure exerted on the productive population, the workforce. The demographic dividend, meanwhile, is the accelerated productivity growth associated with a demographic window of opportunity, that is, the situation if the share of the working-age population in the total population is growing mainly because of a decline in the birth rate. The age structure of the population thus becomes characterized by a larger number of workers relative to the number of dependants. Hence, relatively less income is required to meet the needs of the youngest and oldest age groups, and resources are released for investment in enhanced economic development and family welfare.

The demographic window of opportunity is a temporary phenomenon. It lasts only 30–40 years, after which the child dependency ratio (the ratio of young dependants ages 0–14 to the working-age population) continues to decline, while the old-age dependency ratio (the ratio of persons ages 65 and over to the working-age population) rises.

The demographic window of opportunity does not automatically lead to a demographic dividend. Nonetheless, demographic pressures may be eased somewhat because of declines in fertility, and some populations are more well able to capitalize on the released resources (Ross 2004). When the window of opportunity closes, countries that did not take advantage of the demographic dividend through adequate policies might face socio-economic crisis. A high dependency ratio could lead to serious problems if a large share of government expenditure goes for the youngest and the oldest, leaving the productive sectors of the economy underinvested and required to shoulder the burden of high health care, education and social security costs. A lower dependency ratio means that a larger share of more productive people of working age is available to support schools, health care

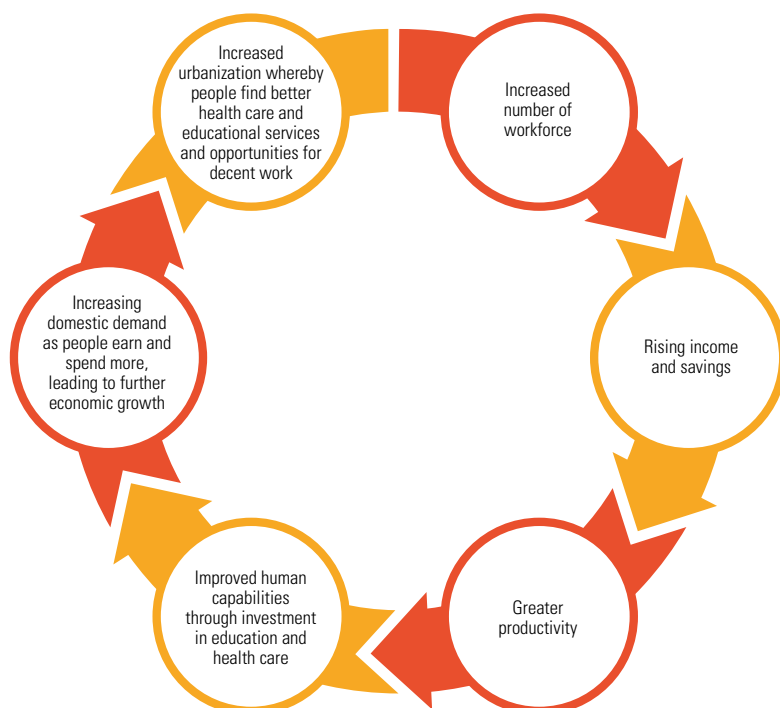
facilities, pensions and more assistance for the youngest and the oldest in society.

The demographic transition makes two potential, roughly sequential dividends available. The first dividend, spanning a period of 30–40 years, materializes if the size of the labour force grows more rapidly than the size of the dependent population, thereby generating greater economic output. Because fewer resources are required to support the proportionately fewer dependants, savings may swell, and investments in economic growth, education and health care may be expanded.

The second dividend emerges if the workforce becomes more productive. Productivity increases may occur because of less population pressure on the educational and health care systems, facilitating qualitative and quantitative improvements in these sectors and leading to the accumulation of human capital and higher productivity (Mason 2003). For example, investments in human capabilities can cultivate a more highly skilled workforce, which boosts earnings and savings and creates more assets, such as homes, land and businesses. Favourable changes in the demographic structure can also have other impacts on human development (figure 2.1).

FIGURE 2.1

Potential Impacts of Favourable Demographic Changes



Source: UNDP 2016a.

Hastening the onset of the demographic transition and realizing the full scope of any potential dividend depend largely on policy choices that affect the process.

It is widely acknowledged that favourable demographic changes, together with sound policies, have been a key stimulus for the economic success of many Asian and Latin American countries over the last two decades. For example, between 1970 and 2017, the Asia and Pacific region's demographic dividend is reported to have accounted for about 42 percent of the economic growth in developed countries and 39 percent in developing countries (UNDP 2016a). In many cases, these gains were accompanied by a substantial leap in human development.

Converting demographic opportunities into a demographic dividend requires strategic policies and good governance. Patterns of public investment must respond to demographic changes. Hastening the onset of the demographic transition and realizing the full scope of any potential dividend depend largely on policy choices that affect the process. Thus, a distinct focus on youth now may help prepare Timor-Leste to reap the benefits of demographic change and the demographic dividend (Hosgelen and Saikia 2016).

The potential demographic dividend in Timor-Leste

The economic benefits deriving from demographic changes will not accrue automatically. A range of policy investments are required if the dividend is to be achieved. A common misperception is that, if the youth population is large, this is an indicator of a forthcoming demographic dividend. While youth can be a great force for economic and political change, the key first step towards the demographic dividend is not a large youth population alone. It is the transition from high birth and death rates to low birth rates and low mortality rates, giving rise to a larger working-age population.

Because of declining birth rates and decreasing mortality rates among children ages 0–14, Timor-Leste is now engaged in a demographic transition. If appropriate policies and strategic investments are realized by policymakers today, particularly for the benefit of youth, Timor-Leste may enjoy the positive outcomes of a demographic dividend.

The Government aspires for the country to reach upper-middle-income status, with a healthy, well-educated and prosperous population, by 2030 (Planning Commission 2011). The gross national income of

upper-middle-income countries today is between \$3,956 and \$12,235; life expectancy at birth is around 75 years; the total fertility rate is near 2.0, and the mean years of schooling is up to 10 years.⁹

This section aims to highlight some of the key policy elements needed if Timor-Leste is to achieve its development goals by reaping the demographic dividend. To quantify the demographic dividend and guide the country towards the most preferred policy pathway, it posits three policy scenarios to project the possible outcomes of the demographic dividend by 2050.

Projection modelling: policy scenarios

The projection modelling presented in this chapter is derived from the DemDiv Model, a cross-national, customizable projection modelling software developed through a five-year cooperation agreement funded by the US Agency for International Development (Moreland et al. 2014). It is an evidence-based tool to inform policymakers in high-fertility countries, such as Timor-Leste, about the potential benefits of the demographic dividend and increase their support for investments in the multisectoral policies required to achieve the benefits. The model, which can be applied to any country, allows users to design multiple scenarios to show how the combined power of policy investments in family planning, education and the economy can generate a demographic dividend not possible under the status quo. The software is structured as a two-part model that projects demographic changes and economic changes with equations to estimate employment and investment, along with an estimation of gross domestic product (GDP) and GDP per capita.

DemDiv addresses the complexity of the demographic dividend by linking age structure and social and economic development, thereby enabling policymakers to quantify the changes that would be required to achieve a demographic dividend. To describe and project the demographic dividend accurately, the model addresses the interplay between population and economic inputs, but also includes the effects of other social and development variables. The model is comprehensive and is based on a foundation of empirical and statistical research.¹⁰

This subsection lays out the base scenario, three policy scenarios and the indicators that



are used to generate projections of the demographic dividend in Timor-Leste through the DemDiv model.

Base scenario: This scenario assumes there will be no changes in economic, education, or family planning policies. The related indicators thus remain the same between 2015 (the base year) and 2050.

Policy scenario 1 (economy only): This scenario assumes there will be changes only in economic policies and investments. Therefore, according to this scenario, only the policy indicators in the economy sector improve by 2050, while the remaining indicators in education and family planning are maintained as in 2015, the base year. The improvements include more effective public institutions, imports that are larger as a share of GDP due to greater integration with the world economy, greater labour market flexibility and financial market efficiency and greater use of information and communication technology (ICT). Although there could be some indirect impact of economic policy on the demographic dividend, only the direct impact has been considered in the projection modelling of this report.

Policy scenario 2 (economy, plus education): This scenario assumes changes in economic and education policies and investments, while family planning indicators are maintained as in 2015, the base year. According to this scenario, economic improvements are coupled with increases in the mean and expected years of schooling among men and women of at least five years by 2050, that is, to 10 and 17 years, respectively. In this scenario, the gender gap in education is eliminated.

Policy scenario 3 (economy, plus education, plus family planning): This scenario assumes combined multisectoral investments and policy changes in the economy, education and family planning so that all indicators related to these sectors will improve by 2050. According to this scenario, the improvements will be coupled with a 34 percentage point increase in the contraceptive prevalence rate by 2050.¹¹ This combined policy scenario is the only scenario according to which the contraceptive prevalence rate rises steadily between 2015 and 2050. It entails a policy target of raising the prevalence rate from 24 percent in 2015 to 39 percent by 2030 and 58 percent by 2050. All other scenarios assume the rate will be maintained at 24 percent. Sector-specific data and assumptions on these three scenarios are presented in appendix B.

Ultimately, the aim of the analysis of the possible demographic dividend under each policy scenario is to demonstrate that population changes motivated by family planning policies and programs amplify the impact of other necessary development initiatives in employment, education, health, and the macroeconomic environment and should therefore be the desired policy pathway in Timor-Leste.

Quantifying the demographic dividend

According to the 2015 census, Timor-Leste has a high total dependency ratio of 82 children and older persons per 100 persons of working age, which means that every 100 persons of working age must support 82 individuals who are not of working age, in addition to supporting themselves (DGE 2015). The rate in Timor-Leste is extremely high relative to rates in other countries in the region. The average dependency ratio in South Asia is 55 children and older persons per 100 persons of working age, and the rates in Indonesia, Singapore and Thailand are much lower, as low as 37 (table 2.1).

The child dependency ratio—the share of children 0–14 relative to the working-age population (15–64)—currently drives 58 percent of the total dependency ratio in Timor-Leste. This demonstrates that dependants ages 0–14 represent a greater burden than elderly dependants (65+) on the working-age population. While dependency ratios in many Asian countries are low, but slowly rising because of expanding elderly populations, Timor-Leste's current high dependency rate is mainly driven by the large number of children ages 0–14.

TABLE 2.1

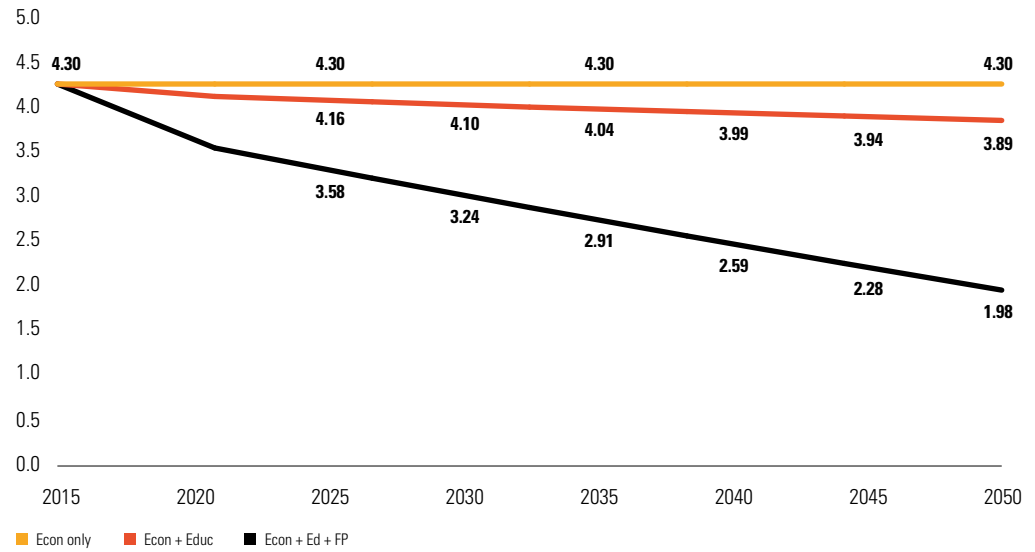
Dependency Ratios, Select Countries and Regions, 2015

Country, region	Total dependency ratio (No. of children and older persons per 100 persons of working age)
Singapore	37
Thailand	39
Indonesia	49
South Asia	55
Timor-Leste	82

Source: World Bank estimates based on age distributions in World Population Prospects 2017 (database), Population Division, Department of Economic and Social Affairs, United Nations, New York, <https://esa.un.org/unpd/wpp/Download/Standard/Population/>.

FIGURE 2.2

Projected Fertility Rates, Different Policy Scenarios, 2015–2050



Note: The results of the base scenario and the economy only scenario (policy scenario 1) are the same; hence, the graph lines representing these scenarios overlap.

The projected outcomes of the various policy scenarios reveal that the most significant advances in saving the lives of women and children are achieved through investments in family planning.

Timor-Leste is evolving towards a more industrialized economic system, and it is experiencing the initial stages of a demographic transition as fertility rates decline and life expectancy increases. Gauged according to the various policy scenarios, investments in family planning would have the largest effect on fertility, lowering the total fertility rate from 4.3 children per woman in 2015 to 3.2 in 2030 and to slightly less than 2.0 by 2050. According to the combined policy scenario (policy scenario 3), improvements in the economy, education and family planning would lead to a minimum replacement fertility rate of 2.1 children per woman by 2048. Although extra investments only in education would have an impact on lowering the fertility rate, the effect would be rather small compared with the effect of the combined policy scenario.

Family planning is highly beneficial for individuals and society. It prevents unintended pregnancies, reduces high-risk births and protects the health of women and children, thereby saving the lives of many and improving the general health of families. Family planning also generates significant economic savings. Enhanced access to family planning also means that women’s greater ability to negotiate family planning with their partners allows young women and couples to determine the number and timing of pregnancies. This increases the ability of women to participate

in the local economy and use household resources to invest in children’s education.

Education is important for many reasons, including the economic empowerment and better health and well-being it promotes (box 2.1). Investing in education and encouraging the completion of secondary education and beyond can provide opportunities to young people to fulfil their potential and contribute to society and the economy by raising human capital and the productivity of the workforce. Studies show investments in greater literacy and in education represent one of the best strategies for reducing under-5 mortality and the birth rate, which is key to a successful demographic transition.

Educational attainment has improved substantially in Timor-Leste in recent years. Children entering school today are expected to complete almost 13 years of education. However, the mean years of schooling among young men and women, 4.2 years, must be raised appreciably. With more and better education, young people entering the labour force would become more well positioned for manufacturing, services, and knowledge-based industries that provide higher wages, helping Timor-Leste achieve upper-middle-income status.

The projected outcomes of the various policy scenarios reveal that the most significant advances in saving the lives of women and children are achieved through investments in family planning (table 2.2).

Returns to Investments in Education

Nobel Laureate Amartya Sen (2003) believes that basic education is crucial for the following reasons:

- Education makes the world more secure and more fair.
- The expansion of education determines a nation's economic and social progress.
- Education makes people understand and invoke their legal rights.
- Education has a gender connection and is important for women's security.
- Education enables people to participate in the political arena and express their demands effectively.
- Basic education can play a major role in tackling health problems in general and epidemics in particular.

- The relative respect and regard for women's well-being is strongly influenced by women's literacy and educated participation in decisions within and outside the family.
- Women's education is closely tied to child survival and reductions in fertility.

Investments in education are linked with two sorts of returns: private and social. According to Psacharopoulos (1994) and Todaro (1997), private returns are always greater than social returns, and social returns to investments in basic education are always greater than the returns to investments in higher education. Heckman, Layne-Farrar, and Todd (1996) find that each additional year of education is associated with a rise of around 30 percent in GDP per capita

Source: Prepared by the authors based on information from UNDP and UNEP (2009).

Combining educational and family planning investments promotes the greatest reduction in the infant, under-5 and maternal mortality rates. For example, while investments in education only (policy scenario 1) could save the lives of 260,307 under-5-year-olds between 2015 and 2050, the number would rise to 974,758 if these investments were coupled with family planning. Similarly,

the lives of 178,457 and 832,289 infants could be saved under policy scenarios 2 and 3, respectively, by 2030 (see table 2.2).

Investments in education and family planning have a direct, positive impact on life expectancy (figure 2.3). For example, while female life expectancy at birth rises from 67.1 years in 2015 to 68.6 years in 2030 under policy scenario 2, it reaches 71.3 years

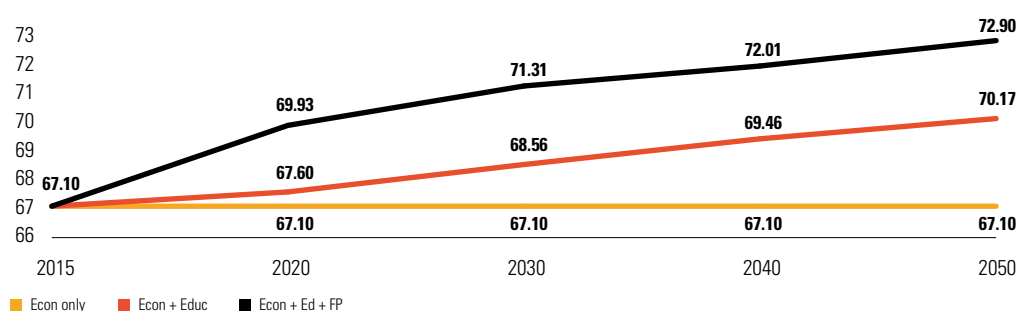
TABLE 2.2

Cumulative Averted Deaths, Different Policy Scenarios, 2015–2050 (number)

Policy scenario	Under 5		Infants, 0–1		Maternal	
	2015–2030	2015–2050	2015–2030	2015–2050	2015–2030	2015–2050
1. Economy only	0	0	0	0		
2. 1 + education	4,434	20,247	2,867	14,101	284	1,341
3. 1 + 2 + family planning	17,966	70,786	14,059	61,960	1,260	5,079

FIGURE 2.3

Women's Life Expectancy, Different Policy Scenarios, 2015–2050 (years)



Note: The results of the base scenario and the economy only scenario (policy scenario 1) are the same; hence, the graph lines representing these scenarios overlap.



TABLE 2.3

Projected Total Population, Different Policy Scenarios, 2015–2050 (millions)

Scenario	2015	2020	2025	2030	2035	2040	2045	2050
1. Economy only	1.20	1.26	1.35	1.46	1.58	1.72	1.88	2.06
2. 1 + education	1.20	1.26	1.34	1.44	1.56	1.68	1.81	1.97
3. 1 + 2 + family planning	1.20	1.25	1.32	1.37	1.43	1.47	1.50	1.52

under policy scenario 3. The accumulative gains in life expectancy are much larger under policy scenario 3. Under this scenario, women could expect to live 5.7 years longer by 2050 rather than the 3.0 years longer under policy scenario 2.

For every 10 percent gained in life expectancy, economies can expect a boost of 0.3 percent to 0.4 percent in annual GDP growth (WHO 2003).

At constant fertility under policy scenario 1, the total population of Timor-Leste would reach 1.5 million in 2030 and 2.1 million in 2050 (table 2.3). Population growth is undoubtedly slowest under policy scenario

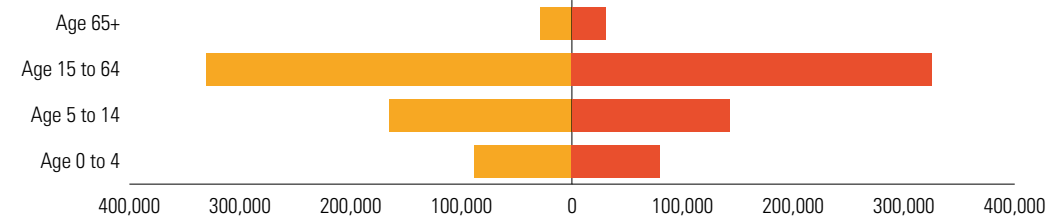
3, whereby the population would increase by only around 320,000 people between 2015 and 2030, a 0.7 percent annual growth rate.

Under the base scenario and policy scenario 1, the age structure of Timor-Leste would remain young and be dominated by dependants. Policy scenario 3, meanwhile, would produce a larger labour force that would have to support fewer dependants (figure 2.4). The dependency ratio would also drop, from 83 percent in 2015 to 79 percent in 2030 and 50 percent in 2050. This means that, while the dependency ratio would continue to be high until 2030, it would start shrinking considerably in 2035.

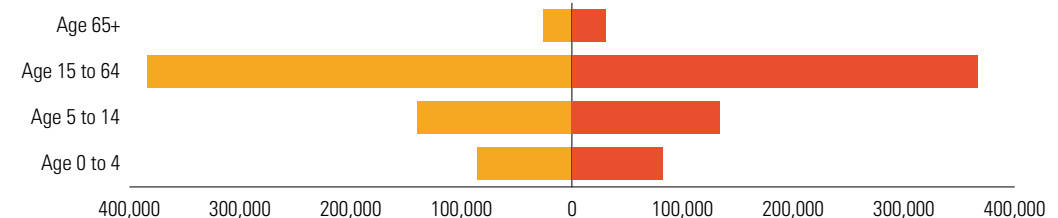
FIGURE 2.4

Population Pyramids, Base Scenario and Policy Scenario 3, 2015–2050

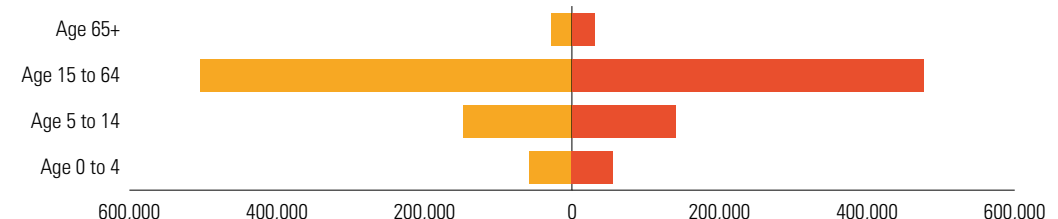
a. 2015, base scenario



b. 2030, scenario 3



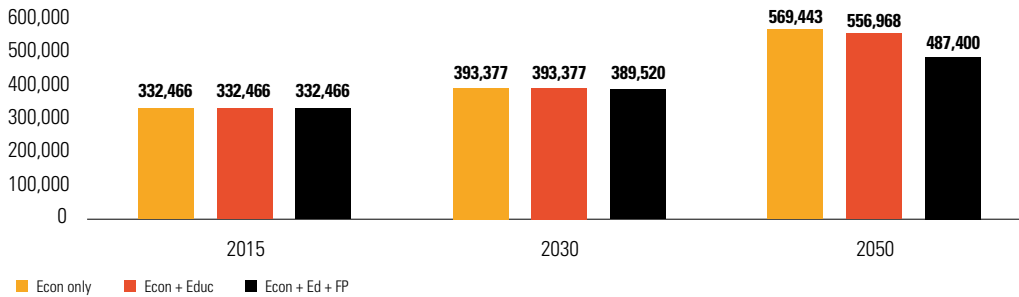
c. 2050, scenario 3



■ Male population ■ Female population

FIGURE 2.5

Employment Gap, Different Policy Scenarios, 2015–2050



The population will continue to grow in the next few decades, leading to an expanding pool of people of working age. The gap between the pool of this age group and job possibilities will be smallest under policy scenario 3 by 2050 (figure 2.5). In the next 15 years, no matter which scenario is considered, Timor-Leste will have to face the challenge of creating more jobs. However, between 2030 and 2050, policy scenario 3 offers a more favourable prospect, whereby the gap between the population ages 15–64 and employment is narrowest, at 487,400 people relative to the 569,443 people under the base scenario and policy scenario 1.

The most favourable changes in the age structure, coupled with improvements in education and economic indicators, lead to the largest increase in investment per capita under policy

scenario 3, from \$429 in 2015 to \$2,299 in 2030 and \$14,790 in 2050 (figure 2.6). Under this scenario, primary education costs per capita would begin declining in around 2035, despite focused and relatively more costly efforts to boost the mean and expected years of schooling (figure 2.7). All other scenarios lead to a steady rise in total primary education costs.

The economy is largely dependent on oil revenue, and the accumulated wealth in the Petroleum Fund of Timor-Leste—a sovereign wealth fund created by the Government from income produced through petroleum and gas extraction—amounted to \$16.2 billion at the end of 2015, approximately six times the country's GDP. Only 10 percent–12 percent of domestic revenue is derived from non-oil sources (IMF 2016). The economy expanded

FIGURE 2.6

Investment per Capita, Base and Different Policy Scenarios, 2015–2050

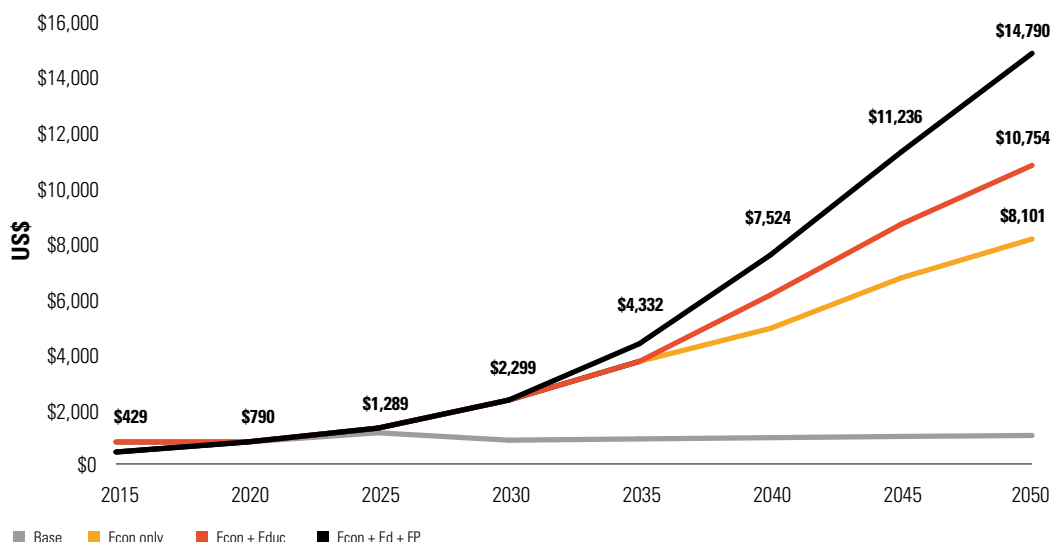


FIGURE 2.7

Primary Education Costs, Base Scenario and Policy Scenarios, 2015–2050

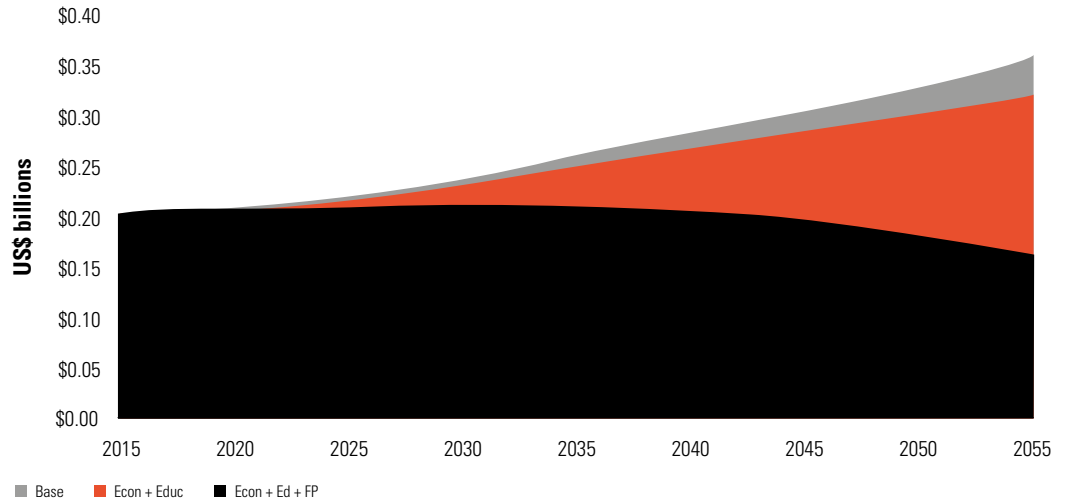
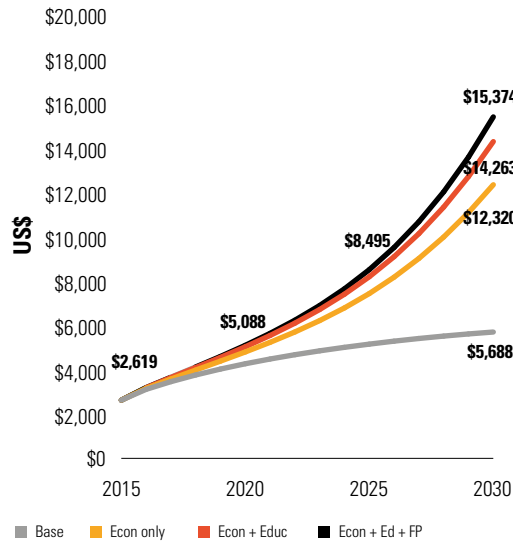


FIGURE 2.8

GDP per Capita, Base Scenario and Policy Scenarios, 2015–2030



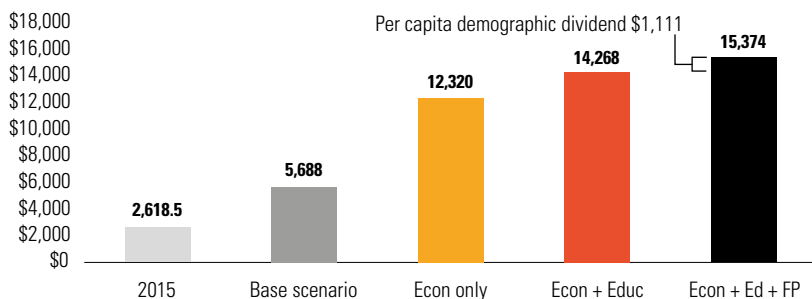
by 4.3 percent in 2015, and GDP per capita at constant prices was \$2,619. Official development assistance was mostly declining; the share of gross national income was 9 percent in 2015.¹² Most development activities are financed by the Government from income generated in the petroleum sector. If projections hold, oil production will run out by 2021, and, according to estimates, the Petroleum Fund will generate \$5 billion in 2030.

The *Global Competitiveness Report 2014–2015* of the World Economic Forum ranks Timor-Leste 136th among 144 countries on economic competitiveness and productivity (Schwab 2014). Competitiveness is defined as the set of institutions, policies and factors that determine the level of productivity of a country. The global competitiveness index evaluates 12 components or pillars of competitiveness: institutions, infrastructure, the macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation.

Based on data from the above-mentioned report, the projections of the combined policy scenario (scenario 3) indicate that Timor-Leste’s GDP per capita will rise from \$2,619 in 2015 to \$15,374 in 2030 (figures 2.8 and 2.9). The projected additional GDP per capita generated through a low dependency ratio—the demographic dividend—in 2030 would be around \$1,100.

FIGURE 2.9

GDP per Capita, Base Scenario and Policy Scenarios, 2015 and 2030





The progress projected in education, health and income would also foster substantial improvement in the country's human development index (HDI) by 2030 (figure 2.10). For example, according to the projections of the combined policy scenario (scenario 3), Timor-Leste could reach an HDI of 0.71 by 2030 (table 2.4). The human development gains are largest under policy scenario 3 and should therefore represent the policy matrix selected by decision makers in Timor-Leste.

Achieving the demographic dividend through youth well-being

Timor-Leste could attain an HDI of 0.88 by 2050 if it undertakes strategic investments and improvements in the economy, education and family planning now. Among the scenarios, the achievement of the targets associated with policy scenario 3 would yield the largest human development gains and dividends from 2015 to 2050 and should therefore be the policy and investment pathway selected by decision makers in Timor-Leste. Some of the benefits arising from the implementation of policy scenario 3 between 2015 and 2050 are as follows:

- The lives of 62,000 infants and 70,000 children under age 5 will be saved.¹³
- The lives of 5,100 mothers will be saved.
- Life expectancy among women will increase from 67.1 to 72.8 years, a gain of almost six years.
- Life expectancy among men will increase from 64.4 to 70.1 years, a gain of almost six years.
- GDP per capita will grow six-fold between 2015 and 2030.
- The dependency ratio will decline from 83 percent to 50 percent.
- Mean years of schooling will be 10 years, a gain of about five years.
- Expected years of schooling will be 17 years, a gain of about five years.¹⁴

The demographic dividend can generate positive outcomes among the people of Timor-Leste. Family planning, education and gender equality can boost national development. To translate opportunities into achievements and milestones, the Government needs to invest simultaneously in health care, education, and economic development and reduce gender inequalities to maximize the potential demographic dividend. Improvement in the

FIGURE 2.10

Human Development Index, Base Scenario and Policy Scenarios, 2015–2030

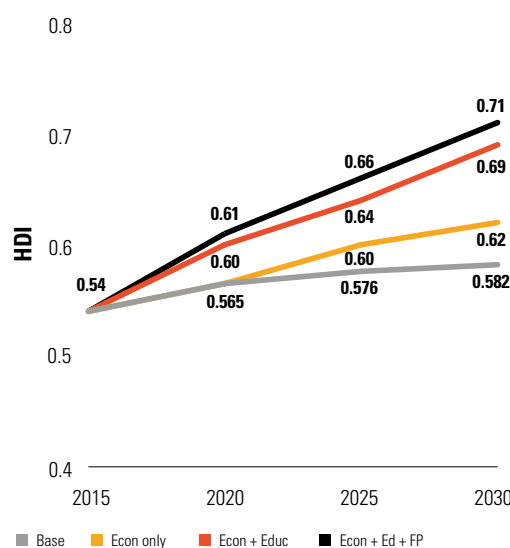


TABLE 2.4

Human Development, Index and Level, Sample Countries, 2015

HDI	Sample countries	Level of human development
0.88	Austria, Belgium, Finland, France, Japan	Very high
0.71	Belize, Dominican Republic, Jamaica, Tonga	High
0.69	Botswana, Moldova	Medium
0.54	Kenya, Nepal	Low

Source: UNDP 2016c.

Note: The HDIs indicated for the sample countries are approximate.

access to family planning services among youth, especially rural youth, is crucial. A commitment to voluntary family planning and to investment in the reproductive health needs of married and unmarried youth would favour human development gains. Investments to meet the family planning needs of youth would be most effective if they are combined with investments in education. Enabling more young women and men to stay in school longer (especially girls in secondary education), expanding equitable access to health care and economic opportunity and enhancing the macroeconomic environment require significant investments that will translate into dividends for future generations.

This report proposes tailored and effective policy investments in Timor-Leste based on an underlying assumption that reaping a demographic dividend is conditional on the

The Government of Timor-Leste recognizes that the sovereignty and future of the country depend on the well-being of youth.

availability of a youthful population that is not only vigorous and skilled, but also that is characterized by substantial overall well-being, including physical and mental health, environmental and social awareness and commitment and a willingness to participate in the development process of the nation. Young people are vital stakeholders in sustainable development and peacebuilding and represent the future manpower, dynamism and energy for the transformation of this new, young nation. Youth can be a creative force and a dynamic source of innovation.

The Government of Timor-Leste recognizes that the sovereignty and future of the country depend on the well-being of youth. The National Strategic Development Plan 2011–2030 acknowledges that young people are future leaders and that they will eventually be responsible for the social and economic transformation of society (Planning Commission 2011). The plan affirms that the Government will do everything within its power to support young people and provide them with opportunities to gain experience, skills and positive values so they may participate in national development.

The well-being and success of Timor-Leste's young people is pivotal to the success of the young nation of Timor-Leste.

—Ago Pereira, Minister of the Council of Ministers (UNDP 2016b, p. 1)

This section aims to guide decision makers and development partners in understanding youth in Timor-Leste through a well-being framework and to highlight areas for investment to assist the nation in preparing for a future demographic dividend. The well-being framework represents a holistic approach to policymaking to enhance human capabilities and opportunities to facilitate positive development outcomes among youth for the benefit of the entire population and the country.

The framework: well-being as an outcome of development

Contemporary measures of the success of development policy focus on the reduction of income poverty, illiteracy, and mortality and morbidity and on promoting long and healthy lives. Concentrated efforts to realize these outcomes have produced crucial improvements in human development. These policy outcomes

are basic building-blocks of individual capabilities that expand people's opportunities to lead the lives they value (Sen 1999).

Such objective outcomes are important and still occupy a central place in the development agenda. However, for a more holistic understanding of development, the processes involved in achieving these outcomes must be properly appreciated. A focus on the processes, reflected in the subjective assessments of individuals and their capabilities and of the opportunities presented through their life experiences, allows a more comprehensive view of the progress of development and offers policymakers the information they require to expand people's freedoms.

In this report, the approach to the evaluation of the state of human development among youth focuses mainly on these processes, that is, the assessments by youth of the well-being they are able to achieve through their life experiences. Except for a few notable cases, achieving well-being and happiness has generally been ignored as a goal of policymaking, but the consensus is emerging among the global community that well-being and happiness shaped by people's life satisfaction are worthy goals of development.

Subjective well-being is taken to be good mental states, including all of the various evaluations, positive and negative, that people make of their lives and the effective reactions of people to their experiences.

(OECD 2013, p. 10)

Quality of life experiences are affected by many factors. They involve people functioning as physiological beings, but also feeling satisfaction with their achievements as sentient and social beings. These experiences of life are made possible through relationships with other human beings within societies through, for instance, market transactions and dealings with governments and in relationships with others in families and communities. People also comprehend the quality of the experience through the norms and values that are communicated through these relationships.

Poverty and human well-being are closely related. Multidimensional poverty is simply another way of describing failures in well-being. The well-being framework helps one grasp the significance of poverty. Because well-being involves physiological and quality of life experiences, the measurement of



well-being relies on both objective and subjective indicators. One of the strengths of a human well-being approach is that it enables the recognition that there are differences in what people regard as important for their well-being, depending on who they are, their position in society and where they are.

A well-being approach is not limited to economic considerations. It acknowledges that development outcomes are a result of a confluence of the historical and political context and social and cultural norms. In this sense, a well-being framework provides a pathway for individuals to flourish beyond pro-poor growth. It represents a much more holistic approach to policy whereby, for instance, young people's psychological and emotional condition, their community and cultural relationships, their environmental awareness and their satisfaction with governance can be integrated into evaluations of the success or failure of development outcomes.

Understanding the youth of Timor-Leste through a well-being approach represents a key opportunity for policymakers to identify trends along various dimensions of human development and invest in policies and programs to help youth realize their aspirations, to influence the attitudes and behaviours of youth as part of the preparation for the emergence of a demographic dividend and to achieve progress towards the Sustainable Development Goals (SDGs). In Timor-Leste, policymaking and resources are and should continue to be targeted on these dimensions of development. This report aims to assist decision makers in the process of achieving the goals of development and to highlight policy priorities in the effort to advance improvements in the quality of life, especially among youth.

The functioning of the well-being framework

Orthodox economic measures generally consist of indicators that are associated with a single domain, such as gross national income per capita. The well-being framework applied in this report is substantially different from these orthodox measures. Simply counting gross values of income, for instance, does not gauge family and community cohesion or an individual's inner state. Nor does it measure people's trust in politicians and law and order or their confidence in the economy.

The orthodox system is thus essentially indifferent to how households sometimes become wealthier, while remaining less well off in, for example, the amount of time spent together with family and friends.

Similarly, the orthodox system is indifferent to the ways in which more time allocated to work and earning income may lead to more stress among family members. These negative effects often unsettle children, for example, if the time poverty of parents causes children to miss out on good nutrition and other essential forms of human nourishment.

The orthodox measures are likewise fundamentally disinterested in gender inequality. This is because their preoccupation with labour growth in the formal sector, for instance, distracts from other key issues, such as the productivity growth that women create in many areas, including in human relationships and the often subtle contributions of households and communities to productivity. By contrast, the well-being framework includes investigations into otherwise hidden dimensions such as psychological health, community vitality, cultural diversity and ecological stewardship.

The well-being framework applied in this report involves eight dimensions or domains of life, along with numerous subdomains (see below). The guiding principle in the framework is that all the domains and subdomains are interrelated and should never be evaluated in isolation. For example, living standards should not be separated from other aspects of life such as physical and emotional health, governance, community vitality, cultural diversity, or environmental resilience. Thus, a job is not merely a means of earning an income. It also serves a social function by helping raise living standards. A job might similarly promote improvements in the overall well-being of an individual or a community by advancing physical and emotional health, facilitating efforts to reach social and environmental goals and fostering community ties. Likewise, the purpose of schooling is to produce functional literacy, but there are also other, explicit social goals associated with the production of knowledge. This includes the socialization of children and the enhancement of cultural diversity and human resilience in the face of climate change.

Objective indicators such as the HDI family of indices are tools to assist in meeting basic needs, such as health, reduced mother

Because well-being involves physiological and quality of life experiences, the measurement of well-being relies on both objective and subjective indicators.

The well-being framework applied in this report involves eight dimensions or domains of life, along with numerous subdomains.

and child mortality, educational equality, and improved infrastructure, especially water and sanitation. They measure development outcomes. The well-being framework, meanwhile, is focused also on the process undertaken to achieve the outcomes. It facilitates the investigation of questions such as whether the outcomes mask discrimination or inequality, and this provides evidence for the formulation of strategies to leave no one behind.

The well-being framework applied in this report has its origins in the gross national happiness index pioneered in Bhutan.¹⁵ However, the questions were developed and contextualized for the youth of Timor-Leste through a consultation process with stakeholders. The eight domains related to various process aspects of the lives of youth are normatively selected and considered intrinsically important for individuals and for society. Modified to respond to the Timorese context, each domain consists of a set of indicators disaggregated into specific variables or questions. Based on personal, collective and relational questions, these eight domains include 118 variables, some of which are illustrated in table 2.5. The mix of variables reflects a recognition that

well-being is supported by multiple, interconnected and complementary factors, as in the case of models of multidimensional poverty (Alkire and Foster 2011).

The domains and the related indicators used in the Timor-Leste youth well-being framework are assigned equal weights because their contribution to overall well-being is considered equal. This assumption is necessary to account for the diversities that the report highlights in capturing the subjective evaluations of individual youths on various aspects of life.

The method used to assess the state of youth well-being in this chapter is similar to that used in the *Assam Human Development Report 2014* (OKDISCD and IHD 2014). It relies on appropriate sufficiency cut-offs or thresholds based on the Alkire-Foster method (Alkire and Foster 2011). The cut-offs are determined at two levels, known as dual cut-offs (see appendix C for more on the well-being methodology). The first-level cut-off is applied to determine the sufficiency of each individual variable that represents the indicators of a specific domain. Then, at the level of each domain, an aggregate sufficiency

The well-being framework applied in this report has its origins in the gross national happiness index pioneered in Bhutan.

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TABLE 2.5

Domains and Variables, Timor-Leste Youth Well-Being Framework

Domains of well-being	Subdomains and indicators or variables
Physical health	Self-reported health, long-term disability, satisfaction in ability in physical activities
Psychological and emotional health	Sense of mental state and stress levels, experience of anxiety or depression, emotional experiences, such as suicidal thoughts, feeling helpless, or hopeless, losing sleep over worry, feeling incapable of making decisions
Education	Literacy, formal educational attainment, skills attained through formal and non-formal training, core civic values, ability to manage finances, use of basic ICTs, knowledge of the value of caring for one's hygiene, nutrition and health, confidence in public speaking
Culture	Languages, artisan skills such as carving or <i>tais</i> weaving, a sense of identity, spirituality, cultural ties and family influences, participation in local customs and traditions ^a
Community vitality	Community relations, sense of trust and belonging, social support and voluntarism, perceived security
Governance	Political participation and rights, perceptions of available government services and access for all, satisfaction with government performance, such as the quality and affordability of education, health, or training opportunities, confidence in political leaders and government institutions to respond to public needs, perceptions of judicial independence, transparency, and accountability
Ecological stewardship	Value of the environment for livelihoods, spirituality, culture and leisure, awareness of environmental concerns, environmental responsibility
Living standards	Employment status, average income, income dependency, perception of relative income status, experience of financial shocks and anticipation of future economic status

a: Tais is a cloth made using a traditional weaving method.



cut-off is applied. The second-level cut-off is applied to determine sufficiency defined as satisfaction in at least two thirds of the variables for each domain. Finally, at the aggregate level comprising all eight domains, the number of domains in which a person is satisfied is evaluated.

Depending on the number of domains in which a person is satisfied (which may range from 0 to 8), a Likert-type scale is devised to denote the specific levels of well-being of an individual.¹⁶ The sufficiency is not viewed in absolute terms; rather, it is viewed in terms of particular intensities of sufficiency or insufficiency across all domains.

Because sufficiency is relative within the present framework, instead of creating only dichotomous categories of sufficient and insufficient, this chapter classifies the specific levels of overall well-being of individuals as follows:

- Extensive insufficiency in overall well-being: insufficient in all eight domains
- Moderate insufficiency in overall well-being: insufficient in five to seven domains
- Neither insufficiency nor sufficiency in overall well-being: sufficient in four of the eight domains
- Moderate sufficiency in overall well-being: sufficient in any five to seven domains
- Extensive sufficiency in overall well-being: sufficient in all eight domains

While the Alkire-Foster method provides an index of sufficiency or deprivation defined as a product of the headcount ratio (the poverty rate) and intensity, the Timor-Leste youth well-being framework gives a range of headcounts and related intensities. The status of well-being at various levels of aggregation is evaluated as the average number of domains in which youth are satisfied. This methodology also allows the measurement of the intensity of well-being reflected in the average number of domains in which people experience sufficiency, rather than deprivation or insufficiency. In this respect the Timor-Leste well-being framework differs from the standard Alkire-Foster method.

The well-being framework also allows decomposability. This means that the methodology permits the summary index to be broken down mathematically according to specific characteristics of the population to offer valuable insights to policymakers. The results can be decomposed based, for instance, on geography, rural-urban location, sex, age

group, educational attainment and so on. It is also possible to examine the contribution of specific domains and the internal drivers to overall well-being, thereby shedding light on specific aspects of the processes involved in the achievement of development outcomes by youth.

The 2016 Youth Well-Being Survey

Reports on well-being are carried out frequently.¹⁷ They typically involve a survey that solicits and aggregates perceptions of respondents on the quality of their lives and their society.

The Timor-Leste 2016 Youth Well-Being Survey was developed to provide the important opportunity to understand the youth of Timor-Leste more closely through rich and comprehensive primary data.¹⁸ The results of the comprehensive survey are presented in this report. They consist of survey responses, records of focus group discussions and key informant interviews. Throughout this *National Human Development Report* (National HDR), these are referenced as the Timor-Leste 2016 Youth Well-Being Survey. The field survey, which consisted of 93 questions exploring the eight domains of well-being, was rolled out in all districts between May and August 2016 (box 2.2). Extensive fieldwork was conducted by staff of the General Directorate of Statistics who collected 811 survey responses from young people ages 15–34.

The National Youth Policy defines youth as young people ages 15–24 (SSYS 2016). However, the policy also recognizes that other legislation defines youth differently. The law on the elections of community leaders, for instance, defines young women and young men as individuals ages 17–35, and the Youth Parliament Programme only considers youth participants ages 12–17.

The 2016 Youth Well-Being Survey diverges slightly from these definitions and explicitly targets the 15–34 age group for several reasons. First, a broader age category provides the opportunity to study issues related to older young people, while still allowing a disaggregation at the 15–24 age group defined as youth in the National Youth Policy (SSYS 2007, 2016). Second, many studies exploring the relationship between a country's population structure and the greater likelihood of

The Timor-Leste 2016 Youth Well-Being Survey was developed to provide the important opportunity to understand the youth of Timor-Leste more closely through rich and comprehensive primary data.

Extensive fieldwork was conducted by staff of the General Directorate of Statistics who collected 811 survey responses from young people ages 15–34.

Sample Questions and Indicators, Timor-Leste 2016 Youth Well-Being Survey

Indicator: physical health. *Question:* Do you think your present physical health prevents you from doing activities you feel like doing?

Indicator: mental health. *Question:* Have you suffered from anxiety or depression in the past 12 months?

Indicator: knowledge, skills and values. *Questions:* How competent are you in financial matters such as managing your money? To what extent do you think forcing somebody to have sex is justifiable?

Indicator: identity. *Question:* How important to you is your religious identity?

Indicator: perceived safety. *Question:* How concerned are you about leaving home after dark?

Indicator: government services and performance. *Questions:* Are you aware of any public schemes or programmes that are aimed at or benefit

youth? Do you feel discriminated against in accessing government services? Are you satisfied with the access to and quality of the health care services you receive? How confident are you in or how trustworthy do you find traditional or formal courts to deliver justice in a timely manner? Do you think government officials are involved in corruption?

Indicator: environmental concerns and responsibility. *Questions:* Can you rate the level of concern you experience about deforestation in Timor-Leste? How responsible do you feel to protect the environment?

Indicator: income and perceived economic well-being. *Questions:* How many people in your household are dependent on your income? In the past two years, was the medical treatment of any member of your household discontinued because of a lack of money?

Source: Timor-Leste 2016 Youth Well-Being Survey.

conflict demonstrate that 25- to 34-year-olds have a large influence on peace and stability. Hence, evidence related to the attitudes, aspirations and well-being of this age group should be of great interest to policymakers, which this report supplies.

The sampling for the survey has been realized in accordance with the share of young women and young men in the 15–34 age group in district, subdistrict and village administrative units. The final sample covers responses from 420 young men and 391 young

women in all 13 districts, 58 of the 65 subdistricts and 97 of the 452 villages. This ensures statistical significance at the national level and in rural and urban areas for both sexes.

Key results of the Youth Well-Being Survey

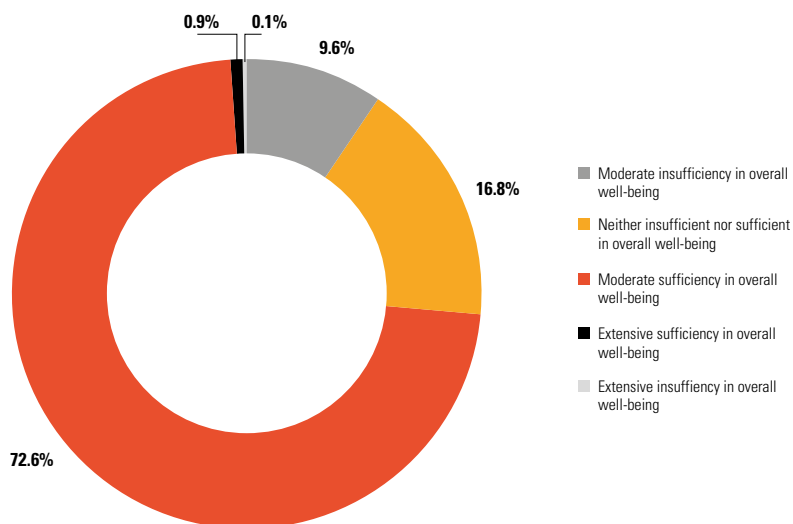
The state of overall well-being among youth

Analysis of the survey data has revealed promising results on the state of youth well-being in Timor-Leste. Around 73 percent of youth enjoy moderate to high sufficiency in overall well-being in that they have achieved either moderate sufficiency or extensive sufficiency across eight life domains (figure 2.11). Thus, nearly three fourths of the youth population finds most of the process aspects of their lives satisfactory or as they prefer them.

Likert-type scales acknowledge that people’s attitudes are characteristically ambivalent. It is therefore essential to accommodate a scenario wherein an individual is less than certain about some aspect of life. This is represented by the category neither insufficient, nor sufficient. The results show that 17 percent of youth are neither insufficient, nor sufficient in the achievement of overall well-being. While this category of youth who are satisfied in any four of the eight domains may be considered deprived in the achievement of well-being in general, they are also not explicitly deprived or insufficient in well-being. The analysis

FIGURE 2.11

Distribution of Youth, by Overall Sufficiency in Well-Being



Source: Timor-Leste 2016 Youth Well-Being Survey.

shows that almost 10 percent of youth are moderately or extensively deprived in overall well-being (see figure 2.11). This means that 27 percent of youth in Timor-Leste require special attention in addressing concerns about well-being.

The state of overall youth well-being, by age, sex and location

Analysis of disaggregated well-being among youth by age, sex and location reveals that more women than men, more rural residents than urban residents, and more older youth (ages 25–34) than younger youth (ages 15–24) achieve sufficiency in overall well-being (table 2.6). Although percentage differences are not large, at a maximum of 5 percentage points, young urban men ages 15–24 require the greater attention of well-being interventions.

Among the 13 districts, the highest achievement among youth in overall well-being is found in Liquiçá, at 97.7 percent of youth (figure 2.12). This is followed by Cova Lima (97.4 percent), Aileu (93.1 percent), Baucau (87.9 percent) and Lautém (82.8 percent). The poorest well-being achievement is found in Ainaro, where only 40.5 percent of youth achieved sufficiency in well-being. The other three districts with considerably lower well-being achievement are Bobonaro (69.5 percent), Dili (66.9 percent) and Manatuto (61.5 percent). When gender differences are considered, young women in eight districts achieve higher well-being results compared with men. This difference is largest in Bobonaro and Manufahi districts, at 18

TABLE 2.6

Youth Well-Being Analysis by Sex, Urban-Rural Location and Age (percent)

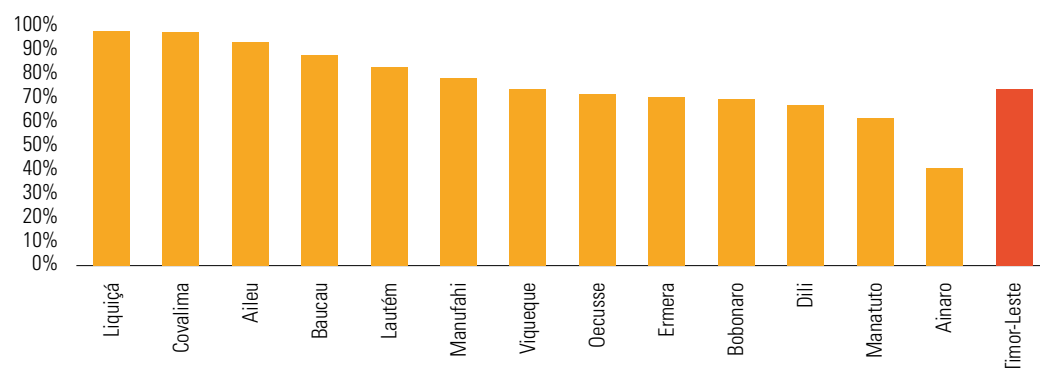
Indicator	Moderate to extensive insufficiency	Neither sufficient, nor insufficient	Moderate to extensive sufficiency
Men	11	18	71
Women	9	15	76
Urban	12	17	72
Rural	8	17	75
Ages 15–24	11	17	72
Ages 25–34	8	16	76
Total, ages 15–34	10	17	74

percentage points. By contrast, young women’s achievement in well-being is 26 percentage points behind men in Oecussi-Ambeno.¹⁹

The intensity of sufficiency or insufficiency in the well-being framework is measured using the average number of domains in which youth are found to have achieved sufficiency (see above). The general intensity is highest in Liquiçá, where youth have achieved sufficiency in six of eight domains, and lowest in Ainaro, where sufficiency has been achieved in only four of eight domains (figure 2.13). Special attention should be paid to the processes that hold back youth in the districts of Ainaro, Manatuto and Oecussi-Ambeno from achieving overall well-being. Youth in eight districts have achieved sufficiency, on average, in five of the eight domains, whereas youth in four districts have achieved sufficiency in six of the domains. Overall, youth in Timor-Leste have achieved sufficiency in five domains.

FIGURE 2.12

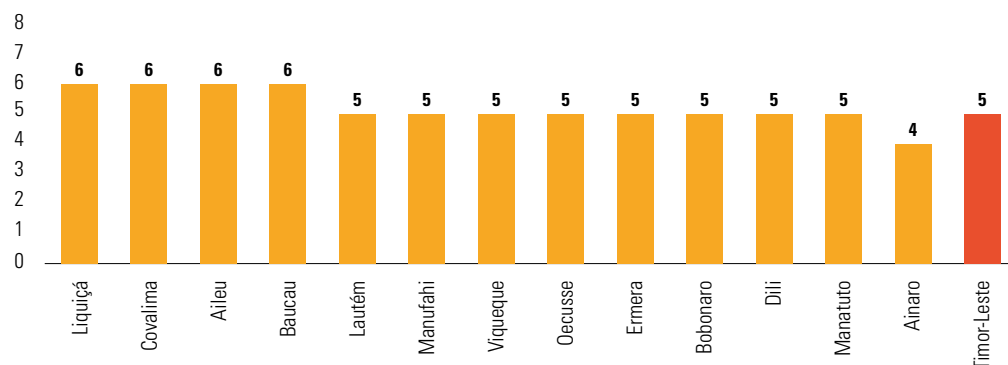
Overall Well-Being Headcounts among Youth, by District



Source: Timor-Leste 2016 Youth Well-Being Survey.

FIGURE 2.13

Intensity of Sufficiency in Youth Well-Being, by District



Source: Timor-Leste 2016 Youth Well-Being Survey 2016.

Drivers of well-being

Analysis of the results on well-being domains reveals that the key drivers of overall youth well-being in Timor-Leste are ecological stewardship and physical health (figure 2.14). At least 95 percent of youth have achieved well-being sufficiency in both of these domains, which means this achievement was consistent even among deprived youth. In other words, even the youth who scored low in overall achievement showed sufficiency in ecological stewardship and physical health. The performance in education and community vitality acts as a drag on overall well-being among youth. Sufficiency is achieved in these two domains by only 10 and 12 percent of youth, respectively.

This subsection provides summary insights and results from each of the eight well-being domains beginning with the domains in

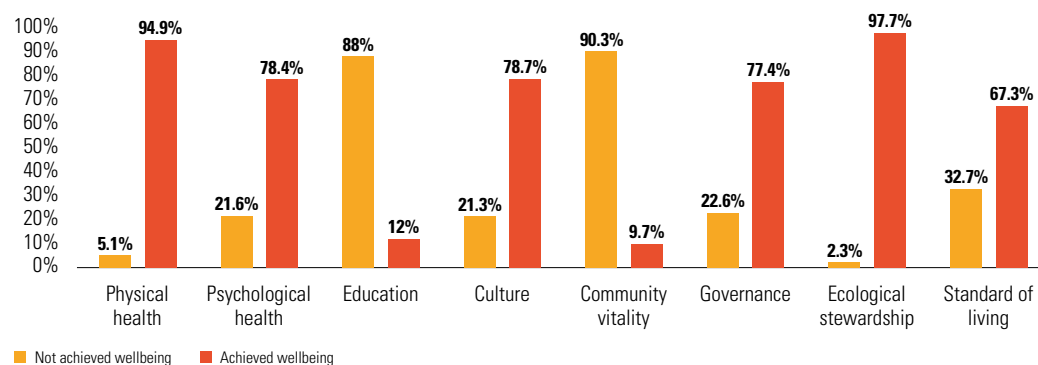
which larger shares of youth achieved sufficiency. The gender differences found in these domains were also almost negligible and are therefore not discussed in detail.

Ecological stewardship

Ecological stewardship has a special significance in small island developing states, such as Timor-Leste, in which the impacts of climate change or environmental disasters may be experienced more intensely. The substantial share of Timorese youth who achieve sufficiency in well-being in this domain, nearly 98 percent, indicates that youth maintain a close relationship with the natural environment. Almost 95 percent of youth consider the environment important to livelihoods, but also in culture, history and spiritual matters. Between 70 percent and 80 percent of youth believe that erosion, landslides, drought,

FIGURE 2.14

Youth Achievement in Well-Being, by Domains of Life, Timor-Leste (percent)



Source: Timor-Leste 2016 Youth Well-Being Survey.



flooding and a lack of access to clean water are major environmental issues in Timor-Leste, and around 60 percent believe deforestation, slash-and-burn farming and land and air pollution are also issues.

According to the survey, 86 percent of youth feel responsible for protecting the environment. More than 80 percent of youth know about *tara bandu*, traditional practices with practical outcomes in environmental protection in Timor-Leste, such as ritual invocations of spirits to protect a river that are accompanied by periodic bans on most fishing activities. The recognition of responsibility to protect the environment because of its links with livelihoods, individual spirituality and traditional culture is a clear indicator of the awareness of ecological stewardship among youth. However, less than half of youth, around 40 percent, have participated in an environmental protection activity. There is thus room to encourage youth to take more responsibility for the environment.

Physical health

Sufficiency in the physical health domain is shared by 95 percent of Timorese youth. This response is an average of the satisfaction responses to four questions asked on this domain. Only 4 percent report that their physical health is poor and prevents them from performing the activities they would like to perform. In response to the question about whether their current health condition limits their daily activities to a small or large extent, 28 percent say it does. However, a large proportion of these 28 percent (95 percent), still report their overall physical health as good. Around 20 percent report they had experienced an illness in their lives that had lasted more than six months. A large share of young people clearly must undergo substantial episodes of poor health during childhood. Nonetheless, the vast majority manage to maintain satisfactory physical health as they get older.

Psychological and emotional health

The results of subjective assessments among youth are a bit more negative on psychological health compared with physical health: 78 percent of youth (82 percent women and 75 percent men) have achieved sufficiency in well-being in this domain. While stress

because of financial pressure is experienced by 80 percent of youth (83 percent by men and 76 percent by women) and because of sickness in the family (by 61 percent: 63 percent among men and 60 percent among women), a majority of these youth are able to cope with the stress and undertake normal daily routines with confidence, positive feelings about themselves and trust in their own capacity for decision-making. However, 20 percent report they suffer emotionally or physically from the effects of domestic violence. This rate is 22 percent among men and 19 percent among women.

Culture

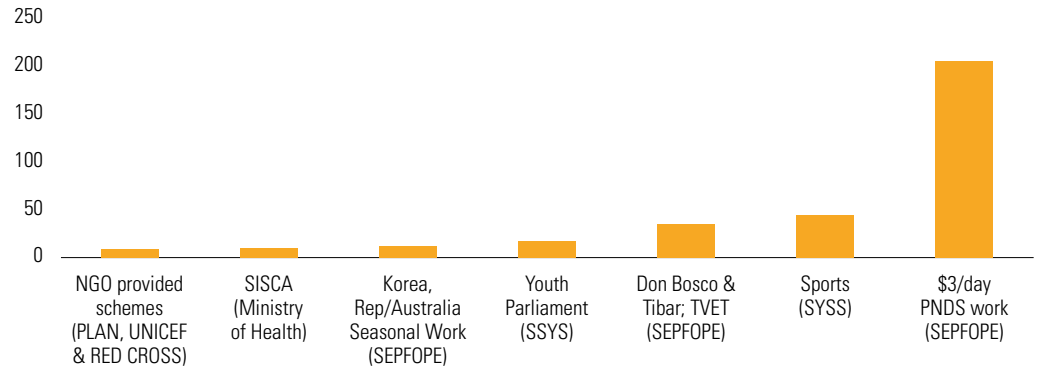
Similar to the psychological and emotional health domain, 79 percent of youth have achieved sufficiency in the domain of culture. The considerable level of achievement indicates that youth value the rich and diverse cultural heritage of Timor-Leste and enjoy participating in the cultural life of the country. For example, a majority of youth continue to use their native language during cultural or family gatherings. Between 80 percent and 90 percent are interested in cultural activities such as traditional story-telling, traditional dancing, tais or basket weaving, the construction of a traditional house, tara bandu, and traditional painting or carving. Cultural or ethnic identity is considered important by 80 percent of youth, and religious identity is considered important by 93 percent. With few exceptions, individuals reported they participate in spiritual or religious activities, and 99 percent say they believe in or follow *lulik* (sacred) traditions, including the *uma lulik*, the sacred huts that dot the countryside and represent a link between the dead and the living and the past and the present.

The significance of culture in the country's development is echoed in the National Strategic Development Plan 2011–2030. The plan states as follows:

To achieve our aim for Timor-Leste to become a prosperous, developed nation by 2030, we will need to encourage our cultural diversity and build respect for our cultural heritage and shared history, while integrating what works for us from other cultures to enrich our own. . . . We recognize that, if we neglect our cultural and historic roots and think only of the present and the material aspects of life,

FIGURE 2.15

Programmes Tailored to Youth Needs



Source: Timor-Leste 2016 Youth Well-Being Survey.

Note: The bars indicate total responses; more than one response was possible. NGO = non-governmental organization. Plan = Plan Timor-Leste, the local office of Plan International, an NGO. PNDS = Programa Nasional Dezenvolvimentu Suku (National Programme for Village Development). SISCa = Sistema Integradu Saude Comunitaria (Integrated Community Health Services). SSYS = Secretariat of State for Youth and Sport. TVET = technical and vocational education and training. UNICEF = United Nations Children’s Fund.

we will be overwhelmed by the forces of globalization and risk losing our unique cultural identity—the very thing we fought so long and hard to preserve. (Planning Commission 2011, p. 63)

“After ten years of independence, attention should be given to cultural development because it was culture that gave us independence.”

—Atanásio Francisco Tavares, elder representative, Maucatar, National Consultation, 30 July 2010 (Planning Commission 2011, p.61)

It is clear that this vision of the ownership and preservation of cultural diversity and cultural heritage is closely shared by the youth of Timor-Leste.

Governance

The analysis of the survey results reveals that 77 percent of youth have achieved sufficiency in well-being in the domain of governance. Youth exhibit a great deal of interest in national and international political news, and they participate actively in political life by voting or attending public discussions or political debates. Highlighting a concern about the perceived political rights of youth, only half of youth report they are able to talk openly and freely about political and government-related issues.

Similarly, only 50 percent believe they have good access to public information and are aware of public schemes and programmes

tailored to youth. The most well known public programmes among youth include the \$3-a-day temporary employment scheme of the Secretaria de Estado para a Política da Formação Profissional e Emprego (Secretariat of State for Vocational Training Policy and Employment, SEPFPOE), the sports-related programmes of the Secretariat of State for Youth and Sport and vocational education provided by the Don Bosco-Comoro workshops and the Tibár Training Centre (figure 2.15).

Only 50 percent of youth believe they have equal access to employment opportunities in the public sector, and, in access to government services, 10 percent believe they are discriminated against. Among those who feel discriminated against, 23 percent think that the discrimination is based on either age or language. Another 19 percent feel discriminated against based on religion, followed by 12 percent based on sex. This indicates the need to improve the access of youth to employment opportunities in the public sector and to remove the barriers and discrimination that often cause deprived youth to suffer. More than two thirds of youth reported they are satisfied with their level of access to and the quality of education and health care services. However, almost half are not satisfied with their level of access to and the quality and range of available skills development and training opportunities or counselling services. According to the survey, 60 percent to 70 percent of youth are not satisfied with the number and variety of livelihood opportunities available to them.



Indeed, employment opportunities currently available to youth are extremely limited given the approximately 20,000 new entrants into the labour market each year. Timely, effective strategies are needed to address the growing mismatch between the available jobs and the supply of labour. Accelerated efforts must be made to create more jobs and livelihood opportunities for youth and equip them with the relevant knowledge and skills to strive in life through their work. The continued absence of such strategies may lead to serious economic and social problems.

On the perceived accountability of public servants, around 20 percent of youth believe most government officials are corrupt, and 65 percent believe only a few government officials are honest. Thus, only a small share of youth believe no public servants are corrupt.

Between 55 percent and 60 percent of youth have some level of confidence in government to listen to them and address their problems by, for instance, creating more jobs or investing in training opportunities. Around 20 percent do not have any confidence in politicians to fulfil promises once elected. Around 80 percent have considerably more confidence in traditional or formal courts to deliver justice in a timely manner.

Standards of living

The analysis of well-being shows that 67 percent of youth have achieved sufficiency in the living standards domain. Among those who are employed in small businesses, the main employers are private and public sector services (figure 2.16). Around 80 percent are

not employed. While 43 percent are looking for work, the rest are inactive, meaning they are not working and not looking for work. Of these, 25 percent are not looking because they have become discouraged by the difficulty of finding work. Half are inactive because they are studying. The median age of the respondents is 22, and 63 percent are ages 15–25. The majority of youth in their early 20s are studying.

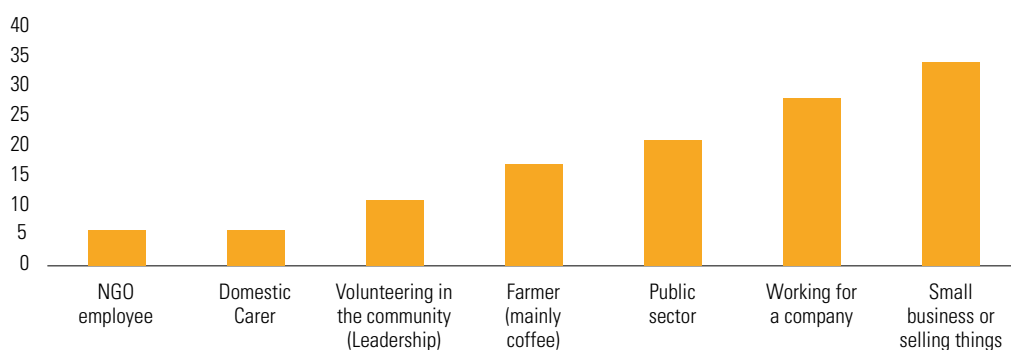
Among youth who are employed, 50 percent each have one or two other people who depend on their income. The remaining 50 percent each have three to nine dependants. This highlights the heavy burden that youth bear in supporting dependants and the implications of the high dependency ratios in Timor-Leste. The high dependency ratios may also discourage many young people from working or actively seeking employment given the monthly minimum wage of \$115.

The findings on food security indicate that, while one third of youth reported that their households have two meals a day every day of the year, 37 percent stated that their households have two meals a day every day for only one month a year. During the years of conflict, people may have developed a tolerance for hunger and the lack of adequate food. In any case, malnutrition is a major problem in Timor-Leste, especially given the effects of inadequate nutrition on the physical and mental development of children. Stunting rates among children reach 50 percent.

A majority of youth—80 percent—believe they and their peers have a similar economic status. This means they believe there is widespread economic equality. The view of 40

FIGURE 2.16

Types of Employment among Youth



Source: Timor-Leste 2016 Youth Well-Being Survey.

Note: The bars indicate total responses; more than one response was possible. NGO = non-governmental organization.

percent is that their economic outlook will improve in the next two years. Only 1 percent expected to experience worsening economic conditions. This indicates there is moderate optimism about the future.

Education

The education domain covers assessments of expected educational outcomes in literacy, numeracy and the attainment of good qualifications, but also general life skills and civic values and principles. According to the analysis of the survey, the performance in the education domain is alarming: only 12 percent of youth achieved sufficiency.

While some youth may be prolonging their studies, this cannot be taken as evidence they are seeking better qualifications; repetition rates are quite high. Among respondents, 30 percent reported that a family member has discontinued studies in the past two years because of a lack of financing; 20 percent had discontinued medical treatment for the same reason.

The survey results reveal that 46 percent of respondents are studying or undergoing training. Basic education is the highest level of educational attainment among 45 percent of respondents. Almost 40 percent have completed secondary education, while 10 percent had attained higher education.

Around 60 percent of respondents aspire to undertake further studies or training. However, only about a third of this group reported that they have received any training. Most training courses taken by youth involve language training (English), followed by computer and vocational education (figure 2.17).

Young people who said they do not wish to enrol in training were asked why not. They responded with the following reasons: currently studying, lack of information, heavy workload or lack of time, excessive distance to a training centre, marriage, or lack of money.

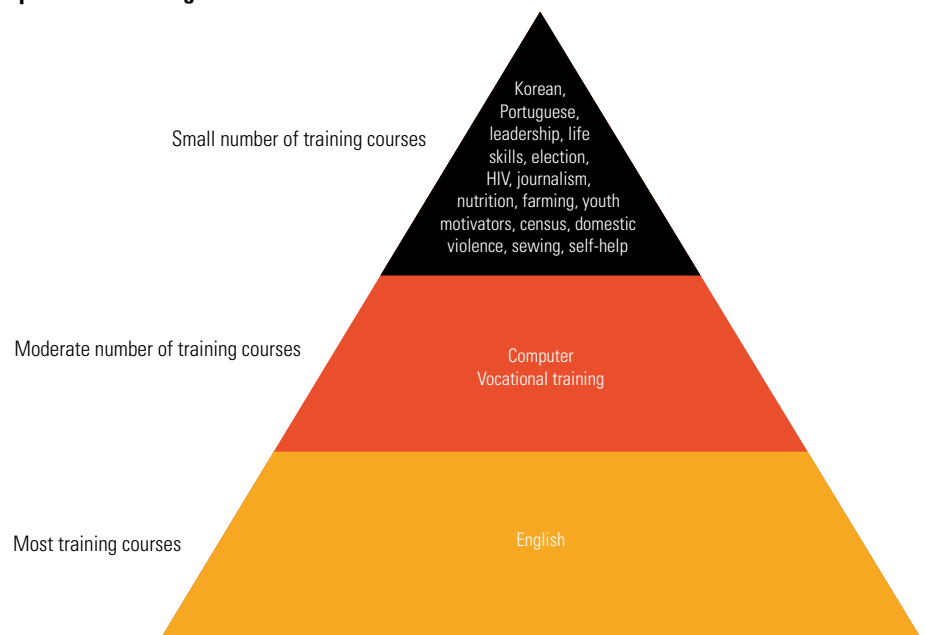
During the focus group discussions that were conducted following the survey, youth identified education, skills building and training opportunities as crucial to achieving a satisfactory life. They were vocal about their willingness to participate in training and capacity-building activities to fulfil their potential and thereby contribute to their communities.

One single change I want to see to improve youth's well-being is the establishment of more training centres for young people living in rural areas so they can access information and opportunities to build their talents and work on their interests.

—Youth focus group participant

FIGURE 2.17

Youth Participation in Training Courses



Source: Timor-Leste 2016 Youth Well-Being Survey.



The survey also explored the civic values of youth, such as whether killing, stealing, lying, creating violent conflict, using drugs, smoking, having unprotected sex before marriage, gambling, cock-fighting, excessive use of alcohol or getting drunk, or sexual misconduct and abuse are ever justified. An average 60 percent to 70 percent of youth found these actions justifiable in certain cases. Among these who responded that these actions were “never justifiable”, the share of women was consistently larger by around 5 to 10 percentage points than the share of men, except on questions related to the use of excessive alcohol or smoking. In these cases, the share of men reporting “never justifiable” was higher. This area should be explored through in-depth analysis.

Only 30 percent of youth were competent in using computers, while 50 percent were confident in managing their own finances. Around 73 percent of youth were able to use a mobile phone.

Community vitality

The results in the community vitality domain draw a disturbing picture: 90 percent of youth did not achieve sufficiency. This domain mainly gauges perceived safety within a community, voluntarism and support for and from neighbours. Almost 80 percent of youth stated that they trust people in their communities, but only 18 percent said they could obtain help from their communities when they needed it. The social support currently being provided to youth by their communities seems to be thin. On voluntarism, 55 percent of youth reported that they work with other local people to benefit their communities. Almost 75 percent say they would volunteer labour, and 50 percent would offer food for community projects, but only one third or fewer say they would contribute money, land, tools, or leadership. This may indicate that a majority of youth do not possess these assets or the leadership skills necessary for community projects.

Youth are greatly concerned about their security. More than 75 percent expressed fear (mostly substantial) about going out after dark, having an accident while travelling home or to work, being sexually assaulted, being robbed, being attacked or killed by an aggressor, being arrested for a crime they did not commit, being beaten by a family member, or being a victim of gang violence. These

fears were shared by both men and women; the share was more elevated among men, and the fears were repeatedly stressed during the focus group discussions.

Youth are concerned about their safety particularly because of teasing and assault, which may be triggered by an individual or group under the influence of alcohol or because of political affiliation. Women reported that they are often teased about sexual matters. In fact, 65 percent of women were “very much concerned” about sexual harassment. Cases of assault against men are linked more often with social envy, differences in political opinions, boredom, or alcohol. Young people said that rumors spread on social media frequently lead to aggressive behaviour.

Timor is not a peaceful society yet because we cannot go out in the dark alone. There is always rumors about rama ambon, fighting between martial arts groups, rock throwing, and drunk people making trouble and harassing others.²⁰

—Youth focus group participant

Youth also raised concerns about political leaders who, they said, divided youth and influenced youth in ways that sow conflict during elections, for example. Many youth also drew a link between unemployment and crime, stating that, if young people have nothing to do, if, for instance, they are not in education, employment, or training (NEET), they may become tempted to carry out socially undesirable activities, such as using drugs or creating conflict.

Leaders of this country easily influence and provoke young people in Timor-Leste. Politicians are good at blaming each other and generating hatred. There is a lot of uneducated youth with nothing to do. Having been influenced, they create conflict.

(Flinders University, MOF, and UNDP 2017, p. 3)

The substantial concerns about security are mirrored in the findings showing that youth justify the use of violence. The focus group discussions reveal that youth often tolerate violence if it is used by teachers to discipline students, by parents or siblings to teach appropriate behaviour in the household, or by police to manage disturbances. Domestic violence between partners is frequently justified

because it is considered traditional, everyone does it, and nobody is punished. Similar views were expressed about sexual abuse.

Teachers use violence to discipline students. Even if they sometimes overreact, teachers are always right in the eyes of parents. . . . Traditionally, it is accepted that your sister or brother may be beaten. Violence within the family is often tolerated. People don't go to the police even if they are beaten . . . because it is family business.

(Flinders University, MOF, and UNDP 2017, p. 4)

Understanding the most deprived and contextualizing deprivation

Understanding the problems of deprived youth and the causes of the deprivation is key to guiding policymakers seeking to leave no one behind because it sheds light on the situation of youth who experience moderate or extensive insufficiency in well-being. According to the analysis, only 10 percent of Timorese youth are deprived in overall well-being. The incidence of deprivation is slightly greater among urban youth in the 15–24 age group. Among youth, 12 percent are deprived in urban areas, but only 8 percent in rural areas. Similarly, 9 percent of young women and 11 percent of young men are deprived.

During the survey, respondents were asked to self-report the level of their satisfaction in life on a scale of 1 to 8, whereby 1 is extremely happy or satisfied, and 8 is extremely unhappy or dissatisfied. Among youth respondents, 13 percent reported that they are not happy or satisfied with life. This represents significant confirmation of the deprivation analysis presented in this section. Although the share of deprived youth is low and indicates that the development efforts undertaken in Timor-Leste since independence are adequate in enlarging young people's well-being, the 10 percent of youth who are still deprived and the 17 percent who are neither insufficient, nor sufficient in the achievement of overall well-being must also be supported.

The survey results among deprived youth show that most of them have done relatively well in the physical health and environment domains (table 2.7). However, few have achieved sufficiency in education or

TABLE 2.7

Domain Performance among Deprived Youth

Domain	Share achieving sufficiency, %
Physical health	73
Psychological health	19
Education	0
Culture	29
Community vitality	3
Governance	44
Ecological stewardship (environment)	86
Standard of living	20

Source: Timor-Leste 2016 Youth Well-Being Survey.

community vitality. Sufficiency in psychological health and living standards has been achieved by around 20 percent. The performance in the culture domain is relatively low, at 29 percent. Almost 45 percent of respondents expressed satisfaction with governance.

Ainaro District accommodates the largest share of deprived youth; 50 percent of youth surveyed were found to be deprived in well-being. Manatuto District follows, with a deprived share of 16 percent, while Dili has a share of 14 percent.

The survey findings on the drivers of deprivations in well-being strongly point to the existence of anomie in Timor-Leste. John Braithwaite et al. (2010) have investigated anomie in the case of Timor-Leste. Their inquiry begins by explaining that, if a social system is in a state of anomie, common values and common meanings are no longer understood or accepted, while new values and meanings have not yet developed. They refer to Émile Durkheim (1997) as a source of this sociological understanding. Durkheim recognized that, in societies in which anomie is exhibited among many members, the observable psychological states are characterized by a sense of futility, lack of purpose and emotional emptiness and despair. Striving is considered useless because there is no accepted definition of what is desirable. In an attempt to probe Durkheim's descriptive account of anomie more deeply, Braithwaite et al. draw on the work of Robert K. Merton (1938), who studied the causes of anomie. Merton found anomie or normlessness severest in people who lack an acceptable means of achieving their

According to the analysis, only 10 percent of Timorese youth are deprived in overall well-being. The incidence of deprivation is slightly greater among urban youth in the 15–24 age group.



personal goals. This equates the root cause of anomie with Amartya Sen's (2006) conception that the opportunities people possess to develop their human capabilities are crucial.

Braithwaite et al. suggest that causal blame cannot be attributed to people who exhibit normlessness. Instead, the central problem in anomie is that the goals of people may become so important that they persist in striving to achieve them at any cost. Particular goals predominate because society establishes such goals at an historical scale. One may thus expect people to apply illegitimate or unethical means in seeking to achieve goals that society has normalized; thus, if the morally acceptable means of achieving institutionalized goals fail, then unethical means may be used. The emphasis on goals therefore overtakes the emphasis on the opportunities or means to achieve the goals. In Merton's terms, this creates a stress that leads to a breakdown in the codes of interpersonal behaviour, that is, anomie. Merton defined a continuum of responses to anomie, and one may expect to find among them delinquency, crime and violent interpersonal behaviour.

If the pages of colonial history in Timor-Leste are peeled back, one realizes that the pursuit of self-interest was the unequivocal goal of the early exploiters of the land and that their intention to manipulate the subjugated peoples by encouraging them also to pursue self-interest is clear as well. This is evident from at least as early as the late 1500s when sandalwood was being exploited. Under the Topasses, the ethnically mixed Portuguese group that dominated politics on Timor in the 17th and 18th Centuries, sometimes in alliance with Dominican friars, colonial society compelled its members to seek wealth, yet offered inadequate means for them to do so. Merton's analysis clarifies that, over a long period, this pressure caused many people to violate decent norms of interpersonal behaviour. One may imagine from the historical explanation presented by Braithwaite et al. that the only forces regulating behaviour in Timor-Leste would be the pursuit of personal advantage and the fear of cruel retribution by the colonial masters if the pursuit failed. The expected outcome would be social behaviour that appeared to be random and chaotic.

Yet, there are possible remedies that the policy community can draw on and on which this National HDR is focused. These involve the creation of opportunities for the

fulfilment of human capabilities. In establishing these opportunities, the report aims to support policies that tend to supplant the colonial institutionalization of self-interest. The new framework would guide social behaviour in good ways. This framework should be initiated within the social institution of work. Decent jobs need to come to represent work opportunities whereby people may develop their human potential, but not do so at the expense of the good of the social or environmental fabric.

The Youth Well-Being Survey and the focus group discussions conducted among youth show that one of the most important aspirations associated among youth with well-being is having a job and possessing access to relevant training opportunities to foster a life that allows youth the dignity and opportunity to develop themselves and contribute to their communities.

The most important thing in life is dignity. A person can have dignity by having skills and a decent job. In the absence of decent jobs, one can easily lose their dignity; hence, regardless of the job, it is important for young people to have access to jobs.

—Youth focus group participant

Human development and gender development measures: youth

This section provides traditional indicators of human development and gender development for youth and the total population of Timor-Leste. These indicators are measured by the HDI and the gender development index (GDI), respectively. The HDI is a composite measure based on three key components of human development, namely, the capabilities necessary to lead a long and healthy life, to enjoy a decent standard of living and to gain access to education. These three components are measured, respectively, by standardized indicators of life expectancy at birth, gross national income per capita, and a simple average of mean years of schooling and expected years of schooling. The GDI is measured by the ratio of the HDI for women and the HDI for men. It shows the extent to which women have achieved human development in comparison with men. Thus, the GDI illustrates the gender disparity in the HDI.

One of the most important aspirations associated among youth with well-being is having a job and possessing access to relevant training opportunities to foster a life that allows youth the dignity and opportunity to develop themselves and contribute to their communities.

TABLE 2.8

The HDI, GDI and the HDI Components, Total Population and Youth, 2016

Index	Men and women combined	Men	Women
Total population			
HDI	0.585	0.611	0.553
GDI (HDI of women/men)	0.905		
Youth (ages 15–34)			
HDI	0.600	0.625	0.571
GDI (HDI of women/men)	0.914		
Components of the HDI	Access to knowledge, education index	Access to health, life expectancy index	Living standards, income index
Total population	0.508	0.690	0.569
Youth	0.607	0.778	0.457

Source: Appendix D.

A unique feature of this National HDR is that it shows the HDI for an age group in the population, namely, youth (ages 15–34). The computation of the HDI and GDI for both the total population and youth is based on data obtained from local sources in Timor-Leste, that is, the 2015 census. Details on the computation are supplied in appendix D. The computed values of the HDI and GDI and the respective components are shown in table 2.8.

Table 2.8. shows that the HDI for the general population of Timor-Leste computed for this report is 0.585, which is less than the HDI value of 0.605 shown in table 1 of the 2016 global HDR (UNDP 2016c). The difference is explained by the use of different data in the computation of the HDI in the two reports. However, both these the Human Development Index (HDI) values for both the general population and youth put Timor-Leste in the medium development range. The GDI for the general population in 2015 was 0.905, which means that the women of Timor-Leste measure up to men in human development quite closely though not entirely (a gap of a little less than 10 percent). This GDI value is a little greater than the value of 0.858 for Timor-Leste reported in the 2016 global HDR (UNDP 2016c). The difference is, once more, explained by the differences in the data used in the computations.

The HDI value of 0.600 for youth, which has been computed using a new method (see appendix D), shows a higher value for human development among youth compared with the HDI of 0.585 for the general population. This is to be expected because youth are in better health (given their young age) and have better access to education relative to the general population, the older members of which have suffered from lack of schooling, exacerbated by the periods of struggle for independence. The HDI for youth would have been even higher, but for the high level of unemployment among youth, which reduces the estimated income of youth (see the last two rows of table 2.8). The GDI of youth is 0.914, which indicates an even smaller disparity in human development between men and women.

The intensity of overall sufficiency among youth in Timor-Leste is 5.16, which indicates an overwhelming level of moderate sufficiency (see figure 2.11 and 2.13). This compares well with the medium level of human development indicated by the youth HDI of 0.600. Furthermore, if this intensity of overall sufficiency (5.16) is converted from a scale of 0 to 8 to a scale of 0 to 1, the intensity of overall sufficiency becomes 0.645 (5.16, divided by 8.00). Although the HDI and the intensity of overall sufficiency are not strictly comparable (because the former is based on only three domains, while the latter is based on eight domains, and the methods of computing the two indices are vastly different), it is encouraging that, whichever way well-being or development is measured, the youth of Timor-Leste fall in the medium or moderate category.

The modelling of the demographic dividend for Timor-Leste presented in this chapter assumes a base HDI value of 0.540 in 2015 and projects this to 0.880 by 2050 under policy scenario 3, conditional on appropriate policies in education, the economy and family planning. If the higher HDI value of the general population of Timor-Leste, namely, 0.585, were used as the base HDI in the projections, then, under the same modelling, the HDI would be greater than 0.880 by 2050 and probably generate the potential demographic dividend, provided the recommended policies in education, the economy and family planning were pursued.

Summary

The demographic transition in Timor-Leste is still evolving. It will play a vital part in the country's ability to achieve the demographic dividend. However, the demographic window of opportunity only opens once, and reduced fertility alone provides no guarantee of prosperity. Benefits such as the demographic dividend are not an automatic outcome and will not be realized unless appropriate social, political, and economic policies are implemented well in advance. This implies that the countries with the greatest demographic advantages for development are those that are undergoing the demographic transition through fertility decline and that have also implemented policies and programmes focused on increasing the overall well-being of people, especially the younger generation. Though Timor-Leste exhibits a high dependency ratio because of exceptionally high fertility in the

recent past, the noticeable fertility decline over a short period more recently indicates that the dependency ratio will drop to 50 percent by 2050 if the fertility decline is encouraged through adequate family planning policies.

The analysis of the overall status of well-being among youth presented in this chapter shows encouraging achievements in several domains of life. The achievements in physical health and ecological stewardship are promising. However, the insufficiency in well-being in other domains, especially education and community vitality, requires urgent attention. Although the HDI is higher among youth than among the overall population, accelerated efforts are needed to apply the nation's wealth to promote the economic inclusion of youth and improve the living standards of youth. This will be crucial in reaping the benefits of the potential demographic dividend and shaping the sustainable future of Timor-Leste.







CHAPTER 3

THE ECONOMIC INCLUSION OF YOUTH



Rozito Rozario Perreira sells his coconuts on the Dili seafont.

© Bernardino Soares

The Economic Inclusion of Youth

Introduction

Work can eliminate well-being deprivations by expanding one's capabilities and opportunities. The provision of work opportunities among youth is not only an instrument for achieving the greater good of society and greater freedom for individuals to expand their opportunities; it is also a means to realize the demographic dividend in Timor-Leste.

Chapter 2 presents evidence showcasing major deprivations in the education and community vitality components of youth well-being in Timor-Leste, hinting at the existence of a societal condition, anomie. If a social system is in a state of anomie, social bonds and the codes of interpersonal behaviour are broken down, and this is reflected in more frequent delinquency, crime and violence. If trust and agreed moral standards have deteriorated, people are less likely to behave in a socially healthy manner and are more likely to lie, cheat, steal and engage in corruption or condone corruption (Tay, Herian, and Diener 2014; Uslaner 2002). These behaviours and the erosion of civic engagement reinforce the weakening of the social fabric so that all follow their own self-interest.

A possible remedy to this social condition in Timor-Leste is the construction of an alternative economic system that holds together the social fabric, supplants the colonial institution of self-interest and seeds social ethics within society by cultivating values of democracy, justice, empowerment, creativity, participation and self-management. The leaders of the country must help shape and nurture an alternative economic system to guide young people's social and economic behaviour in desirable ways and to restore a shared identity and common goals.

This chapter explores the merits of such a solidarity economy and of social enterprise development as a remedy for anomie and deprivations of well-being and as a viable pathway for economic diversification and job creation.

Replacing the oil economy

Since independence in 2002 and because of oil revenues over the last 10 years and the strong bipartisan support for conflict prevention, the Government has taken rapid steps towards the goal of making Timor-Leste an upper-middle-income country by 2030. Infrastructure initiatives have been undertaken; state institutions have been established in a short time, and progress has been achieved in the social sector. Most development activities have been financed by the Government using revenue generated by the petroleum sector.

Despite ongoing economic improvements and a GDP growth of approximately 4 percent a year in the past five years, Timor-Leste remains a heavily oil dependent country. The accumulated wealth in the Petroleum Fund of Timor-Leste amounts to around \$16.2 billion. Only 10 percent to 12 percent of domestic revenue derives from non-oil sources. Oil revenues provide 90 percent of Government spending. There is consensus among Government leaders and development partners that it is crucial for the Government to diversify the economy to sustain fiscal stability. According to the International Monetary Fund (IMF 2017), the oil fields may be depleted by around 2022.

Efforts are already under way to strengthen non-oil sectors through investments in infrastructure and private sector development. Recent policy initiatives, for example, are emphasizing private sector growth and job creation, improving access to finance, and developing sectors such as agriculture, mining, tourism and manufacturing. Structural policy reforms to enhance basic infrastructure, financial access, labour competitiveness and the ease of doing business can help support economic diversification in the country. But these initiatives will be sustainable only if they are grounded on the core principle of inclusive development. Applying the lessons of the 15 years since independence, the Government

The leaders of the country must help shape and nurture an alternative economic system to guide young people's social and economic behaviour in desirable ways and to restore a shared identity and common goals.

needs to forge an inclusive path forward, one that will allow young people to help the country reap potential economic dividends through access to decent work opportunities to foster sustainable growth. Timor-Leste has a rapidly expanding population that is marked by a youth bulge. There are approximately 20,000 new entrants into the labour force every year, while job opportunities available in the formal economy do not exceed 2,000 a year (ILO 2016).

Human Development Report 2015 (UNDP 2015) and the Sustainable Development Goals (SDGs) point to a shift in thinking about the nature of work. From a human development perspective, the notion of work is broader and deeper than jobs or employment alone. Jobs provide income and support human dignity, participation and economic security. But the jobs framework fails to capture many kinds of work that have important human development implications, such as care work, voluntary work and creative work. This is valuable in the case of Timor-Leste because too many in the population seem to equate work with wage and salary employment, forgetting that a great deal of valuable work is unremunerated—bearing children,

raising families, growing household subsistence crops—and that the country would collapse without such social contributions.

The link between work and human development is synergistic. Work enhances human development by providing incomes and livelihoods, by reducing poverty and by ensuring equitable growth. Human development by enhancing health, knowledge, skills and awareness increases human capital and broadens opportunities and choices (figure 3.1).

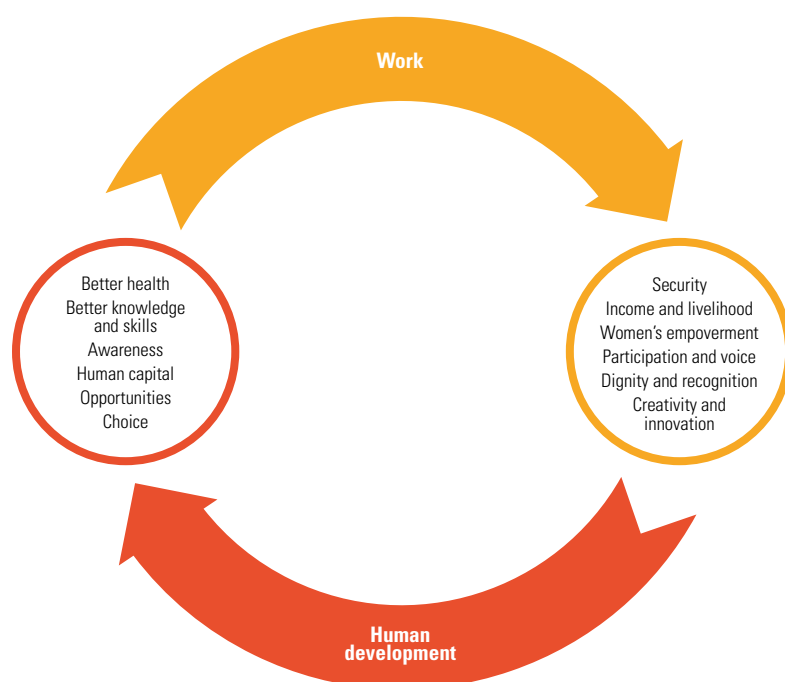
Work also strengthens societies. Human beings working together not only increase material well-being, they also accumulate a wide body of knowledge that is the basis for cultures and civilizations. And when all this work is environmentally friendly, the benefits extend across generations. Ultimately, work unleashes human potential, human creativity and the human spirit.

The link between work and human development is not automatic, however. It depends on the quality of work, the conditions of work, the societal value of work and so on. The quality of work also includes whether a job provides dignity and a sense of pride and whether it facilitates participation and interaction.

The link between work and human development is not automatic. It depends on the quality of work, the conditions of work, the societal value of work and so on.

FIGURE 3.1

Work and Human Development Are Synergistic



Source: Data of the Human Development Report Office.

Work strengthens its link with human development if it goes beyond individual benefits to contribute to shared social objectives, such as poverty reduction, sharing prosperity, social cohesion, culture and civilization.

To strengthen the link with human development, work also has to enhance environmental sustainability. Work strengthens its link with human development if it goes beyond individual benefits to contribute to shared social objectives, such as poverty reduction, sharing prosperity, social cohesion, culture and civilization.

The solidarity economy refers to those parts of an economy that aim to redress social and economic inequalities in society. The approach became popular in Latin America in the 1990s when the region was facing an economic crisis and high unemployment rates. People looking for alternative sources of income began to cluster into groups, co-operatives and associations to establish economic ventures that would benefit the community (Nobrega 2013). The solidarity economy is considered among many international development experts as a viable means to seek to reduce poverty.

The types of organizations generally included under the heading of the solidarity economy are co-operatives, credit unions, microfinance institutions, fair trade initiatives, social businesses, and community-supported agricultural associations. None of these institutions requires a great deal of initial investment, though they all require a great deal of skill to make them successful.

Solidarity economy institutions may each be seen as social enterprises in that they have a social mission that balances social and economic sustainability. In line with Sen's (1999) approach, the mission-related impact is the central criterion for success, not merely wealth creation (box 3.1).

Social enterprises are typically understood to constitute the production of goods or the provision of services that benefit society. They are cause-driven entities and have social aims; they limit the distribution of profits or are non-profit and are independent of the state, and their internal organization is inclusive and participatory (Lipparini 2015). Globally, social enterprises constitute a small share of the economy, though they are perceived as an important channel for fulfilling the social development needs of communities that might otherwise struggle to obtain certain goods or services (Bank 2013).

In Timor-Leste, young school-leavers generally prefer employment in the public or private sector, but the opportunities for such jobs are limited. Meanwhile, agriculture is viewed as a last resort. These attitudes need to shift to open up new opportunities, not only to engage youth in economically productive activities, but to contribute to rural development in a country that is principally dependent on agriculture for livelihoods.

This chapter looks at development strategies and options for an enabling ecosystem that can help young people to transform themselves from job-seekers to work creators. It considers how to respond to the growing youth bulge and, in particular, how to promote youth well-being and a transition towards a demographic dividend through social enterprise development in rural areas.

This chapter starts with an analysis of youth in work and not in work based on census data and other sources, disaggregated by age, gender and educational attainment. This provides the contextual backdrop for the

In Timor-Leste, young school-leavers generally prefer employment in the public or private sector, but the opportunities for such jobs are limited.

BOX 3.1

Amartya Sen and the Solidarity Economy

Amartya Sen was one of the originators of the concept of the solidarity economy. The concept emerges from his idea that individuals are more than merely economic actors. Most economists assume that people are selfish and that people try to maximize their own interests all the time so their value to society, or utility, is usually determined by the quantities of goods and services they consume (based on their income). Sen's capability approach aims to capture human well-being not purely by income, but by way of the opportunities available to individuals to do and to

be what they have reason to value (Sen 1999). What people can do and can be is not limited to what they are doing or being now, but what they may choose to do or to be in the future. Choice and freedom are therefore crucial, including political freedom, economic freedom and other freedoms (Matsui and Ikemoto 2015).

Because the amount of information that can be conveyed through market mechanisms is so limited, Sen would argue that one cannot achieve a desirable society by relying solely on market mechanisms.

Source: Hill 2016.



subsequent examination of important issues involving youth, work and development. The following section reviews some of the diverse strategies and initiatives that are contributing to economic development and job creation in Timor-Leste or that have the potential to do so. This includes the role of the private and non-governmental sector, major Government investments in large-scale development, the importance of migration as a source of income for young people, and social enterprise development. In the subsequent section, the potential of young people to contribute to economic diversification and rural development is considered from the perspective of entrepreneurship opportunities in tourism and agricultural development that can emerge in an ecosystem that promotes social solidarity, financial inclusion and skills development among youth.

Youth engagement in work

The period of youth is often defined as the period of transition from education to work. In countries in which there is a large youth population and limited work opportunities, people may be considered as youth up to 30 or 35 years of age. The United Nations, for statistical purposes, defines youth as persons between the ages of 15 and 24 years, without prejudice to other definitions by member states.²¹

Defining youth as people in the transition from education to work is to understand youth as a stage in life. However, in Timor-Leste, there is also a traditional view whereby *jouventude* (youth) refers to unmarried people. This conceptualization of youth has a social impact because men generally marry much later than women. According to the 2015 census, 61 percent of women ages between 20 and 24 were married as of 2015. In contrast, only 14 percent of men in the same age category were married. While the age at first marriage among people ages up to 19 is 6 percent among married men, the share among married women is significantly higher, at 25 percent (DGE 2015). This may mean that married women, although young, may often be socially excluded from activities that are oriented towards youth.

Since independence in 2002, the message that both girls and boys should attend school has been largely accepted by the community,

particularly in the case of primary school. It continues to be common for young women to be taken out of the education system at puberty, especially if the school is far away and parents have concerns about the safety and sexual security of their daughters. Children normally attend primary school in the local village, but must often move to a district or subdistrict centre to attend pre-secondary school (now incorporated into basic education to include grades 1–9). Furthermore, nearly half of all secondary school students are in Dili, the capital, while most of the rest of the secondary schools are located in larger towns. This results in many rural children leaving home to attend post-primary education, staying with extended family members or other families or even living independently (Wigglesworth 2016). Young people studying away from home may have a high degree of independence, especially boys, who face less control of their movements by their families. Once in an urban area, they are likely to stay there to look for work or training opportunities after they have finished their studies.

The expectations of those who have attended secondary school are high, and the idea of employment is strongly linked to work in the public sector (Ostergaard 2005). Education was not available to the majority of the population prior to the Indonesian occupation, and Timorese young people recall that, during the occupation, Indonesian teachers used to encourage children to attend school, saying that education would enable them get a government job (Wigglesworth 2016). Today, secondary education is expected to be a passport to a job. However, this expectation is unrealistic because around 18,000 children leave school every year with skills that are inadequate relative to the needs of the labour market and the new jobs available. Even in Dili, the available jobs number only in the low hundreds.²²

In rural areas, parents often pay school fees in the expectation that their children will bring an income into the family and that education will provide a better life than marginal subsistence. Thus, returning to work on the family farm does not meet the expectations of either parents or youth. In the districts, where there are fewer formal employment opportunities than in Dili, agricultural work and other forms of casual paid work have been excluded from people's concept of employment (Wigglesworth 2016).

Secondary education is expected to be a passport to a job. However, this expectation is unrealistic because around 18,000 children leave school every year with skills that are inadequate relative to the needs of the labour market and the new jobs available.

Many young people, particularly men, migrate to Dili or the capitals of their districts, in the hope of finding opportunities in education, training, or work.

Young women are more likely to be kept at home to undertake domestic duties.

Many young people, particularly men, migrate to Dili or the capitals of their districts, in the hope of finding opportunities in education, training, or work. According to the 2015 census, around 65 percent of internal migrants who had pursued education or employment opportunities elsewhere migrated to Dili (DGE 2015). More than one third of the men in Dili, for instance, have reported that they migrated there from other districts. The reason for the migration among more than 50 percent of these men was education or employment. While education was still a predominant reason for migration among young women, the trigger almost half the time was related to marriage or the need to follow family members (DGE 2015). Young women are more likely to be kept at home to undertake domestic duties. In reality, street trading and driving taxis or minibuses have become a major income-generating activity among young Timorese men with few skills. Such activities are considered temporary, transitional work, while one awaits the desired office job (Wigglesworth 2016).

Many young people have also settled in small towns. Most of Timor-Leste's 13 districts have local organizations that offer computer skills training and English classes that are popular because both skills are strongly associated with better chances of obtaining employment. It is also not uncommon for young people to volunteer at local non-governmental organizations (NGOs) as a way to build skills and connections that may increase their opportunities for paid work in future (Wigglesworth 2010). The towns offer more reliable mobile services than rural areas, and mobile phones have become an important means among youth to socialize with their friends through social media and a way to hear about job openings and possibilities for training.

Transition from school to work

Census data of 2015 show that, among the population, 56 percent of people ages 15–64 were economically active, either working or looking for work in 2015 (DGE 2015; figure 3.2).²³ The other 44 percent were inactive, that is, including students, pensioners, and significant numbers of women as home-makers.

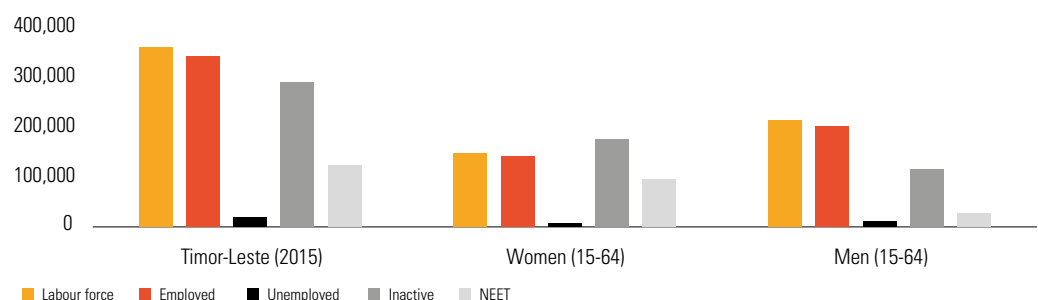
The lowest labour force participation rates are found in Dili (46 percent) because the share of young people who are students is much higher in Dili than elsewhere (Ferreira 2016). In 2010–2015, there was a 23 percent increase in the total working-age population in Dili. In 2015, around 38 percent of the total population of Dili was represented by migrants. Close to 39 percent of the working-age population of the country moved to Dili for economic reasons or for education (ILO 2016).

The transition from education to employment among youth is illustrated in figure 3.3. The information is drawn from Curtain (2012). An equivalent report is not yet available based on 2015 census data; however, where useful, the 2015 census data are included. Figure 3.4 shows that the share of young men in education or training declined from 72 percent among 15- to 19-year-olds to 39 percent among 20- to 24-year-olds and 7 percent among 25- to 29-year-olds, while the shares in employment rose from 17 percent among 15- to 19-year-olds to 44 percent among 20- to 24-year-olds and 73 percent among 25- to 29-year-olds.

Figure 3.4 shows that the corresponding shares of young women in education or training decreased more quickly, from 72 percent among 15- to 19-year-olds to 27 percent among 20- to 24-year-olds and 7 percent

FIGURE 3.2

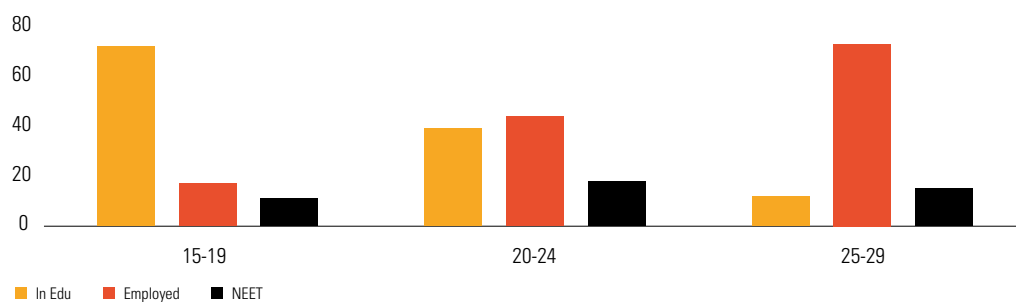
Employment Status, Population Ages 15–64, by Gender, 2015



Note: NEET = not in education, employment, or training.

FIGURE 3.3

Young Men in Education, Work, or NEET

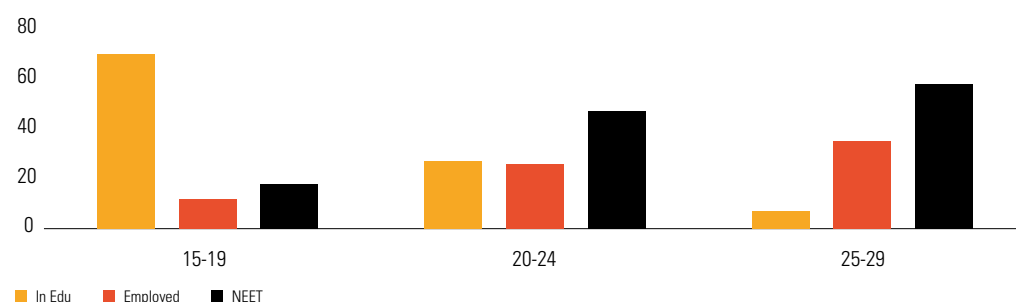


Source: Curtain 2012.

Note: NEET = not in education, employment, or training.

FIGURE 3.4

Young Women in Education, Work, or NEET



Source: Curtain 2012.

among 25- to 29-year-olds, while the shares in employment increased much more slowly, from 12 percent among the 15–19 age group to 26 percent among the 20–24 age group and 35 percent among the 25–29 age group. Thus, the share of women in employment by age 29 was only half the corresponding share of young men. Moreover, while the share not in education, employment, or training (NEET) among young men peaked at ages 20–24, the peak among young women was at ages 25–29, and the NEET share among young women already exceeded the share in education or work by age 20, indicating significantly reduced opportunities among young women relative to young men.

Youth and unemployment

In 2010, young people ages 15–29 accounted for 70 percent of the 10 percent unemployed in the adult population (ages 15–64). By 2015, this share had not changed much. According to the 2015 census, young people

ages 15–34 represented 77 percent of the 9 percent unemployed in the adult population (DGE 2015). Table 3.1 shows that, in rural areas where job opportunities are limited, the unemployment rate was 23 percent among 15 to 19-year-olds in 2010, dropping to 17 percent among the 20–24 age group and 9 percent among the 25–29 age group. This reduction in the unemployment rate by age may have been influenced by job-seekers who had become discouraged and given up looking for work, thus becoming economically inactive. Because of the flow of young people to urban areas, particularly Dili, but also district centres, the urban unemployment rate reached 40 percent among the 15–19 age group, 33 percent among the 20–24 age group and 19 percent among 25 to 29-year-olds by 2010 (Curtain 2012). Although youth unemployment rates appeared to drop significantly in both rural and urban areas between 2010 and 2015, the unemployment rate among urban youth, particularly in the 15–24 age group, was still considerable, at 28 percent.

According to the 2015 census, young people ages 15–34 represented 77 percent of the 9 percent unemployed in the adult population.

TABLE 3.1

Unemployment Rates, Rural and Urban Youth, 2010 and 2015 (percent)

Age group	Rural Areas		Urban areas	
	2010	2015	2010	2015
15–19	23	9	40	28
20–24	17	8	33	24
25–29	9	5	19	12
30–34	3	3	11	7

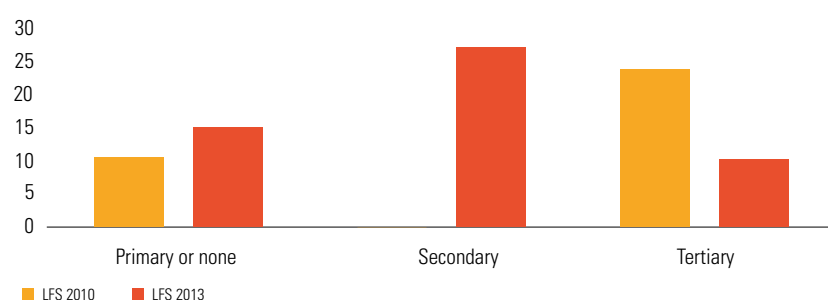
Source: GDE 2015.

Along with the general declining trend in youth unemployment, a decrease was also reported in the labour force participation rate among 15 to 34-year-olds, from 44 percent in 2010 to 41 percent in 2015. The rate among young men dropped by almost 10 percentage points, while young women's participation rose from 31 percent to 36 percent.

The methods used to calculate the labour force participation rate are different in the census and in the labour force surveys (GDE 2015; SEPFPOE and ILO 2016). While the census includes producers of foodstuffs in the labour force, the labour force surveys do not. According to the latter, labour force participation among youth ages 15–24 rose significantly, from 9 percent in 2010 to 14 percent in 2013. The main factor contributing to this expansion was the decreasing importance of subsistence foodstuff production, in which some 29,000 young people ages 15–24 were engaged in 2013, down from more than 41,000 in 2010. Across the country, the rising labour force participation rate among youth was accompanied by growing youth

Educational attainment and employment are strongly correlated.

FIGURE 3.5

Unemployment, by Educational Attainment, 2010–2013

Source: SEPFPOE and ILO 2016.

Note: LFS = labour force survey. The percentage of youth unemployment among young people with secondary educational attainment in 2010 is 0; hence, the blue bar in the middle is absent.

unemployment, which expanded from 21 percent in 2010 to 22 percent in 2013. Among young people with tertiary education, the unemployment rate declined, from 24 percent in 2010 to 10 percent in 2013 (figure 3.5).

Educational attainment and employment are strongly correlated (see below). Unemployment increased from 11 percent to 15 percent among primary-school-leavers and from 0 percent to 28 percent among secondary school-leavers. It fell from 24 percent to 10 percent among tertiary graduates, who thus exhibit a considerable advantage relative to primary and secondary school-leavers.

Gender imbalance among job-seekers

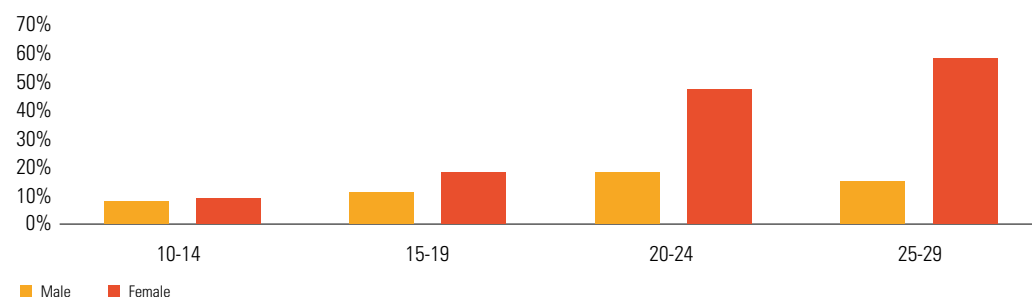
In 2015, the labour force participation rate among the 15–34 age group was 35 percent among women and 47 percent among men. The share of young people (ages 15–34) actively looking for work was also higher among men, at 9 percent, than women, at 7 percent.

Based on a definition of the employed as individuals who worked at least one hour for pay during the week prior to the survey or who worked in unpaid labour for an enterprise owned by the households in which they live, the NEET measure among young men and women is considered a valuable gauge of how young people are faring in the economy (Curtain 2012).²⁴ The NEET share among women represented more than half the 25–29 age group (figure 3.6). According to the 2013 Labour Force Survey, 26.5 percent of young women were in NEET, compared with 22.1 percent of young men (SEPFPOE and ILO 2016). The data also reveal large differences across districts, where NEET among women reached as high as 46.0 percent in Bobonaro.

Young women who are not in employment or in education are likely to be engaged in housework, and some of these may want to work, but have given up looking for work. In 2013, family duties were cited as the reason among 39.6 percent of the women who were economically inactive (SEPFPOE and ILO 2016). Figure 3.7 shows the shares of young men and women who were mainly engaged in housework in 2010. In Timor-Leste, there is a substantial gender division in labour, and growing food and selling own-produced food in local markets may not be considered as work, but as a contribution to the household and therefore as an extension of women's role in doing housework. The number of people

FIGURE 3.6

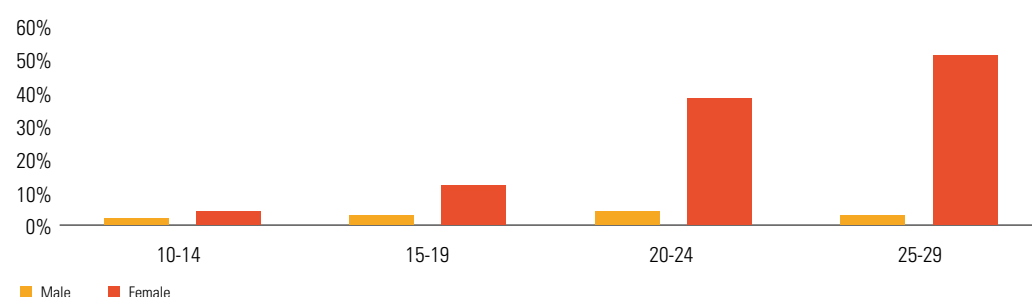
Share of Men and Women in NEET, by Youth Age Group, 2010



Source: Curtain 2012

FIGURE 3.7

Share of Men and Women Engaged in Housework, by Youth Age Group, 2010



Source: Curtain 2012

who were not able to work because they were fulfilling family duties increased significantly in 2010–2013, from 128,466 to 204,738 (ILO 2016). Women are clearly disproportionately disadvantaged and limited in their opportunities for further study and work. Furthermore, this disadvantage starts in the teenage years and is associated with girls who are kept at home for household duties (see below).

Types of employment and vulnerable work

Vulnerable employment is defined by the International Labour Organization (ILO) as the sum of own-account workers and contributing family workers (ILO 2010). These people are less likely to work under formal arrangements and are also less likely to enjoy decent working conditions, adequate social security and voice through effective representation. In contrast, in the solidarity economy, activities such as co-operatives and social enterprises are, by nature, embedded in the community, which offers greater security

and reduces vulnerabilities. In 2013, 23 percent of young women were in vulnerable employment compared with 26 percent of young men.

A key factor in employment status is educational attainment. The shares of men and women ages 24–29 at each level of educational attainment who are employees, self-employed, or contributing to a household enterprise are shown in table 3.3. Young people with

Women are clearly disproportionately disadvantaged and limited in their opportunities for further study and work.

TABLE 3.2

Type of Work, by Youth Age Group, 2013 (percent)

Age	Employee	Employer	Own-account worker	Contributing family worker	Total employed
Men					
15–24	3.74	0.29	4.03	4.52	12.59
25–34	28.47	1.68	11.36	6.03	47.69
Women					
15–24	1.83	0.41	3.87	3.36	9.46
25–34	9.91	0.13	9.79	5.65	25.47

Source: SEPFPOE and ILO 2016.

TABLE 3.3

Share of Employed Ages 24–29, by Gender and Educational Attainment (percent)

Employment status	Primary	Pre-secondary	Secondary	Polytechnic, diploma	University	Non-formal
Employed						
Men	25	33	49	73	72	41
Women	6	7	25	57	55	19
Self-employed or household enterprise						
Men	60	51	29	13	10	43
Women	24	20	13	10	5	25

Source: Curtain 2012.

Timorese industries do not have the confidence in the quality of recent graduates or seasonal workers. Some business owners simply say they would employ anyone off the street who demonstrates strong motivation and discipline.

primary or pre-secondary educational attainment are more likely to be self-employed or working in a household enterprise. Secondary graduates and above are more likely to be in paid employment. Table 3.3 shows that women have a much smaller chance of obtaining work even when they have higher levels of education.

Skills development to create jobs

The lack of jobs has been a perennial issue in Timor-Leste. The country underwent a major political crisis in 2007–2008. Many young men who were experiencing inadequate access to education and the labour market engaged in gang violence. Since then, the Government has supported social programmes such as social benefits for veterans, the vulnerable and the elderly financed through the petroleum revenues that have injected more cash into the local economy. A considerable amount of aid has also been channelled towards youth employment and training. The Australian Aid Programme in Timor-Leste has funded activities related to young people, jobs, and competency standards and accreditation processes for vocational training and employment. It has also supported the Youth Employment Promotion Programme implemented by the ILO to provide job counselling and skills training to Timorese looking for work and work experience through short-term jobs in public works, such as rehabilitating and maintaining the country's rural roads using temporary local labour, particularly youth. Of the 24,494 youth registered by employment centres supported by the programme, only 4.7 percent were successfully linked to

employment opportunities. However, the labour-intensive public works component provided temporary employment, averaging one month for each employee, for 78,000 young people (less than 30 years of age), 27 percent of whom were women (DFAT 2014).²⁵

The assessment was conducted before the emergence of a fully functioning formal technical and vocational education and training (TVET) system in Timor-Leste (see chapter 4) and thus does not reflect the value of vocational education for employment. This is particularly so because the young people registered at employment centres have not yet necessarily received vocational training. A tracer report at the end of 2014 demonstrates, for example, much more promising results: 46 percent of technical training graduates were found to have obtained jobs following graduation (SEPFOP 2014b).

According to Timor-Leste's 2014 Enterprise and Skills Survey, 82 percent of employers reported that first-time job-seekers coming from secondary schools lack job-specific skills and qualifications, while 71 percent stated that youth lack general life and work experience, and 50 percent reported that the major limitations among job-seekers who had received training at technical and vocational schools was low literacy and numeracy skills (SEPFOP 2014a).

Timorese industries do not have the confidence in the quality of recent graduates or seasonal workers. Some business owners simply say they would employ anyone off the street who demonstrates strong motivation and discipline. They prefer training people on the job rather than recruiting a fresh graduate from a vocational training



centre. They simply don't see the value in it. This is a real problem. I don't think there is enough collaboration between industry and vocational training centres.

(Timor-Leste 2016 Youth Well-Being Survey)

In 2007–2011, the US Agency for International Development engaged in a youth work-readiness programme, *Prepara Ami ba Servisu* (Preparing Us for Work), in Timor-Leste. The primary objective was to provide out-of-school men and women ages 16–30 with workforce development training in their rural communities to reduce urban migration. The job-readiness preparation programme combined formal instruction with practical on-the-job training. It partnered with 14 local NGOs to provide training to over 2,000 youth—54 percent were women—in nine of the 13 districts (EDC 2010). It helped focus the attention of the Government and local NGO partners on rural youth, supported a national training initiative on soft skills and entrepreneurship, encouraged employers to hire young workers, linking youth with the regional centres for employment and guidance counselling of the Sekretaria Estadu Formasaun Profisional no Empregu (Secretariat of State of Professional Training and Employment), and promoted equal opportunities among young men and women (EDC no date).

Established in 2004, the Instituto de Apoio ao Desenvolvimento Empresarial (Business Development Support Institute) is an autonomous institution providing assistance to new and developing businesses in Timor-Leste. It supplies business training and support services by offering training and counselling sessions for start-ups, women and young entrepreneurs in various business-related areas, such as marketing, business innovation and planning.

In the past, the focus of the Secretariat of State for Youth and Sports has been more on youth development initiatives that support building life skills and civic education. Recently, the focus has shifted to supporting entrepreneurship and income generation. The entrepreneurship programme, which was launched in 2014, is being implemented in five districts. National youth centres help establish youth groups that then submit proposals for funding to the secretariat. The project proposals often focus on agriculture, aquaculture and livestock. There have been 30 youth groups that have benefited from this

initiative, which distributed around \$9,000 per year. In 2017, the plan was to train two or three individuals from each of the five districts to become entrepreneurship motivators and trainers.

The secretariat has also signed a memorandum of understanding with the Ministry of Youth and Sports in Indonesia to promote collaboration in learning from successes and failures in entrepreneurship, self-employment and income-generating initiatives implemented in the region.

Jointly funded by Irish Aid and the New Zealand Agency for International Development, the ILO Business Opportunities and Support Services Project works in partnership with the Business Development Support Institute to deliver business development services to microenterprises and small and medium enterprises (SMEs), unlock business opportunities by developing functional value chains in specific sectors and promote better coordination and alignment in private sector initiatives. The Business Development Support Institute organizes annual innovative business plan competitions whereby winners are provided with training and business advisory services, particularly in generating business ideas, management and finance. Several successful social enterprises have emerged following these competitions that seek to reduce food imports.

Knua Juventude Fila-Liman, a one-stop shop youth centre, is the product of a collaborative effort between the United Nations Development Programme (UNDP), the Secretariat of State for Vocational Training Policy and Employment (SEPFPOPE), the Business Development Support Institute, the Serviços de Registo e Verificação Empresarial (Registry and Business Verification Service), the Central Bank of Timor-Leste, the main government agencies with programmes focused on employability, entrepreneurship and finance, and TELEMOR, a major telecommunication company. Located in central Dili, the centre was officially launched on 16 August 2017 by the former prime minister of Timor-Leste, Rui Maria de Araújo. It focuses on two pillars, youth opportunities and youth voices, and provides holistic services aimed at encouraging social entrepreneurship among youth, increased employability and youth engagement in decision-making. The activities run by UNDP and several contributing

In 2007–2011, *Prepara Ami ba Servisu* (Preparing Us for Work) provided out-of-school men and women ages 16–30 with workforce development training in their rural communities to reduce urban migration. The job-readiness preparation programme combined formal instruction with practical on-the-job training.

Although work skills are being developed, permanent jobs remain elusive for most young people. The number of available jobs has been small relative to the large size of the cohort of youth leaving formal education in search of work each year.

partners, such as Engineers without Borders, Catalpa International, the Secretariat of State for Youth and Sports, Bee Lafaek, and the US Agency for International Development, include social business camps, business incubation, skills development training, job fairs, counselling and referral, and peer support. These activities focus on providing support all along the entrepreneurship value chain, from ideas to financing, including legal and technical assistance. The centre also provides training, seminars and virtual dialogue to develop research and leadership skills and to promote youth engagement in decision-making. This is an innovative initiative to enable youth to access a variety of government services and information in one place. If this initiative is successful, there would certainly be a need to replicate similar venues in the districts to allow more youth to access information and skills development opportunities related to social entrepreneurship.

Although work skills are being developed, permanent jobs remain elusive for most young people. The number of available jobs has been small relative to the large size of the cohort of youth leaving formal education in search of work each year. However, youth who have participated in skills development programmes have acquired basic skills that should become good building-blocks for work in the future.

Current avenues for work

Agriculture and rural development

Timor-Leste is an infant economy dominated by small landholder subsistence farmers and characterized by limited infrastructure and a small formal sector (Inder and Cornwell 2016). Subsistence agriculture forms the backbone of the household economy; more than half the employed population depends on agriculture as the source of livelihoods. Agriculture is the main occupation of 63 percent of men and 66 percent of women. However, it is mostly a subsistence activity. According to the 2015 census, fewer than 3 percent of households focus mainly on sales of agricultural goods, suggesting that the commercial agricultural sector is extremely small.

Low productivity and difficult access to markets have generated widespread seasonal food insecurity. Among under-5-year-olds, 60 percent have experienced significant

malnutrition, while stunting affects more than half the population.²⁶ Apart from its clear relevance to food security, the agricultural sector provides a source of income in rural areas and supplies raw materials (from crop surpluses and natural resources) for agroprocessing and agribusiness. The Government believes the sector has huge potential to help address major national problems, including unemployment and underemployment among youth (MED 2016). However, the investment in agriculture was less than 2 percent of the state budget in 2016.

Youth involvement in agriculture is declining because young people have been rejecting the household tradition of subsistence farming. From 2010 to 2013, the size of the labour force rose from 150,900 to 213,200, but the number of subsistence foodstuff producers fell from 206,300 to 178,900 (SEPFOPE and ILO 2016). A characteristic of subsistence farming is low productivity and risk adverse decision-making that is based on household needs more than maximizing output. But agriculture is essential for food production; so farming must be made more productive and also more attractive to young people.

Coffee accounts for 95 percent of non-oil exports. It is the country's second-largest export, after oil. It is estimated to provide some income to about 30 percent of all households (ADB 2016). However, one third of the country's coffee trees are thought to be unproductive, withered by age and neglect; others yield only a fraction of what should be achievable. Growers have had some success in establishing their image as producers of a high-end, shade-grown product and export mainly to markets in the United States and Europe. However, coffee exports are small in quantity and reach only \$15.8 million—or approximately 1 percent—of the country's annual budget. Coffee farmers are estimated to produce only about a quarter of the quantities that were shipped during the industry's colonial days.

While there is great potential for productivity growth and job creation in the coffee industry, there is a need for an integrated approach to increase youth engagement in the agricultural sector, particularly in processing and value addition and in achieving the adoption of sustainable and effective agricultural practices on a large scale. There are some initiatives aimed at improving youth engagement in the coffee industry. The Asian Development Bank, for instance, has

Agriculture is the main occupation of 63 percent of men and 66 percent of women. However, it is mostly a subsistence activity.



supported a young barista competition at the country's annual coffee celebration, Festival Kafe Timor 2017. There are also plans for an innovative reality television show aimed at a young audience, *Fila fali ba to'os* (Back to the Farm), which is to be aired in 2018.

The shift from low productivity to higher productivity requires a reallocation of economic activity across broad economic sectors. A crucial element in this process is the movement of labour from less productive to more productive sectors of the economy (ILO 2016).

“Improving productivity comes almost exclusively from learning”, according to Inder and Cornwell (2016, p. 33). As in other post-conflict countries, the majority of adults have had little exposure to quality formal education or employment; thus, the culture of business and entrepreneurship needs to be established, a process that takes time and deliberate initiative (Inder and Cornwell 2016). Key factors in the transformation of an economy based on subsistence is leveraging knowledge, increasing labour productivity and nurturing entrepreneurship, but attention has to be paid to the types of economic activities that are supported and how wealth is redistributed to reduce poverty (Inder and Cornwell 2016). In Timor-Leste, many young people have experienced the misfortune of being educated during a period of transition in the education system from the Indonesian administration to the fledgling Ministry of Education after 2002. The widespread destruction of infrastructure, including schools, in 1999 and the departure of the Indonesian teachers resulted in makeshift schooling in the early years of independence. Young graduates without any teaching qualifications became school teachers, though they had studied within the hierarchical Indonesian education system, which discourages critical thinking and initiative. This was the kind of educational model that Paulo Freire (1972) described as banking education or passive education, whereby students are not encouraged to question, but simply copy lessons by rote. Freire believed that learning for change requires a starting point within the context of the existing knowledge and environment of the participants. While this philosophy has been implemented in non-formal education in Timor-Leste for many years, the formal education system of the Portuguese colonizers and the Indonesians failed to recognize

the value of the Timorese culture and way of life. Education was therefore aimed at fulfilling functions in a modern administration and economy. Even agricultural students at Universidade Nacional Timor-Lorosa'e (National University of Timor-Leste, UNTL) graduate ill-equipped to support traditional agricultural systems because the curriculum does not cover the crops that are widely grown in the country (Janes, da Costa, and Dryden 2003). So, formal education has encouraged youth to prepare for formal urban work and has not skilled them to promote development within their home environment.

Despite their preferences for office jobs, most youth rely on farming for livelihoods and sources of income; market stalls and produce sales are the major source of work among young people (Curtain 2012). Finding a reliable livelihood is a major element of the transition to independence among youth, and many youth who remain in rural areas are given land to work by their families, traditionally only the young men, although this is starting to change. The support for entrepreneurship initiatives in rural communities could transform Timorese agriculture, enabling potential economic opportunity to be realized. As active contributors in the community, young people who contribute to meeting community needs, such as accessing markets, will benefit from their improved community status and greater community vitality and well-being.

The private sector

The private sector is at an early stage of development. With the exception of small amounts of coffee, Timor-Leste has virtually no non-oil merchandise exports. Business activity is constrained by limited human capital, poor quality infrastructure and gaps in the basic legal framework for commerce. The public sector dominates the economy, providing approximately half of formal employment in 2013 and spending an equivalent of 99 percent of non-oil GDP in 2014 (ADB 2016).

Although the private sector employs over three times more people than NGOs, its relative share is small in the economy and mostly concentrated in urban areas, especially Dili. According to the 2015 census, 4.8 percent of the labour force was employed in the private sector, a decline from 11.5 percent in 2010 (DGE 2015). The share was only 2.4 percent in rural areas in 2015. The Registry

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and Business Verification Service also reports a declining trend in the number of newly registered companies, from 1,549 new firms registered during the first three months of 2015 to 928 in the same period in 2017. Moreover, the vast majority of registered firms are *empresários em nome individual*, that is, firms that are registered bearing the names of individuals, demonstrating that small companies dominate in the country.

There are many challenges hindering the private sector. Women are underrepresented as owners of formal businesses and as wage-earners. Households and businesses have limited access to finance and financial services. Those on low incomes cannot save to invest, pay bills, or exit subsistence living. Entrepreneurs and firms cannot finance investment and productivity improvements. Access to skilled labour is a major concern for businesses operating in the country. Workforce development is a political priority, but the system's capacity to deliver results remains weak.

A vigorous private sector is needed to grow and diversify the economy. The nation currently ranks 178th among 190 countries on the World Bank Ease of Doing Business measure.²⁷ It takes almost 20 times more per capita income to start a business in Timor-Leste compared with countries in East Asia and the Pacific region. The Government has introduced several initiatives to improve the investment climate, including establishing an open trade and investment regime, opening the telecommunication market to competition and streamlining the business registration process. Prepared with the assistance of EY, the Government launched "Timor-Leste Investment Guide" in May 2017 (EY 2017). The guide is designed as a tool to help national and foreign investors understand the opportunities available in the country and promote private sector development. However, much more needs to be done to support the growth of a healthy private sector that can promote formal employment among youth. This includes a clear, trouble-free legal and regulatory environment, incentives for investing in viable non-oil sectors, transparent public institutions and respect for the rule of law. Putting these measures in place would open up space for innovation and partnership. Making the private sector a partner rather than a client or outside actor in Timor-Leste's development process would be an important factor. While some private sector companies

are only seeking Government contracts and do not reinvest their earnings in the country's development, others do invest for the future in initiatives that create jobs and positive economic ripple effects. There is a need to incentivize those private sector actors who invest in endeavours that represent positive contributions to the country's future. Private sector development is also an important vehicle to upskill the workforce with much-needed business skills and exposure to innovation and technology.

Large-scale infrastructure development

Most Government-sponsored economic development activities in Timor-Leste in recent years have been large-scale initiatives, such as the roll-out of a national electricity grid in 2010–2012, the Special Zones for Social Market Economy, and the Tasi Mane South Coast Development Programme.

The location of the special zones was selected to favour Oecussi-Ambeno District because of the enclave's geographical isolation and chronically low development indicators. The economic zone was given special status in July 2014 when the presidency of the Oecussi-Ambeno Special Administrative Region was assigned to Dr Mari Alkatiri, the first Prime Minister of independent Timor-Leste and the current Prime Minister of the Seventh Constitutional Government. The establishment of the special zones and of the Special Administrative Region is a clear sign of the Government's willingness and commitment to use a new policy instrument, the Special Zone for Social Market Economy, to reduce poverty in Oecussi-Ambeno and improve overall social and economic well-being (UNDP 2017). However, the local community has expressed concerns regarding the lack of consultation between district government authorities and residents. Good development practice requires open consultation with local people and respect for their knowledge of local practices and the environment, so that new practices can be built on existing knowledge.

The national budget of Timor-Leste is largely drawn from royalties from gas and oil exploration in the Timor Sea, resources that are currently piped to Australia for processing. In an attempt to attract the oil and gas industry to develop as yet unexploited

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reserves in the Timor Sea, the Government is planning a south coast development programme to service the industry. The proposed programme, the Tasi Mane South Coast Development Programme, would include construction of a supply base, an airport and a port in Suai, the capital of Cova Lima District, that would be linked by highway to a petroleum refinery in Betano and to Same, both in Manufahi District, and to a natural gas plant in Viqueque District to the east. The Government has taken possession of the land for the supply base, including hamlets and agricultural land, in exchange for money compensation. Prefabricated homes have been imported to provide new housing for the relocated communities, though the homes have been assembled close together, allowing little room for home gardens. The contract for the supply base is still under negotiation.

The construction of the airport facilities in Suai has created opportunities for unskilled workers. Local workers are said to account for 70 percent of the construction workforce (10 women out of 220 local employment, nine of which were in domestic roles), but local communities hotly deny this.²⁸ Local women's groups have complained that Indonesian women were being brought in to cook for the official launch of the Suai airport project, depriving local women of economic opportunities.²⁹ A community on the land designated for the airport is being relocated. New housing is being built, employing 200 local workers (predominantly men), who are being trained in brickmaking and building skills that they can use in the future, thereby offering new skills to the community. Moreover, the houses are made using solid brick and are therefore much more durable than prefabricated houses; some have been designed to meet the particular needs of the families that will live in them.³⁰

The Tasi Mane programme has been both praised and criticized. Government officials maintain that it will enable economic development and provide employment opportunities to local people. Critics argue that the oil industry is notoriously bad at creating much-needed jobs, and others are concerned about the top-down approach of the development scheme (Bovensiepen, Filipe, and Freitas 2016). Of great concern among civil society organizations in Suai is the expenditure of cash project compensation income

for drinking and gambling. The large number of motorbikes that have been bought with compensation money is immediately evident in Suai. This is taken as a sign of the failure to recognize that, while people might feel rich now, their new wealth will dissipate if they do not find new livelihoods.³¹

Large-scale developments, such as the Special Zone for Social Market Economy and the Tasi Mane South Coast Development Programme, are viewed optimistically by the population. Most Timorese are employed as unskilled labour. Do the local people possess the skills needed to develop these projects once construction has been completed? How will the community members who have given up their land survive when the money runs out? Projects devised and managed from the capital may not adequately involve communities in consultations. The communities are often informed after the planning has been completed, and they are told how they will benefit. Thorough consultations with communities about programmes that have such profound effects on local livelihoods and lifestyles should be undertaken to ensure deeper community understanding of the consequences. Programmes designed and planned from outside the community may not create local jobs, particularly if the construction contracts are won by large international companies that are not accountable to the community. Only if there is a conscious effort to consider the needs of local people, such as through skills development in the Suai community housing project, are the expectations of the communities for local jobs likely to be fulfilled. In the near term, the challenge is to prioritize large-scale projects that foster inclusive and sustainable development and diversify the economy.

Overseas migration for work

As in many other Asian countries, labour emigration has become an important source of income among many Timorese. The Government has initiated bilateral programmes to promote temporary overseas migration among young people seeking work in Australia or the Republic of Korea in recognition of the limited jobs and high unemployment among the young. Migrant labour has become an important way for Timorese families to receive regular incomes through remittances.

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The deficit in gainful employment in Timor-Leste is highlighted by the flow of Timorese migrant workers to the United Kingdom.

The Government announced in August 2016 that, because the national unemployment rate had reached 11 percent and because few jobs were likely to appear in the private sector in Dili, SEPFOPE would seek opportunities for young people to work overseas.³²

Timor-Leste participates in two programmes to facilitate overseas work among Timorese. The first, the Republic of Korea Temporary Workers Programme, is a government-to-government initiative. Timor-Leste is the 15th Asian country to join the Korean Employment Permit System for youth ages 18–35. In 2009–2015, this programme enabled 1,886 young Timorese, 5 percent of whom were women, to work in Korea (Wigglesworth and Fonseca 2016). Another, more recent programme is the Australian Seasonal Workers Programme, which was launched in 2012 to fill low-skill seasonal vacancies (box 3.2). It has enabled almost 1,000 Timorese, 27 percent of whom are women (most ages 26–35), to perform seasonal work for a few months a year since 2012, according to SEPFOPE data. The value of the remittances sent to Timor-Leste are estimated by SEPFOPE at \$7 million in the case of Korea as of 2015 and \$3.5 million in the case of Australia as of 2016; the majority of the workers each send more than \$600 a month to their families (da Cruz Pui, da Costa, and Powell 2016). It is estimated that labour is Timor-Leste's third largest export after oil and coffee.

The deficit in gainful employment in Timor-Leste is highlighted by the flow of Timorese migrant workers to the United

Kingdom. An estimated 16,000 Timorese are working there. Unlike the programmes in Australia and Korea, finding work in the United Kingdom is an individual enterprise without government support. Indeed, many Timorese are working there on Portuguese passports and are therefore not entitled to consular assistance. Many young Timorese, including university graduates, leave Timor-Leste for the United Kingdom to work at meat processing plants, kitchen services in restaurants and warehouse labour in supermarket chains (Wigglesworth 2017).

Recent research suggests that many migrant workers are unlikely to realize their economic ambitions upon their return to Timor-Leste. A study of 30 returning workers finds that a lack of business skills and the demands for cash by family members for customary ceremonies are the main constraints on realizing local business investment (Wigglesworth and Fonseca 2016). However, the workers believed they had learned technical skills that were useful for the country. Thus, after working in Korea, two men launched construction businesses; two women undertook credit services, and others set up small shops in their communities. One worker who had been employed in a fish hatchery in Korea considered this an important skill and wanted to set up a similar business in Timor-Leste. An agricultural worker who learned about mushroom growing wanted to use that skill in Timor-Leste. However, these workers and many others reported that they lacked either the business

BOX 3.2

Interview: Workforce Development and Seasonal Workers Programme, Australia

The Workforce Development Programme of the Australian Department of Foreign Affairs and Trade currently covers (a) Australia Awards, a programme offering international scholarships and fellowships for study in Australia; (b) skills development and employment; and (c) English language training. The main focus of the programme is on skills development and jobs for seasonal workers. The seasonal workers programme was launched in 2011. In 2016, around 200 people from Timor-Leste were involved. The goal is to reach 500 a year by enhancing the skills and the productivity of Timorese workers. In the past, the people who went to Australia were ill-prepared. One possibility is to link the programme with a training centre. Once students

graduate, they can gain work experience by participating in the seasonal workers programme. The two main areas of employment among Timorese in the programme have been fruit picking and home care. The Timorese have a much better reputation than seasonal workers from other countries in these areas. Another goal is to equip more Timorese to take on management positions. Raising the demand within Australian industry for Timorese workers is challenging, but there has been progress. Programme authorities are also trying to identify better selection criteria for seasonal workers. The main constraint among seasonal workers is the poor quality of education, which is reflected in limited basic literacy and numeracy skills.

Source: Timor-Leste 2016 Youth Well-Being Survey.

The Permaculture-Agroecology System in the Basic Education Curriculum

The permaculture-agroecology system is not a new concept, but it has been formally introduced in the education system in Timor-Leste only recently. In 2013, the Ministry of Education began reforming the nationwide basic education curriculum for grades 1–6. School permaculture-agroecology gardens had been part of the arts and culture discipline. The organization behind the permaculture-agroecology movement is Permatil, which was established in 2002. The Permatil school garden programme has now become part of the formal education system in Timor-Leste. Nationwide,

1,415 schools have been targeted to create school gardens through the programme.

The goal of the garden programme is to help teachers and students learn how to grow a variety of seasonal foodcrops that can contribute to the school feeding programme. The programme involves a shift from passive classroom learning in activities outside the classroom, while adding beauty to the school landscape. Students and communities learn to copy the model in their home gardens to improve the health and nutrition of the wider family.

Source: Lemos 2016.

skills, business knowledge, or the financing required to establish businesses. Returning workers also believed they learned basic work skills such as being on time, working hard and achieving production targets (Wigglesworth and Fonseca 2016). Seasonal workers returning from Australia or the United Kingdom responded similarly. So, when young people return from working overseas, they face difficulty getting work because of the scarcity of jobs, but launching a business is also challenging. Nonetheless, having developed skills and learned good work habits, the returning migrants may have an advantage over youth who have not worked since leaving school. Most entrepreneurial innovation involves borrowing ideas and inspiration from what others are doing. The best way to see such innovation flourish is to provide the opportunity for business people to interact with others and to observe those who perform functions differently. That is why Timorese migrant workers who bring home new skills represent great potential for the spread of the solidarity economy and the development of social entrepreneurship.

Civil society organizations and co-operatives

NGOs have a social mission: they are not-for-profit and are therefore part of the solidarity economy that aligns social and economic objectives. They often build on local cultural values and contribute new ideas and new ways of operating to improve output. They have been involved in rural development activities since Timor-Leste's independence.

Young people are key participants in the formation and the work of NGOs. The influence and involvement of international aid agencies in emergency, rehabilitation and development programmes in the early years of independence (1999–2004) were accompanied by significant growth in civil society, from only 14 local NGOs in 1998 to over 200 registered by the end of 2001 (Wigglesworth 2016). The struggle for independence and of the donor-aid-driven economy during the early years of independence provided the context in which many civil society activists cultivated a high degree of motivation to achieve social development objectives and realize their commitment to national development (Wigglesworth 2016). Many more NGOs have formed since then, while others ceased operations when donors withdrew their programmes.

There are currently about 370 registered local NGOs. The share of employment in the NGO sector is 1.3 percent (DGE 2015). Although this seems negligible, NGOs in Timor-Leste have continued to play a key role in engaging local communities in development activities and influencing policy-making for sustainable development (Hunt and Wigglesworth 2014). For example, Permaculture Timor-Leste, or Permatil, has promoted permaculture methods to improve household farming, and the Ministry of Education has formally adopted a school gardens programme to encourage children to take an interest in food production (Wigglesworth 2016) (box 3.3).

Timorese migrant workers who bring home new skills represent great potential for the spread of the solidarity economy and the development of social entrepreneurship.



NGOs have provided opportunities for skills development for young people in rural areas through training, particularly in information technology (IT) and English, as well as for jobs by enabling volunteers to learn on-the-job skills. They have been instrumental in widening social inclusion, community participation and community decision-making, which are fundamental for meaningful citizenship.

Like NGOs, co-operatives are also a part of the solidarity economy and offer young people an entry point for participating in the economy. Article 138 of the Timorese Constitution recognizes the importance of co-operatives and guarantees their development. The Timor-Leste Strategic Development Plan 2011–2030 calls for the development of a policy framework to establish co-operatives among the vulnerable to create employment, income and training opportunities. Government leaders view the establishment of co-operatives as an instrument for economic diversification and growth in rural areas as well as a means to improve the rural credit base.

The Government recognizes the role of co-operatives in diversifying the economy, but more effort is needed to motivate youth to take part in these economic institutions. There are currently 87 credit unions, 17 agricultural co-operatives, 17 multi-purpose co-operatives and 5 fisheries co-operatives. The growth in co-operatives has been largely a result of a grant programme that provided start-up funding and grants for training, support and equipment. In the context of declining donor funding, it is important to realize six determining factors so that co-operatives may take root in the local economy. These include the following:

- The members must be committed to ownership of a co-operative organization.
- Human resources and capacity must be enhanced.
- Self-reliance must be nurtured.
- Co-operative policy and law have to be defined in an efficient and effective manner.
- Institutional capacity needs to be strengthened in all areas by designing various training programmes.
- The issue of financial literacy and access to finance must be resolved.

It is equally important to promote youth engagement in co-operatives to build the values of solidarity, trust and community

well-being. The Ministry of Education is in the process of developing a national curriculum that would not only focus on teaching co-operative values and principles, but also reinforce enterprises, jobs, self-reliance and self-development. This initiative is a positive step towards the inclusion of youth in the socio-economic development of the nation.

Social entrepreneurship and social businesses

An activity must meet two key criteria to be considered a social enterprise. First, it must become economically sustainable, that is, it must generate its own working capital and pay the wages of its workers. Second, its purpose must be to contribute to meeting a social need; it is not-for-profit in that it does not generate a surplus to be distributed to shareholders or directors. In a social enterprise, no individual should profit from the labour of others. Thus, profits over and above the working costs may be shared equally, ploughed back into the enterprise, or assigned to the community for other social activities.

A social enterprise is most effective if it reflects a combination of an intimate knowledge of and a concern for place with wider, non-local strategic networks to access financing, knowledge and advice (Korsgaard, Ferguson, and Gaddefors 2015). Because successful rural entrepreneurs typically use a localized resource base before seeking out non-local resources, entrepreneurs are not simply present in a location, they are embedded in a place. They have a strong understanding of the resources in the local context and how to access these resources, and they have a concern for the well-being of their local communities. The sense of place acts as an important enabler for the social entrepreneur.

The skill, energy and creativity of Timorese youth need to be harnessed through education and channelled into opportunities for social entrepreneurship. Local business ventures that seek to address social challenges can be a particularly rewarding source of sustainable incomes, offering a pathway into the formal economy, which helps to build and strengthen inclusive markets. Making inclusiveness a development priority and creating avenues for young people and businesses alike to make good while doing good is critical to the nation's success.

The Government recognizes the role of co-operatives in diversifying the economy, but more effort is needed to motivate youth to take part in these economic institutions.



Although not widespread, a number of social enterprises have been set up in Timor-Leste in recent years. InfoTimor was possibly the first not-for-profit enterprise in the country. It was established by social entrepreneur Andrew Mahar, a community organizer for over 25 years in Australia and in the Asia and Pacific region. InfoTimor focuses on capacity-building and using IT as the primary tool for the creation of positive social change. It has provided IT services and employment to young people in Baucau, the second-largest city of Timor-Leste, since 2008. The initiative has been a stepping-stone for young people seeking to build skills and engage in socially responsible work, while also earning wages. It has been successfully replicated in other districts, including Cova Lima, Dili and Liquiçá. InfoTimor was launched with \$2,000 start-up capital. Its success is evident. It employs 35 people, but over 1,000 people have worked at InfoTimor since it was founded, thereby gaining skills.³³

The Cova Lima Community Centre invited InfoTimor to help create an IT social enterprise in Suai, the capital of the Cova-Lima District. Training was provided by InfoTimor staff in 2009, who also assisted the community centre in setting up a computer maintenance workshop, software and hardware training, an Internet café and a satellite dish to deliver the Internet to the local community. The centre has since become a registered NGO and training organization. InfoTimor Cova Lima continues as a self-financing activity of the centre that is run by a team of trained and skilled computer technicians. It receives donated recycled computers from Australia for refurbishment and sale. It also repairs other computer hardware, runs classes for training in software and provides IT technical support and training to the Cova Lima District administration. Changes in the services offered by Timor Telecom, a mainstream telecommunications company, resulted in improvements in the Internet services in Suai. So, the Internet café is no longer necessary and has closed. However, it did provide an important service for several years. This illustrates that a social enterprise must have various income streams to be successful; if one activity is less profitable or has outlived its usefulness, then the business can be maintained by other activities. In Suai, the Cova Lima Community Centre

has become a key location for skills development among youth who attend classes, use the Internet facilities and gain experience as volunteers.

The social enterprise model has also been effective in preserving the skills behind the production of tais. In addition to marketing tais cloth for clothing, the model may be used to produce a range of new products, including bags, purses, decorated boxes and accessories. One of the enterprises involved in this effort is Kor Timor, which was originally supported by an Australian woman who wished to encourage local craft production.³⁴ It is now run by the local members, consisting of eighteen producers and four administrative and marketing specialists. According to an associate at the Kor Timor shop in Dili, the objective of the related organization is to raise the awareness of Timorese women about the importance of education and enhance the economic capacity of the organization's members to support education among children. It aims likewise to promote traditional weaving as part of the culture and identity of the Timorese people. The Kor Timor associate was not familiar with the social enterprise concept, though her description indicates the business is a social enterprise.

Ecotourism is another area with potential for social enterprises. It represents an alternative to fly-in, fly-out high-end tourism such as has been established across the Pacific, where visitors pay to stay in luxury international hotels, eat largely imported food and have minimal contact with the local people. Ecotourism aims to develop small-scale locally run hotels and restaurants that will use local products and local staff as much as possible. The aim is to benefit the community through increased tourism, greater demand for fresh produce and the creation of new employment opportunities. A social enterprise for tourist accommodation has been established by Haburas, an environmental NGO that offers cabins in Tutuala, near Jaco Island National Park, at the eastern tip of Timor-Leste.³⁵ Haburas has launched another social enterprise, a restaurant in Dili that provides organic food at lunchtime. There is plenty of potential for sustainable tourism in the underdeveloped tourist market of Timor-Leste. The return of migrant workers who have participated in the hospitality industry in northern Australia could also inject important skills into such enterprises.

Although not widespread, a number of social enterprises have been set up in Timor-Leste in recent years.

Social enterprises must meet a double or triple bottom line to provide economic, social and environmental benefits.

Other social enterprises in Timor-Leste include WithOneBean, which trades ethically, socially and environmentally sourced coffee from a co-operative of subsistence farmers, and WithOneSeed, the first internationally certified carbon farming programme in Timor-Leste, both established by Andrew Mahar (see above).³⁶ WithOneBean operates among 24 village coffee collectives, comprising a total of 435 farming households. The coffee is sold to Alter Trade Timor, a marketing social enterprise that aims to ensure that the producers obtain a fair price for their coffee, as well as investing in training to help co-operative members improve yields, raise quality and consistency and develop more sustainable incomes. Alter Trade Timor sells the coffee onward to Tradewinds, a not-for-profit fair-trade organization that aims to export high-quality products to consumers in Australia “who in good conscience know that the coffee they drink has benefited the producers.”³⁷

United Nations agencies have also been promoting the establishment of social enterprises and businesses in Timor-Leste. For example, ILO initiatives have revolved around identifying and supporting the establishment of social businesses that could help reduce poverty in rural areas. One of these was the production of dirt bricks to generate employment, particularly among NEET youth in the construction industry. The enterprise focuses on a type of brick that can be produced by using 80 percent local resources instead of cement and a machine that does not require electricity. Dirt bricks cost 20 percent less than ordinary bricks. Small police stations in Dili are being built with this material. The Secretariat of State of Professional Training and Employment is planning to scale up the initiative. Another ILO-supported initiative is the production of school uniforms. Wearing a school uniform is compulsory in Timorese schools. Currently, 90 percent of the uniforms are imported from China and Indonesia. The ILO has trained young women to use sewing machines to produce the uniforms. Nuns in Oecussi-Ambeno have taken up the initiative and been successful. In Ainaro and Maliana, the outcome has also been positive.

UNDP’s Social Business Project 2012–2016 aimed to formulate and pilot social business models that can create employment, generate income, enhance livelihoods and produce other positive social impacts in

Timor-Leste. By the end of 2014, the project had contributed to generating income among approximately 1,000 community members through a participatory social business model for recycling plastic bottles that created more than 110 jobs for youth. The project also helped improve the capacity for salt production to raise the incomes of 26 salt farmers in Ulmera and respond to the national demand for salt.

Social enterprises must meet a double or triple bottom line to provide economic, social and sometimes environmental benefits. The risk of entering into a social enterprise is that, compared with a simple business, competing priorities add a layer of complexity that is not experienced by for-profit enterprises (Talbot, Tregilgas, and Harrison 2002). Keeping a business afloat can challenge the social priorities and values of a non-profit organization and divert it from its social mission. Alternatively, the social goals may increase the cost of operations and make success in the marketplace difficult. This is the reason social enterprises typically receive or need to receive some level of support from outside and may require such support for a number of years.

New ways forward for the solidarity economy and social entrepreneurship

Leveraging natural resources to diversify the economy

Agriculture production and marketing

Well-functioning agricultural markets are critical to translating agricultural growth and increased productivity into improvements in rural household incomes. However, Timor-Leste lacks formal markets for most foodcrops. Crops such as rice and coffee have not substantially increased production levels. The National Strategic Development Plan 2011–2030 identifies high-value products that could be promoted and produced for niche markets in Timor-Leste. Coffee is the country’s major agricultural product, and, although labour productivity is low relative to other coffee-producing countries, the sector benefits from organic production methods that help attract premium prices (Planning Commission 2011).

Well-functioning agricultural markets are critical to translating agricultural growth and increased productivity into improvements in rural household incomes.



Other products with potential in Timor-Leste include candlenut, the commercial name for the fruit of the candleberry tree (*Aleurites triloba*), which is grown in six districts for oil, small amounts of which are exported. The expansion of the crop is constrained by the four-year wait between planting and harvesting. Coconut is a perennial crop, and 40 percent of Timorese households possess coconut trees. As with coffee, productivity is low, and coconut is exported only on a small scale. The processing of coconut oil has been undertaken by some NGOs. There may be potential for expansion, including in the manufacture of household products such as brooms, baskets and cooking implements. Other high-value niche crops identified by the Government that could be developed are cocoa, black pepper, cashews, hazelnuts, ginger and cloves. The Government is attempting to identify high-quality niche products that can be grown in Timor-Leste and exported to high-value markets (Planning Commission 2011).

For example, in Oecussi-Ambeno District, where transportation is more constrained than in the rest of the country, some have suggested that, if farmers are to increase their material livelihoods through agriculture, they will need to find a way to produce one or two commodities in sufficient volume for export. Crops proposed include peanuts, cashews, soybeans, mung beans, white onions and the *aloe vera* plant, which occurs naturally in Timor-Leste (Holthouse and Grenfell 2008).

A useful model might be the One Village, One Product Project that was developed in Japan and has been taken up in Thailand (as One Tambon, One Product).³⁸ It is a local entrepreneurship stimulus programme that promotes hand-made goods and handicrafts, but could equally promote agricultural production. It focuses on the identification of one product for each district. The products must be unique and of a high standard, and there must be a sufficient workforce to ensure adequate production. Through support in skills development and marketing, the programme enables villagers to improve their standard of living and has enabled producers to feel they are part of the global economy. The ultimate aim is to establish a strong sense of marketing management among people and to support communities in working together to develop sustainable production based on a single product marketing strategy for each community.

This model of product development provides an example of how local production can be more effectively supported by concentrating marketing efforts on the promotion of only one product per region or subregion. In this way, transport and marketing support is easier to manage, and community organization and collaboration to work together to meet production targets can be fostered. Similar initiatives focused on microenterprises have also been launched.

Human development in Timor-Leste will require education that is relevant to the life situation of the community. Improved knowledge and skills in agriculture and entrepreneurship could enhance productivity and promote better nutrition. The energy and capabilities of young people are needed to kick-start more robust economic activity in rural areas.

Community-based ecotourism

Timor-Leste's tourism sector is in the early stages of development and remains isolated, untested, and expensive compared with its Asian and Pacific neighbours. The challenges include limited and expensive airlinks, poor local transportation networks, limited accommodations and tourism activities outside the capital, Dili, and a lack of skilled hospitality workers. Other unmet traveller needs include poor levels of infrastructure, the high cost of rental transport and the limited availability of readily consumable information relating to travel within Timor-Leste.

According to a survey conducted by the Asia Foundation (2014), the tourism sector in Timor-Leste is worth \$14.6 million a year. While this still represents a small share of overall GDP, it ranks closely behind coffee as the third largest sector. The country's geographical neighbour, the Northern Territory in Australia, reports an annual visitor economic value added of close to \$1.5 billion, and neighbouring Indonesia reports a total economic value added of \$9.1 billion annually. Timor-Leste has pristine reefs, unspoiled hillsides and a compelling national story. Peeling away even a tiny fraction of the 4 million holidaymakers who visit nearby Bali each year could make a big difference in the country's fortunes.

In March 2017, the Government approved a national tourism policy to provide a clear public framework to ensure growth in

The energy and capabilities of young people are needed to kick-start more robust economic activity in rural areas.

tourism, which has been identified as one of the five priority sectors for economic diversification. Some of the targets of this policy include the following:

- Revenue from overseas tourism, excluding carrier receipts (air fares and ferry charges), will be \$150 million per year (at 2016 prices, adjusted for inflation between now and 2030).
- Employment in tourism will reach 15,000 (approximately 4,300 at present).
- 200,000 international tourists will visit Timor-Leste annually, with an average stay of four days (approximately 13,000 at present).

Timor-Leste is, by all measures, a thriving, democratic and vibrant young country in which a tourism industry can flourish with immense economic benefits. While the above targets seem highly ambitious, they are achievable through a proper mix of interventions. The country is at an important juncture to pursue an inclusive, community-based pathway that would strengthen the social fabric among its young people and provide youth with work opportunities for improved livelihoods. A community-based ecotourism development model aligns well with the solidarity economy and would offer a fertile platform for social business and enterprise development among youth. Learning from similar experiences in countries such as Korea and Vietnam, both former war-torn nations with booming tourism industries today, Timor-Leste can find its voice and its place in the world's booming tourism market.

Timor-Leste is, by all measures, a thriving, democratic and vibrant young country in which a tourism industry can flourish with immense economic benefits.

Building the ecosystem for social entrepreneurship

A new discourse around employment should focus on the activities and enterprises that are necessary to advance development in rural communities. While most young people want to escape subsistence agriculture, attitudes among youth need to change so that the potential of generating an income through small enterprises and other initiatives can be more willingly realized. Business and technical skill development will need to be available for the establishment of much-needed services in the production, processing and marketing of agricultural and non-agricultural products, as well as in rural ecotourism. Possible entrepreneurial activities include the introduction of new crops and methods, food processing and

preservation techniques to reduce food losses, community-based tourism activities and improved access to transportation and markets.

There is a gendered effect in work status because of higher employment and unemployment among young men relative to young women. In Timor-Leste, women are often considered better money managers, and women exhibit potential for successful entrepreneurial activity. So, a gender-sensitive approach is essential. Much more needs to be done to allow women's voices to be heard and support the aspirations of women to play an active part in the local economy. In this respect, it is particularly important that family planning be widely available and easily accessible for women. Family planning represents an opportunity for women to pursue additional education and participate in public life, including paid employment in non-family organizations.

Economists have identified education as a key engine of economic transformation, and young people typically have higher educational attainment relative to the older generations. Most economic change is currently taking place in Dili, but more resources need to be concentrated in rural areas to support young people so that they to bring their skills to bear and establish entrepreneurial initiatives in their home environments. Responsibility for promoting social enterprise should be placed in the districts. This will enable more young people to gain the skills, confidence and pride they require to embark on social enterprise development that will assist their communities in exiting from poverty.

While there is a clear need for skills development so youth may embark on enterprise development, that youth lack all relevant skills should not be assumed. Many Timorese youth have work-ready skills through participation in donor-supported work-ready training programmes, migrant work in a more competitive environment overseas where youth have learned new work skills, or the skills and experience they have gained working in civil society organizations in Timor-Leste. However, the skills to develop a business enterprise are not so well established, and migrants returning from Korea have expressed a need for support in acquiring these skills.

A consultative process is needed to define possible areas of product or productivity improvement to contribute to meeting the

development needs of rural areas. Social enterprises in Timor-Leste have demonstrated that they represent an effective model so that small-scale entrepreneurs may produce modest incomes among their workers and address wider development objectives that contribute towards community well-being.

Timor-Leste has a history of activism among young people who have shown a willingness to contribute to the well-being of their communities and desire to better the subsistence existence of their families. The inability of youth to access capital and resources for their planned initiatives has long been a complaint among young people in the districts. Financial mechanisms need to be established to support local youth initiatives.

The financial inclusion of youth

There are many disadvantaged members of society in Timor-Leste, including youth, who continue to be excluded from the financial system. Because of barriers such as high costs, long travel distances and the burdensome requirements involved in opening a financial account, youth often face financial exclusion. If people become constrained by these barriers, they must rely on other, informal mechanisms

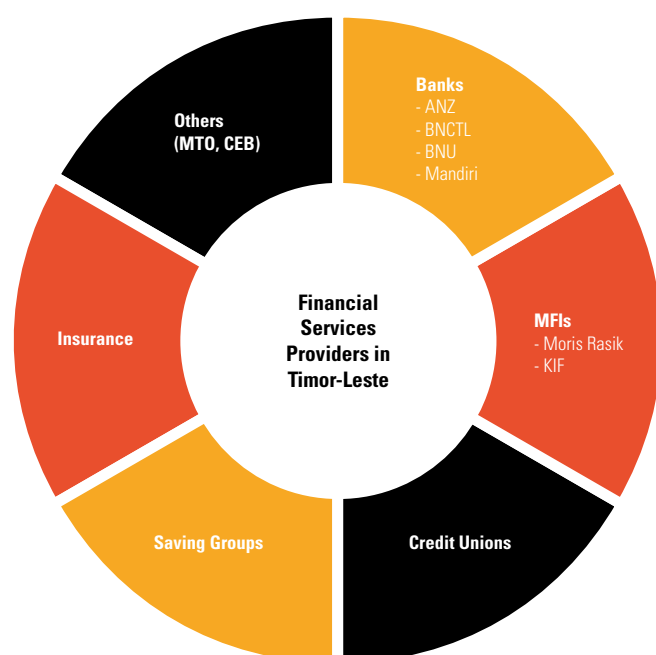
to meet their financial needs. These informal mechanisms are often more risky, expensive and inferior relative to formal, regulated services.

In Timor-Leste, four banking institutions play an important role in widening the outreach of financial services to enable communities to transact, save and obtain credit (figure 3.8). Non-bank financial service providers such as microfinance institutions have also been instrumental in shaping a more inclusive financial sector in Timor-Leste by complementing the roles of banks.

Savings groups, an integral part of the solidarity economy, are another form of non-bank institution that contributes to financial inclusion. There were 329 groups with over 6,000 members operating in nine districts in Timor-Leste and in the special administrative region of Oecussi-Ambeno in 2014 (BNCTL 2016). The groups provide their members with a safe place to save and the opportunity to borrow in small amounts and on flexible terms. Because of the positive benefits across communities, various international organizations have supported the establishment and growth of savings groups in Timor-Leste, including UNDP, Oxfam, World Vision, Seeds of Life, and Care International. UNDP

FIGURE 3.8

Types of Financial Service Providers, Timor-Leste



Source: BNCTL 2016.

has initiated the establishment of 170 saving groups with over 3,900 members in Oecussi-Ambeno alone.

It is estimated that about 42 percent of the population of Timor-Leste (or 68 percent of the adult population) use financial products and services (BNCTL 2016). Although the level of access to financial services seems fairly high, large gaps remain in the coverage of villages and administrative posts.

Bank credit is restricted. Only 3 percent of the adult population has outstanding loans with banks (BNCTL 2016). Because of the absence of collateral and because of bankruptcy laws, banks accept limited collateral. This includes balances in deposit and savings accounts and fixed accounts for salary payments. This means high-interest loans are often only available to salaried persons with savings or deposit accounts. Rural farmers and potential young entrepreneurs are challenged by the lack of access to financial capital. A feasibility study conducted by the Central Bank of Timor-Leste in 2013 found that the agriculture and small enterprises sectors in Timor-Leste have not had access to finance on suitable terms (BNCTL 2016). As a result, there has been no growth in agriculture or small business enterprises at the grass roots.

A recommendation of the study was that a credit guarantee scheme be introduced to open up opportunities for people who were previously unable to obtain access to financing to start agricultural enterprises focused on livestock. With the primary objective of enhancing financing among SMEs in Timor-Leste, the scheme is now being piloted in three districts. These are welcome initiatives, but a lot more work needs to be done to enable young people to access financial services and become knowledgeable about financial opportunities and risks and ways to manage them. The Central Bank of Timor-Leste and ANZ Bank Australia currently offer financial literacy training for young people in the use of money and the advantages of saving. These should be scaled up.

Elevating the financial literacy of young people is of great importance and should be tackled through formal and non-formal educational institutions and bank and non-bank institutions. If access to finance can be assured through greater financial literacy, young people would become more well equipped to participate in the solidarity economy and take up enterprise development initiatives.

Rural farmers and potential young entrepreneurs are challenged by the lack of access to financial capital.

Elevating the financial literacy of young people is of great importance and should be tackled through formal and non-formal educational institutions and bank and non-bank institutions.

Summary

This chapter shows that Timorese youth have limited opportunities for formal employment. The data presented show that age, education and gender affect the ability of young people to gain employment. Individuals with primary or pre-secondary educational attainment are more likely to be self-employed or working in a household enterprise than to be employed for a wage. Women are only half as likely as men to find work, but are also less likely to identify as unemployed given their obligations in unpaid household labour, which masks their aspirations for paid work.

There is a widespread expectation among school-leavers that their education should lead to jobs in the formal sector. A goal of youth is to escape the subsistence lives of 75 percent of Timorese households; so, young people must be supported in helping to transform and develop their environment.

The major infrastructure development projects currently under way in Timor-Leste are often viewed as outsider driven and unsupported by adequate consultation with local people whose lives are going to be changed through the projects. Although some jobs may be created in construction, attention needs to be focused on integrating long-term positive outcomes among local people into development plans, particularly by ensuring the participation of young people in planning a sustainable transition from the subsistence economy to a cash economy.

Civil society has had only a modest impact, but it has been a stepping-stone for young people in learning new skills and gaining knowledge that can be of value in their lives, whether in paid work or through enhanced life and livelihood skills. Many small projects have been implemented around the country by NGOs, and these can exert an impact in local communities, although the extent of the impact is difficult to ascertain. Nonetheless, the commitment of young people to do this work is evidence of social solidarity and community development that deserves encouragement and support. Moreover, the NGO sector has been important in raising issues of gender equality in the public arena and making opportunities available to women through their programs.

One of the ways that young people escape unemployment is to migrate overseas for work. The Government has supported a



substantial number of young Timorese in travelling overseas for work to Australia and Korea, and many more have migrated on their own to the United Kingdom. A recent survey showed that members of a fifth of all households have migrated overseas for work (IRI 2016). As a result, migrant remittances are a major source of income among many households. Many Timorese migrants in Australia have found work in hotels and restaurants, and migrants have returned from Korea after working in small agricultural and fishery enterprises. All these young people have new skills that could be put to good use through social enterprises in Timor-Leste.

While Timorese youth have largely shunned subsistence agriculture as a lifestyle choice, they should be supported in seeking work as social entrepreneurs in rural areas as a means to livelihoods and to contribute to the broader objective of the development of local communities. Because of the lack of rural services in agricultural marketing, transport systems, food storage and preservation techniques, these areas offer opportunities for rural economic enterprises. In the National Strategic Development Plan 2011–2030, the Government has identified small enterprises focusing on niche products as an important area of new enterprise development (Planning Commission 2011). There are other useful lessons to be drawn from development models, such as the One Village, One Product Project, which has enabled the Government to concentrate the production

and marketing of particular niche crops in suitable areas of the country to reduce the costs of support and marketing.

Similarly, the tourism sector offers great potential for jobs and entrepreneurial activities among young people and as a means of diversifying the economy. There is a need to deconcentrate public services and invest more in youth-owned development initiatives in villages and municipalities. Large-scale investments may be important catalysts for growth. However, young people will be an important driver of economic diversification in post-oil Timor-Leste. Hence, investment in education and skills development among youth is indispensable to economic sustainability. Human development in Timor-Leste will require education that is relevant to the life situation of the community. The energy and capabilities of young men and women are needed to kick-start more robust economic activity in rural areas.

The success of social enterprise development will depend on opportunities and ideas and on young enthusiasts who step forward in communities to lead. There is potential for transforming job-seekers and the economically inactive into entrepreneurs, especially among the 62 percent of the population currently below 25 years of age. This will require a conducive business environment, including flexible regulations, opportunities for financing and market access. It can also be encouraged and facilitated through special initiatives to assist young people and enthusiasts who are willing to undertake business initiatives.

There is potential for transforming job-seekers and the economically inactive into entrepreneurs, especially among the 62 percent of the population currently below 25 years of age.



I believe that when people have an occupation that allows them to provide for their families, the social dimension of human nature will emerge instinctively and lead people to help and organize others less privileged.

Kay Rala Xanana Gusmao



Habitagem

Serve a habitagem para proporcionar o calor, frio, humidade e a sua a combater o calor.

Habitagem tradicionais que se encontram em vários andares, com muitas janelas de cimento.

Habitagem tradicionais que se encontram em campos. Estas habitagens são feitas de madeira, de planta.

ESCOLA SECUNDA





CHAPTER 4

EDUCATION AND TRAINING IN THE NEW ECONOMY



Jose Araújo, a teacher at Nicolau Lobato Secondary School, teaches Portuguese to 70 students in a classroom.

© Bernardino Soares

Education and Training in the New Economy

For the next generation, in the year 2020, East Timor 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.

Planning Commission 2002, 2011

Introduction

The epigraph above contains the first four clauses of the Vision Statement in the National Development Plan that was adopted in 2002 and that was reaffirmed in 2011 as part of the National Strategic Development Plan (Planning Commission 2011). It expresses the vision of a society in which people will have adequate food, shelter and clothing and assumes that numerous small enterprises will emerge to produce and distribute the relevant products and services.

This chapter discusses ways in which young people can become involved in initiatives that would help the nation realize its vision. It also examines steps to actualize the potential of the current generation of youth to become the most productive in the country's history.

The chapter investigates ways educational initiatives and policies may inspire and motivate young people ages 15–34 or younger to acquire skills and otherwise train and prepare so they may create sustainable livelihoods that will contribute to community needs. These young people, particularly those working within their own communities, can contribute immensely to the transformation of the economy, provide services in rural areas, help put an end to poverty and deprivation and promote health and well-being for all. Yet, many factors conspire to prevent this from happening.

This chapter and the associated appendices look at these factors, beginning with relevant characteristics of the education system, the choices made by students and the quality of teaching and course content (see appendix E). Some of the factors reflect global trends; others are the result of Timor-Leste's peculiar history of colonial intervention (see appendix F for a detailed discussion). After focusing on the arguments for educational provision and how they relate to the structure of Timor-Leste's economy, the chapter surveys aspects of the solidarity economy conducive to enhancing education and training for sustainable livelihoods. Following a consideration of some of the implications for the knowledge infrastructure of a focus on the appropriate type of education, the chapter proposes recommendations for the establishment of new institutions and the better use of existing structures to empower young people to participate in the solidarity economy and to ensure that the skills of young people are directed at improving the quality of the life within communities.

Formal education: practices and challenges

One of the challenges in Timor-Leste concerns the role played by education in promoting rural-urban migration, drawing the most creative young people out of the areas where they could make a difference through the application of their skills. While many government ministries are now grappling with the need to establish training activities in rural areas, districts, or subdistricts, the effort tends to be fragmented. This occurs because one ministry is responsible for general education, and another for vocational training, but many other ministries and secretariats of state are also establishing training centres in rural areas. For example, the Secretariat of State for Vocational Training Policy and Employment (SEPFOPE) has established centros emprego

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e orientação profissional (employment and professional training centres) throughout the country to assist students in gaining access to courses accredited by the National Labour Force Development Institute. The Secretariat of State for Youth and Sport has established youth peace centres to train young people in preparation for future educational pathways. The Ministry of Education's Direção Nacional de Ensino Recorrente (National Directorate for Recurrent Education) has established community learning centres in seven districts, and more are planned. The Programa Nasionál Dezenvolvimentu Suku (National Programme for Village Development) is supported by an Australian aid project subcontracted to Cardno, which trains large numbers of people as financial, technical, or social facilitators in *suku* (village) and *aldeia* (hamlet) administrative units for participation in infrastructure projects. The Servisu Integradu da Saúde Comunitária (Integrated Community Health Service) of the Ministry of Health trains local community health volunteers in extremely remote areas where there are no full-time medical staff (Werner 2012). The Banco Central de Timor-Leste, the central bank, has launched a programme of financial inclusion to train young people in the use of money and the advantages of saving (Banco Central 2016). These are welcome initiatives. However, there is sometimes duplication. Programmes often operate without the knowledge of formal and non-formal education providers in the same geographical area. Meanwhile, other needs remain unmet.

Many young people find that there are far too many competing structures involved in education, and this hinders them in making considered decisions about the future. Career counselling services are rare. There is also excessive reliance on standardized tests within the system to make decisions that affect people's lives.

Approaches to non-formal and informal education

Formal, non-formal and informal education each have a different dynamic. Formal education is compulsory for the first nine years of the education system, while non-formal education is purely voluntary, and informal learning is influenced by parents and culture. These

approaches to education may pull students in different directions. However, they may also work together in a powerful way. In one of the first books on non-formal education, Coombs (1974) offers four examples of non-formal education alone or in combination with another approach:

- *Preparatory*: Non-formal education can help prepare preschool children for formal schooling through nursery schools, children's radio programmes, and so on.
- *Complementary*: Non-formal education can parallel and complement formal schooling by providing extracurricular learning experiences among students, through, for instance, the Scouts and Girl Guides.
- *Substitutionary*: Non-formal education can provide a substitute for formal schooling or components of formal schooling among students who have not had access to some schooling.
- *Extension*: Non-formal education can extend formal education after schooling is complete through continuing education opportunities, such as on-the-job occupational training.

Each of these types of non-formal education has considerable relevance in Timor-Leste.

The experience of Timor-Leste: non-formal preparatory education

Although preschool in Timor-Leste is now non-formal, it is being established as part of the formal education system. University preparatory programmes are also needed, for example, among students whose high schools did not adequately support them as independent learners.

Science of Life Systems, a self-funded social enterprise initiated by an educational enthusiast from Malaysia, plays a role in preparatory non-formal education among many people in Timor-Leste. The target group is 16- to 25-year-olds who want the opportunity to improve their chances of finding work, but, for many, it serves as a preparatory course for further study. The main skills taught are English, computer literacy (including touch-typing), communication skills and personal development skills and habits, including punctuality. A small group learns computer maintenance. Most enrol in a two-year full-time course, and there is provision for boarding at the 47 centres covering all districts. Many centres also cater for part-time students of any age.

Many young people find that there are far too many competing structures involved in education, and this hinders them in making considered decisions about the future.

The experience of Timor-Leste: complementary non-formal education

Non-formal education may also become important in Timor-Leste in teaching the sorts of skills not easily learned in the classroom, an approach supported by the Big 6 youth organizations. The founder of the Scout Movement, Robert Baden-Powell, argued in the first decades of the 1900s that the Scout Movement embodies a form of leadership training that formal education has not been able to replicate, the patrol system. Patrols are groupings of six or seven boys (and later girls) within a scout troop. In 1920, he wrote as follows in *Aids to Scoutmastership*:

If the Scoutmaster gives his Patrol Leader real power, expects a great deal from him, and leaves him a free hand in carrying out his work, he will have done more for that boy's character expansion than any amount of school-training could ever do.

(Baden-Powell 1920, p. 59)

After independence, two scout movements in Timor-Leste united to form the União Nacional dos Escuteiros de Timor-Leste (National Union of Scouts–Timor-Leste), but, during the resistance, both helped create strong leadership from which Timor-Leste still benefits.³⁹ Many Timorese leaders, including Prime Minister Rui Araújo and his wife, Teresa, along with feminist movement leaders Filomena Barros dos Reis and Laura Abrantes, participated in the scout movement during the Indonesian occupation (Conway 2010). Eugenio Lemos, musician and leader of Permaculture Timor-Leste, the organization behind the permaculture-agroecology movement, participated in Pramuka and thereby gained valuable experience in both music and agriculture (Wigglesworth 2016). His founding of the PermaScouts was an attempt to combine Permaculture with some of the excitement for scouting among young people. He felt both had an ethical base in the respect for nature.

Another specialized form of scouting that may play an important role in Timor-Leste, at least in coastal parts of the country, is the Sea Scouts. Other potentially important youth groups are Junior Landcare, Red Cross Youth, the YMCA, the YWCA, community radio associations, musical organizations, drama clubs, and art, craft, and pottery groups.

The experience of Timor-Leste: substitutionary non-formal education

Substitutionary non-formal education is an expanding area of activity in the Ministry of Education's Directorate for Recurrent Education, which has established related community learning centres in eight districts to help people take the step from illiteracy to high school equivalence. The centres also offer courses such as carpentry and dress-making. They are managed by local committees, which vote on the courses to include and try to assist local employers by training people with the skills local employers need. Once a committee selects and hires teachers, their salaries are paid by the Ministry of Education. There are plans to extend the scheme to many more districts to address the issue of equity in education up to the high school level.

Extension education is much needed to augment the formal education people have received as young students. The best time to teach a new skill is often once people have realized they need the skill. People may have ended their formal education years ago, or they may believe they are already well educated when they find they need to learn a new language, how to use a new computer software programme, how to grow or cook a new vegetable, or drive a car. They might need to refresh their professional expertise, such as nurses requiring more mathematics to use new technology. Paulo Freire wrote extensively on extension education after he observed agricultural extension officers treating adults as if they were children, not engaging them in dialogue to find out how much they already knew. Indeed, learners in extension education often already have extensive experience, but need new knowledge and skills. They may require bookkeeping, for instance, to complement their knowledge of fishing or boat-building.

Skills for the 21st Century

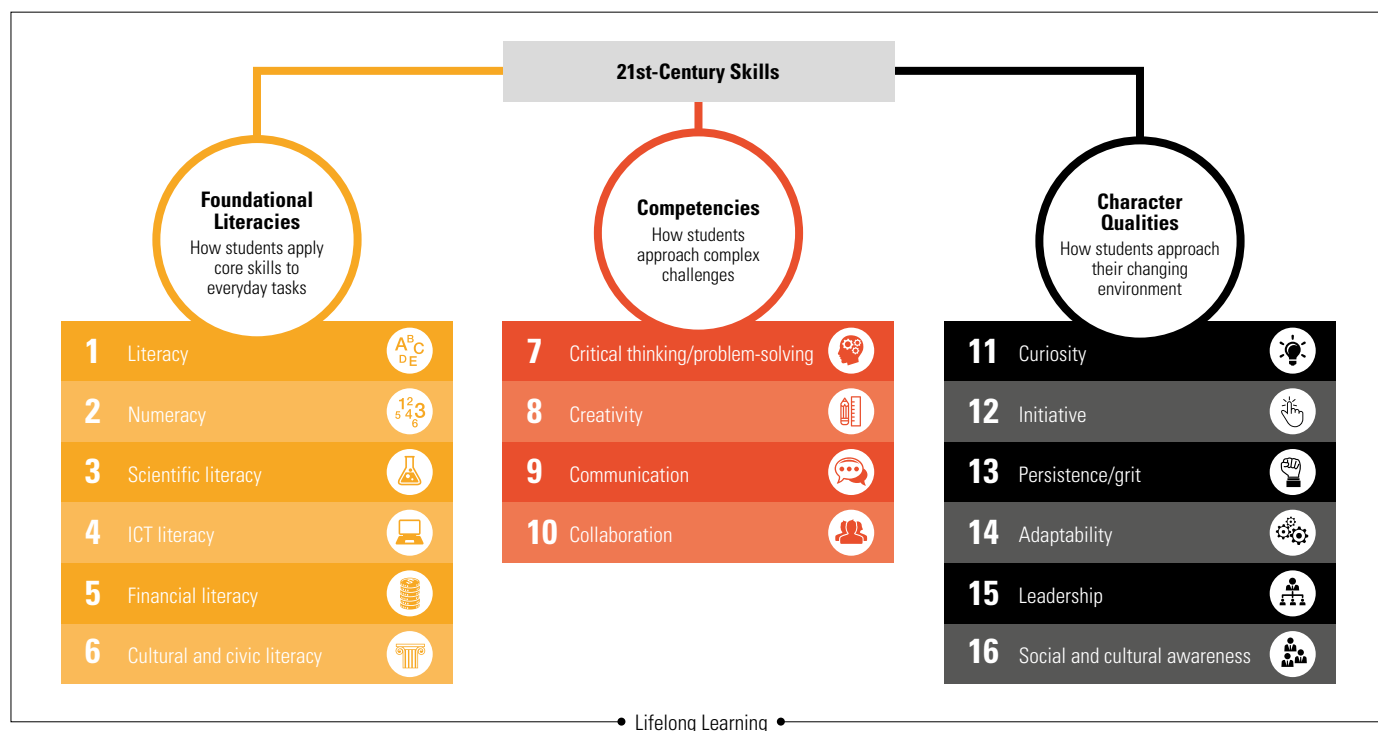
The World Economic Forum has developed a typology of the 16 skills and qualities of character required by students to deal with the globalized world (figure 4.1).

In many ways, skill needs can be more easily addressed through formal education, such as literacy in information and communication technology (ICT), digital literacy, financial

The World Economic Forum has developed a typology of the 16 skills and qualities of character required by students to deal with the globalized world.

FIGURE 4.1

World Economic Forum Indices, 21st Century Skills, Timor-Leste



Source: Soffel 2016.
Note: ICT = information and communication technology.

literacy and numeracy. However, the necessary qualifications and qualities of character cannot be easily taught through formal education. This most often requires students to become active learners, testing out their theories and incorporating the results into their thinking.

A skills mapping exercise similar to the one conducted in Rwanda might be considered in Timor-Leste (box 4.1). This might lead to a more refined and comprehensive understanding of the emerging skill and other human capital needs that could form the foundation of a fresh human development strategy for the labour market in Timor-Leste. Policymakers should be encouraged to discuss the skills needed in Timor-Leste and how to develop these skills. Discussions around typologies such as the one in Rwanda are needed among stakeholders in education to make sure key areas of skill are not overlooked. An exercise such as this represents a way for policymakers and public servants to examine the issue together across all departments, determine who is already teaching the skills and find the best places for these teachers in the education system.

Recommendations for establishing a knowledge-based society

Education to benefit the largest profession in the country

A new approach to education among rural livelihoods is required in Timor-Leste if subsistence agriculture is to be intensified sufficiently to produce a reliable surplus, create a local market for food products and address nutrition issues. Education among farmers should become adequately oriented to problem-solving. Many sustainable livelihoods could be created by shifting the value added and the marketing associated with primary products from the subsistence economy to the formal economy.

This calls for a huge change in attitudes towards one of the most difficult components of education. There is a tendency in Timor-Leste to regard agriculture as the only field worthy of study in rural areas. The agricultural high schools at Los Palos (the private high school, Fuiloro, run by the Catholic Salesian Order),

Developing a National Typology of Skills

The Government of Rwanda has implemented a successful model of development. It has paid a great deal of attention to identifying the future labour market skills that will be needed and making sure they are covered by the education system. Table 4.1 presents a skill typology realized in Rwanda when that country and Timor-Leste were at a similar stage of development.

TABLE 4.1

Typology of Basic Skills, Rwanda

Basic skills	Functional literacy and numeracy, basic health knowledge and skills (including hygiene and HIV/AIDS prevention), child-rearing skills, domestic skills, simple psychomotor skills, basic education
Generic and transferable skills	Problem-solving, reasoning, creative thinking, analysis of information, attitudes (such as a respect for time and a spirit of inquisitiveness), communication and language skills, (particularly bi- and trilingualism), basic computer skills, social skills of interaction with others
Private sector business skills	Entrepreneurial skills (and attitudes), management, marketing and trading, packaging, dealing with banks, bookkeeping and accountancy, microenterprise management
Public sector skills	Policymaking skills, project design and management, including specific technical skills such as planning and management uses of ICT
Vocational skills	Building and construction, electrical installation and maintenance, electronic equipment repair, handicrafts and pottery, baking, automobile mechanics, painting, tailoring, carpentry, computer skills for secretarial work
Agricultural skills	Improved agricultural techniques and technologies, improving soil fertility, food preservation and storage, weaving and making products from hides and skins, crop diversification
Advanced skills	Science and technology skills, advanced technical skills (computing, laboratory technicians, and so on), engineering, research, agronomy, botany and biochemistry, teaching and education
Service sector skills	Accountancy, servicing contracts, banking, tourism-related skills, hotel management, skills for guides, cooks, waiters and so on
Political and citizenship skills	Moral and values education, Rwandan culture and history, participatory citizenship education, political awareness and political thinking, attitudes towards authority, human rights, unity and reconciliation

Source: Tikly et al. 2003.

The first two sets of skills, basic skills and generic skills, are needed by everybody and should be available through basic education (up to grade 9) or through adult education among individuals who missed out earlier along their education path.

The last set of skills, political and citizenship skills are best learned through non-formal education, including participation in civil society organizations. The other, more specialized skills could be gained by way of a variety of modes of delivery, including formal, non-formal, or informal education, the government, civil society, or private sector providers, and at various ages and stages in one's career in the classroom or on the job. This type of exercise has been sadly lacking in Timor-Leste.

Maliana and Natabora provide graduates with good technical skills; however, few graduates become farmers. Some are employed as agricultural extension workers, but more aspire to attend university and study agricultural science, although there are even fewer jobs available for agricultural scientists.

In most other small countries, the importance of broadly based general education to the rural sector is recognized. This is often referred to as rural livelihoods education, which focuses on a wide range of skills, including a purposeful interface with indigenous knowledge. The closing of the two home economics teacher colleges that were established under the Indonesians meant that nutrition would now be ignored in formal education, but also that most households in Timor-Leste would no longer be recognized as centres of both production and consumption. Farming families must become more aware of the significance of nutrition if they are to participate in the solidarity economy and launch household enterprises to add value to primary products.

Because many farmers are illiterate, community learning centre programmes would be beneficial. Local education initiatives could assist farmers in creating local solidarity economy institutions to sell their produce at good prices. Examples of good practice elsewhere that could be applied in Timor-Leste include community-supported agriculture in Australia and the United States and the *maisons familiales rurales* (rural family homes) in New Caledonia (box 4.2).

Improving complementary non-formal education in grades 6–9

Because the school day is shorter in Timor-Leste than in most other countries, school students could be encouraged to join the Scouts, the Red Cross of East Timor, other voluntary youth movements and organizations, or activities such as music or community radio when school is not in session. With the assistance of local and international youth organizations in Timor-Leste, all students in grades 6–9 (the third cycle of basic education) should be encouraged to join a complementary non-formal education programme after school at least one day a week. The programmes should seek to capture the young people's imagination, challenge them, be fun, and introduce them to a wider range of people than they encounter in

A Case Study of the Maisons Familiales Rurales, New Caledonia

Trainers in Timor-Leste would do well to examine the experience of a successful training method used in the French-, Portuguese-, and Spanish-speaking countries that has done a great deal to create usable knowledge in rural areas and contribute to productivity and the improvement of daily life: the *alternance* (alternation) methodology implemented by the *maisons familiales rurales* worldwide.^a Local committees are responsible for fundraising and the selection of students, while the national committee—or territorial committee in the case of New Caledonia and Tahiti—is responsible for training educational leadership.

The associated centres are each located in modest buildings, often disused government buildings, typically surrounded by a small amount of land for demonstration plots and to grow food for the students because the goal is that most practical farming is to be carried out on the land of the parents of the students. Students spend one week in the centre and the next two weeks at home on their farms or with an apprenticeship detachment (thus, alternating), where they learn skills, such as welding or dress-making, from community members. During the week at the centre, much time is spent in the classroom discussing various crops and animals and studying soil chemistry, physics, mathematics, animal and plant biology and local culture. There is substantial cooperation with the Department of Agriculture, and extension officers often visit the centres to give demonstrations (Hill 1987).

Towards the end of the three-year course, the students draft plans on how they will use their skills and acquire new ones to establish their own farms. The local organizations fund and manage the educational enterprise and also engage in local economic projects such as co-operatives for coffee roasting for the benefit of the local communities.

One characteristic of the philosophy of the centres is the way in which the centres address the differences between mental and manual labour. There is no sense that the theory is allowed to become too academic or otherwise irrelevant for rural people. The interest of students in learning is thus sustained, and the students are encouraged to wed theory and practice.

Health and health care initially formed a major part of the girls course, but not the boys course; however, because of requests by communities, the girls and boys courses were combined (Hill 2001). The *maisons familiales rurales* have introduced a truly broad-based education among young rural girls in New Caledonia, who often suffer from failure in the formal system and require a great deal of general education as well as life skills. While girls participate in the study the agricultural subjects, they can also develop the skills necessary to establish their own small businesses and are offered assistance in doing so. The Community Development Department at the National University of Timor-Leste (UNTL) is looking at the possibility of introducing a related diploma course in Timor-Leste.

a: "Les Maisons Familiales Rurales", Union Nationale des MFR, Paris, <https://www.mfr.asso.fr/>.

their schools. The content should cover skills not readily taught in the classroom, such as teamwork, public speaking, organizational skills, democratic decision-making, outdoor adventure, love of nature, conflict resolution skills, the development of an interest in hobbies or a vocation, and experiences in determining their own future. Art, music, drama, crafts and community radio may attract students. Many programmes could be highly relevant to participation in the solidarity economy. Likewise, solidarity economy organizations such as co-operatives could contribute curriculum material to youth organizations. Complementary non-formal education should always be centred on groups young people choose voluntarily because they seem entertaining and enlightening and because they offer the opportunity to engage with other young people from different backgrounds.

New institutions outside Dili: enhancing substitutional non-formal education

The Government should re-examine the proposal to establish a community college in each district or, occasionally, in a large

subdistrict as recommended by the National University of Timor-Leste (UNTL)—Victoria University conference "Finding Pathways in Education" in July 2015.⁴⁰ The colleges could be a local hub for discussions among employers, educators and district authorities, replace the planned, more expensive and narrowly based polytechnics and also cover many of the courses planned for the polytechnics. Analysis of the skills and enterprises needed in the districts and the generation of new ideas can take place among young school-leavers as part of the orientation process for life after school.

The Directorate for Recurrent Education of the Ministry of Education has recently launched several community learning centres. Their curriculum is flexible, and, in some districts, the centres are working closely with civil society. Community colleges could also be usefully colocated with these community learning centres, youth centres, youth peace centres, employment and professional training centres, the National Programme for Village Development and the Integrated Community Health Service centres. They might likewise represent a good opportunity to initiate courses to prepare young people to



Many of the skills young people need to participate in the solidarity economy could easily be taught in high schools.

join the solidarity economy. If a district community college were designed for such purposes, placing several such institutions under one roof where they would share facilities, for example, a library, a cafeteria, and computer laboratories, should be possible. Government-funded, donor-funded and civil society-provided courses in a variety of fields could all be made available to give local students a choice and adequate preparation for their studies, while offering local employers a way of sourcing training for their employees and prospective employees without resorting to travel to Dili. Private universities seem currently to dominate the market for post-secondary training and are not typically attuned to the learning needs of many districts, nor do they supply the required learning infrastructure. Facilitators could also be trained at community colleges to assist communities outside the district capitals in asset-based community development to promote sustainable livelihoods locally. This would be particularly relevant for economic initiatives such as the One Village, One Product Project (chapter 3). Similarly, social and solidarity economy organizations, such as local coffee co-operatives, microfinance client groups, credit unions and fair-trade offices, could help students at the learning centres hone their organizational and management skills.

Essential skills to be taught at high schools

Many of the skills young people need to participate in the solidarity economy could easily be taught in high schools. This could include skills that would be useful whatever pathway students take. The three main areas of education that appear to be missing to enable students to participate in the solidarity economy are the following:

- Basic knowledge of the political economy of Timor-Leste and of their potential place in it
- Knowledge of organizational development and skills in planning, organizing and management
- Bookkeeping and financial record-keeping skills, including the use of electronic tools

These skills are required no matter if the student plans to be a farmer, a construction worker, a food service worker, a sustainable energy specialist, or a director in a public service department.

Knowledge of the political economy, including the economic history of Timor-Leste, is important in making students more aware of professions in which opportunities may emerge. Most students now only have limited knowledge of occupations and professions through their relatives. They thus often have a poor understanding of appropriate courses to take. Informal education through the media, including community radio, can be an important conduit for this understanding.

If students do not have computer literacy skills by grade 10, this would be a good time to introduce the subject if the equipment and teachers can be found. The application of basic word-processing packages, plus spreadsheets (needed for the bookkeeping course) would be sufficient.

Subjects such as bookkeeping, dress-making, culinary arts, sustainable energy studies, sanitation and health care, carpentry, hospitality services, maritime and fishing services, design and technical drawing, and the introduction to motor mechanics should be available as electives, including practical modules, to all students in grades 10–12 at all high schools. Students who are taking academic subjects, such as chemistry and physics, might be encouraged also to take a course on sustainable energy and engage in practical projects such as designing technology to improve access to electricity among rural residents. Australian high school students in these fields design and race solar cars from Darwin to Adelaide. Dili-based science educator Curt Gabrielson (2017) has described how he persuades physics students in Suai to build batteries as a skill that could become the basis for all sorts of innovations if associated with practical subjects such as metal-working. If a school does not possess the facilities to provide coursework in some of these practical specializations, they could share facilities with a local business or a local community learning centre run by the Ministry of Education.

Each final-year high school student should research and write up a plan showing how they intend to accomplish their goals in the next five years. These five years after completion of full-time secondary education are often the most important in the lives of young people. What they decide to do and how they reach the decision will help determine their pathway for life. To draft the plan, they will have to research many options in further study, work, volunteering, acquiring additional skills and



learning more about the society of Timor-Leste. They will also have to examine their assumptions behind the choices they make. While most of these plans may not come to fruition, the planning exercise will be useful to the students and to the counsellors who may advise them in various organizations.

Practical curriculum development and teacher training

There is potential for providing specialized training more widely in Timor-Leste. Thus, the unit on electricity offered at the Fatumaca School and other vocational secondary schools might be offered elsewhere as well. Ataúro High School has a unit on fishing that is popular and could be shared with other, relevant schools in places where fishing is a key livelihood. Some specialized technical and vocational high schools, such as the dress-making and tailoring high school in Becora or the tourism high school, could become centres of excellence open to high school students as well as others. The introductory units could be offered across the high school system, and teaching staff could consist of graduates of the specialized vocational high school who have industry experience and received the certificate in training and assessment. Motor mechanics, including automobile and motorcycle repair and maintenance, would be a popular subject among students. The specialized technical high schools, such as the dress-making and tailoring school or the tourism school, could be open to people of any age wishing to learn these skills, including students of high school age. The schools could then be badged as centres of excellence in the particular specialization, thereby attracting higher-level instructors, who could lead in carrying out research.

The new subjects to be taught in high school will require adequately educated and trained teachers. Each teacher will need a good background in the particular trade or profession, plus expertise in teaching and training. The Australian certificate 4 in training and assessment was introduced by Victoria University, Melbourne, in Timor-Leste in 2007. A number of Timorese did the advanced diploma in collaboration with Victoria University and an Indonesian University, and a version tailored to Timor-Leste was produced with the assistance of the Dili Institute of Technology. However, people face difficulty determining how and where to obtain the qualification today.

Reforms required in institutions of higher education

The UNTL should reform its course recruiting methods in tertiary education so that it finds the best, most well-prepared students likely to succeed the most quickly. The current entry test is not a good predictor of success, and students who have been accepted often waste a great deal of time and money when they fail and must drop out. Because Timor-Leste is a small country and a small number of students finish high school, it should be possible for vocational counsellors to interview all prospective entrants and supply more information about their options. Some students might be advised to wait a year or two before enrolling at the UNTL and should not be penalized for doing so. Each Faculty at the UNTL should conduct relevant interviews to make sure candidates are properly motivated. Obliging candidates to write an essay on why they want to attend before the interview would force them to focus on their plans and aspirations. A similar process could be used at vocational training centres, such as the National Centre for Employment and Vocational Training and the Centro Senai, which would encourage students to research the industries in which they hope to work.

In many cases, entry into advanced or specialized education establishments can be achieved by demonstrating prior learning, that is, the acquisition of skills and expertise through work or other life experiences rather than through formal education. Often, such learning is difficult to document. Curtain (2007) recommends that the experiences of young people in learning by doing be captured on personal skills passports (box 4.3). While the concept is used in some programmes, it can be scaled up to motivate young people to acquire relevant skills for improved livelihoods.

BOX 4.3

The Personal Skills Passport

A personal skills passport is a record of achievement that describes the demonstrated work-related skills and expertise an individual has acquired. Skills passports, if widely promoted, could provide young people with the incentive to start at entry level, such as volunteer work, knowing that this may open up more attractive work opportunities. A programme funded by the United States Agency for International Development to combine work experience positions with training among rural young people in Timor-Leste is applying this concept.

There is potential for providing specialized training more widely in Timor-Leste.

The One Laptop per Child Initiative

Supported by the United Nations Development Programme (UNDP), the One Laptop per Child non-profit initiative was launched in 2006 to transform education around the world. This goal was to be achieved by creating and distributing educational devices (typically \$100 laptops) in the developing world and by creating software and content for these devices.

The initiative's primary goal continues to be to transform education by enabling children in low-income countries to have access to content, media and computer-programming environments. The initiative has been praised for enabling the use of low-cost, low-power machines in education; for assuring the

agreement of ministries in many countries that computer literacy is a mainstream element in education; for creating interfaces that worked without literacy in any language, and particularly without literacy in English.

Similar to any project, the initiative faces challenges. It has been criticized as cost-ineffective and for its lack of adequate focus on sustainability and training and its limited success in distribution. Nonetheless, the initiative has succeeded in endowing millions of children in developed and developing countries with greater access to laptops. Its viability should be considered in the context of Timor-Leste.

All universities and, ideally, all high schools should train students to be literate in digital technologies and should have computers, computer technicians and adequate teachers available to give students confidence in using computers to write, find source materials, and use email and, possibly, an online learning platform before they begin undergraduate work. There are examples of innovative initiatives offering children and youth in developing countries access to low-cost, low-power ICT tools (box 4.4).

The UNTL should offer a preparatory year to anyone before they apply to a faculty to become a degree student. The coursework should provide two academic units in science or social science that require proficiency in essay-writing or mathematics, followed by adequate preparation in languages, computer literacy in Microsoft Office or an open source equivalent, touch-typing, library skills and presentation skills. Participants should also undertake voluntary work for a civil society organization in a field related to their planned focus at the UNTL. Students who have successfully completed this course work should become eligible to apply to the faculty of their choice regardless of age.

Library scientists will also have to be trained in library management, designing web pages and assisting students in the use of computers, motion pictures and other library resources. The library should house advisory services on essay-writing, creating a curriculum vitae and choosing a career. This will turn university and, hopefully, also high

school and community college libraries into the all-purpose information centres they are in most countries.

The final-year compulsory fieldwork carried out in most faculties at the UNTL, a holdover from the old Indonesian system, should be replaced by fieldwork units in the first through third years of all courses to introduce students to the practical aspects of the subjects of their focus. The units in the first and second years should involve research in villages and placement as interns in organizations. During the third year, the units might consist in participation in action-research projects or capstone units that link the student with possible workplaces or with organizations of the social and solidarity economy where they can be introduced to people who can help them after they graduate. This is already being realized in health care in Timor-Leste.

High school and university courses in economics should be modified to cover the economic history of Timor-Leste, including the history of co-operatives, credit unions, agriculture under the Indonesian occupation, experiences with microfinance, fair trade, and economic successes and failures. Ideally, the Economics Faculty at the UNTL and other universities should be able to produce teachers on this subject matter, but textbooks and library collections are lacking. A collaborative research project on Timor-Leste's economy including Timorese and foreign academics might represent a way to produce good curriculum materials.

All universities and, ideally, all high schools should train students to be literate in digital technologies and should have computers, computer technicians and adequate teachers available to give students confidence in using computers to write, find source materials, and use email and, possibly, an online learning platform before they begin undergraduate work.

Courses for school-leavers seeking to participate in the solidarity economy

For individuals who have already left school, a one-year course, offered, perhaps, at a community learning centre run by the Ministry of Education, could provide some preparatory non-formal education on joining or establishing a workers co-operative with a social objective, a farmers co-operative aimed at creating a community-supported agricultural organization, or obtaining credit from a microfinance institution. The course could provide background on the Timorese economy and the history of local workers co-operatives, farmers co-operatives and microfinance institutions. They could also cover bookkeeping skills, plus language, touch-typing and computer literacy similar to that provided by Science of Life Systems (but not necessarily in English), in addition to other practical skills the individuals might wish to apply in their chosen professions. If students are from the same parts of the country, they could also be study asset-based community development so they may eventually form community associations to mobilize resources in preparation for launching their own enterprises.

Establishment of a collaborative research centre

The universities of Timor-Leste are, in many ways, an underutilized resource in conducting the collaborative and interdisciplinary research needed by the country. In Australia, collaborative research centres have been crucial to directing public and private sector money and energy into areas of research important to the country. In Timor-Leste, housing and housing policy development, for example, require people in many disciplines—architecture, engineering, community development, health care, law, and so on—to work together with stakeholders on many significant issues that should be addressed for the benefit of the country. Only then will the construction industry and relevant small entities, such as co-operatives and social businesses, and large businesses be able to operate to their maximum potential.

Similarly, renewable energy is a sector with great promise. In many countries, it is the most rapidly growing sector of the solidarity economy. Yet, in Timor-Leste, it is scarcely addressed by engineers, builders, district authorities, or academics. Other promising topics for collaborative research include public transport and the IT infrastructure required to support the education system. Research on these and other topics is too difficult for the Government to carry out alone to draft good policies. Gaining adequate access to the full breadth of Timorese stakeholders to plumb their thinking is also too difficult for foreign researchers and consultants. The collaborative research model, which could include some visiting researchers, but would be predominantly organized by Timorese, could produce powerful results and recommendations.

Summary

A general conclusion of this chapter is that the Government of Timor-Leste needs to put more emphasis on quality education to achieve the demographic dividend. Good-quality education is also a major tool to help eliminate deprivations in well-being among youth. Young people need access to quality education that helps them make the transition to a knowledge-based society with skills relevant to today's world. Education must be able to motivate young people to prepare for the transition from school to work by participating in society before they leave school. Education should help young people learn from society so they can develop a vision of the direction they may wish to take once they leave school and enter the workforce. The current system perpetuates the idea that educational attainment will automatically lead to a job. This is no longer true, not even of technical and vocational training. Young people must learn to take more responsibility for their future, but they must also be given proper support through ICT literacy programmes, information centres and advice from career professionals. The chapter includes recommendations that can help educational institutions in Timor-Leste adopt a direction that will be more helpful to young people and help the nation reap the youth dividend.

The Government of Timor-Leste needs to put more emphasis on quality education to achieve the demographic dividend. Good-quality education is also a major tool to help eliminate deprivations in well-being among youth.







CHAPTER 5

THE CHALLENGE OF THE FOURTH INDUSTRIAL REVOLUTION: EMBRACING TECHNOLOGY



Training at Senai Northern Territory English Language Centre.

© Hugh Miley

The Challenge of the Fourth Industrial Revolution: Embracing Technology

Introduction

According to Schwab (2016), founder of the World Economic Forum, the fourth industrial revolution is taking place now. During the first industrial revolution, production was mechanized based on water and steam power. Mass production during the second industrial revolution was made possible by electric power. The third industrial revolution involved taking advantage of electronics and information technology (IT) to automate production. Now, building on the third industrial revolution, a fourth, the digital revolution, has been occurring since the middle of the last century. It is characterized by a fusion of technologies that is blurring the lines among the physical, digital and biological spheres.

Like the revolutions that preceded it, the fourth industrial revolution has the potential to raise incomes and improve the quality of life of populations around the world. However, to date, those who have gained the most from this revolution have been consumers who are able to afford and access the digital world. The revolution raises barriers to the market because major competitive advantage is gained through access to data, investments in integrated digital solutions, which entail substantial costs, as well as advanced and extremely specialized professional skills. There is a concern that the revolution could lead to greater inequality because it has a great potential to disrupt labour markets. As automation replaces labour across entire economies, the net displacement of workers by machines may widen the gap between the returns to capital and the returns to labour. It is becoming clear that talent and skills, more than capital, will represent the critical factor of production in the future.

In Timor-Leste, most people have not yet benefited from the first three industrial revolutions, and most villages still rely on low technology. Because the influence of the fourth industrial revolution, the digital revolution, is global, Timor-Leste will soon face more

international competition especially if it joins the Association of Southeast Asian Nations. Neighbouring countries in the region are developing suitable digital strategies and adopting smart governance policies, while building a digital infrastructure, digital workforce, digital technology industry, smart agriculture, smart tourism, smart urbanization and innovative ecosystems and start-ups. In this rapidly changing context, the Government of Timor-Leste must widen dramatically the scale of investment in knowledge and human capital.

The transformation from a dependent economic development model, whereby the means of production are easily replaceable, to a knowledge-based economy requires the adoption of a fresh development strategy, which inevitably depends on access to funding, talent, social capital and an efficient institutional environment.

A sound understanding of information and communication technologies (ICTs), pertinent digital divides, or constraints in e-literacy—familiarity with technologies such as computers and software—is critical to shaping strategies to close the knowledge and productivity gap characteristic of Timor-Leste's economic sectors and enterprises.⁴¹ These are also important in involving communities in socially oriented e-commerce, promoting social enterprises, and raising awareness about key government services.

Technology can lift the Timorese people to a new collective and moral consciousness based on a shared sense of destiny and values associated with creativity, entrepreneurship and stewardship. However, strengthened efforts are needed for the diffusion of technology to accelerate the development of knowledge, skills and talent among young people and provide them the space for more meaningful and effective economic, social and political engagement.

This chapter highlights the role of ICTs in enlarging young people's opportunities to find their space in the fourth industrial

Building on the third industrial revolution, a fourth, the digital revolution, has been occurring since the middle of the last century.

In Timor-Leste, most people have not yet benefited from the first three industrial revolutions, and most villages still rely on low technology.



revolution: from gaining the skills demanded on the labour market to venturing into social entrepreneurship and to participation in nation-building through e-citizenship. It examines the state of ICTs in Timor-Leste and explores community access to ICTs such as mobile telecommunication and the Internet and to traditional mass media such as television and radio. Following an analysis of sectoral challenges in ICT, it assesses shared issues associated with technical and vocational education and training (TVET) in the Asia and Pacific region and the extent to which TVET in Timor-Leste supports ICT-skilled work-ready graduates in the changing world of work. It investigates formal TVET and non-formal training in Timor-Leste, how these have contributed to strengthening ICTs and what remains to be done. It addresses ways ICTs can be harnessed to enlarge the prospects for e-citizenship and the wider social inclusion of youth. The chapter closes with a diagnosis of the role that ICTs can play in developing and supporting social enterprises for economic diversification in Timor-Leste.

The current state of ICTs and their use in Timor-Leste

While the history of ICTs in Timor-Leste can be traced through the periods of Portuguese and Indonesian rule, this chapter focuses on the period from 1999 to the present. The United Nations-supervised popular referendum of August 1999 resulted in an unequivocal vote for independence from Indonesia. Independence was achieved in 2002 following a troubled transition. The violence that occurred in the wake of the 1999 referendum resulted in the destruction of the entire telecommunication network and electrical systems (Kalathil 2006; Soares and Mytton 2007; World Bank 2013). All telephone links were cut, and broadcasting infrastructure, such as radio and television transmitters and relay stations were severely damaged (Cokely et al. 2000). With United Nations support, the ICT infrastructure of Timor-Leste was slowly restored during the transition, and the country's first Internet connection was established in February 2000 under a project supported by the United Nations Development Programme (UNDP) (Moreira 2009a).

Telecommunication

Following the independence of the country, the telecommunication provider, Timor Telecom, was launched and dominated the sector until 2011, when competition was introduced. Timor Telecom is a privately owned consortium with a majority shareholding controlled by Portugal Telecom (World Bank 2013). Between 2003 and 2011, when Timor Telecom was the sole telecommunication operator, service delivery was considered expensive (World Bank 2013). It was widely criticized for its high prices and low service quality, though this was countered with the claim that the high prices were a result of Timor-Leste's taxation regime (da Silva 2009). In July 2008, a new tax regime was approved that reduced the telecommunication service tax to 5 percent. Timor Telecom responded by reducing its prices by 10 percent (da Silva 2009).

In 2012, the Government legislated the Telecommunications Decree (No. 15/2012), which established a new communication regulatory authority, the Autoridade Nacional de Comunicações (National Communications Authority). The entity is Timor-Leste's regulator for telecommunication, radio communication, broadcasting and the Internet. It is charged with overseeing the liberalization of telecommunication and is responsible for granting licences, regulating telecommunication, radio and Internet service providers, monitoring compliance and resolving disputes (World Bank 2013). The liberalization of telecommunication and the subsequent impact on the expansion among Internet service providers have been important in the rapid development of social networking in Timor-Leste. Enhanced competition in telecommunication has been effective in reducing user costs, extending service coverage and increasing new ICT access. Typical of many developing countries, the extension of wireless mobile technology in Timor-Leste has been characterized by technological leapfrogging. In this instance, hard-wired telecommunication networks, which had never been extended to rural or remote areas in Timor-Leste to any significant degree, have been rapidly replaced by wireless technology driven by market competition.

Since the liberalization of the telecommunication, three operators for voice, text and wireless Internet services have been licensed: Timor Telecom, the Indonesian

The liberalization of telecommunication and the subsequent impact on the expansion among Internet service providers have been important in the rapid development of social networking in Timor-Leste.

Timor-Leste is likely to require medium bandwidth to meet growing Internet demand, which will eventually call for a fibre optic cable infrastructure.

owned Telkomcel, and the Vietnamese owned Telemor (World Bank 2013). By the end of 2012, mobile telecommunication coverage had reached 92.5 percent of the population, and approximately 55.0 percent of the population, or 620,000 people, have subscribed to mobile service (Kelly and Souter 2014).

Internet, social networking and social media

Timor Telecom is the only full hard-wired, traditional copper cable technology, Internet service provider except for the 3G providers, though the Australian-owned iNET Internet service provider also operates in Dili, utilizing Timor Telecom

infrastructure (da Silva 2009; World Bank 2013). Timor-Leste is likely to require medium bandwidth to meet growing Internet demand, which will eventually call for a fibre optic cable infrastructure. It has been relying on international telecommunication and Internet connectivity through expensive satellite links because of the country's geographical remoteness from submarine fibre optic pathways. Recent proposals have suggested a tie-in to the Indonesian fibre optic system (World Bank 2013). Linking Timor-Leste to the fibre optic network would reduce mobile telecommunication and Internet user costs, increase download and upload speeds and extend public access and use.

Statistics of the International Telecommunication Union reveal that Timor-Leste is experiencing rapid growth in Internet access and use, which is being driven by mobile phone subscriptions (table 5.1). Mobile phone subscription is cheap and at saturation levels, and this is raising the access to mobile Internet services. Fixed telecommunication infrastructure and Internet services are extremely limited and not especially relevant to the future growth of the ICT sector.

The liberalization of telecommunication has clearly resulted in rapid growth in new ICT access and a transformation in communication in Timor-Leste. This is confirmed by statistics of the social media agency We Are Social, which offers data from 2013, 2015 and 2016 (figure 5.1).

TABLE 5.1

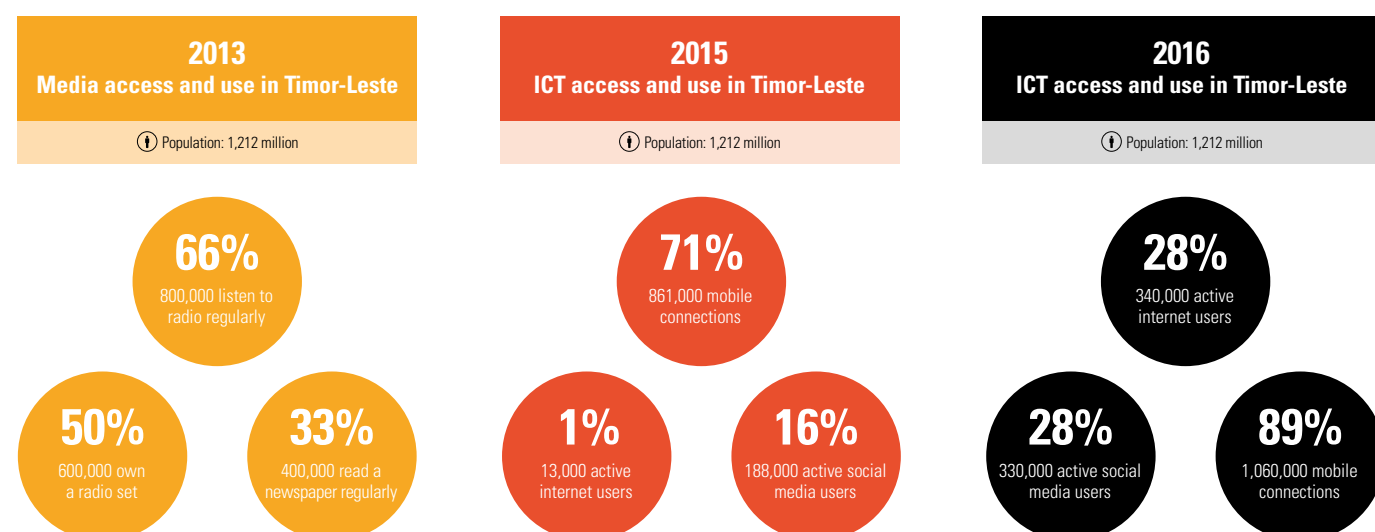
ICT Access Statistics, Timor-Leste, 2016

Indicator	Value
Fixed telephone subscriptions, per 100 inhabitants	0.2
Mobile cellular subscriptions, per 100 inhabitants	125
Fixed (wired) broadband subscriptions, per 100 inhabitants	0.1
Mobile broadband subscriptions, per 100 inhabitants	64.6
Households with a computer, % of total	20.9
Households with Internet access at home, % of total	26.9
Individuals using the Internet, % of population	34.1

Source: Timor-Leste Profile, data of 2016, ICT Statistics (database), International Telecommunication Union, Geneva, <http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>.

FIGURE 5.1

Access to New ICTs and Mass Media, Timor-Leste, 2013, 2015, and 2016



Sources: Data of "Digital in APAC 2016", We Are Social, Singapore, <http://wearesocial.com/sg/blog/2016/09/digital-in-apac-2016>; World Bank 2013.

Note: Statistics on the use of social media are based on monthly user numbers reported by the country's busiest platform and representing active accounts rather than individual users.

We Are Social refers to the growth in the ICT sector as follows:

The real standout story in Internet growth belongs to Timor-Leste, where Internet usage has leapt by almost 2,500 percent since March 2015. Almost all of this growth can be attributed to improved mobile Internet access, which has been driven in large part by bundled data packages (including free or cheap Facebook access) offered by the country's telco [telecommunication] operators.⁴²

In Timor-Leste, social media use is dominated by Facebook, which accounts for 95 percent of all activity. Twitter is used by 4 percent of social media users.⁴³ Other platforms, such as YouTube, which is download-heavy, Tumblr and Pinterest have an insignificant share of the social media market. Facebook user statistics highlight that there are a substantial number of users among the younger age groups (table 5.2). Users ages 18–24 comprise 46 percent of all Facebook users, while 13- to 17-year-olds account for 20 percent of users, and 25- to 34-year-olds, another 25 percent. Relative to girls and young women, more boys and young men are active on Facebook. The gendered nature of social media use may reflect ICT access restrictions; this issue merits further investigation.

Mass media

Mass media plays a critical role in raising public awareness on initiatives geared towards youth and in making these initiatives successful and sustainable. However, the history of Timor-Leste's mass media is a turbulent one. The mass media infrastructure was severely damaged in the wake of the 1999 unrest; militias destroyed the offices and the paper stocks of the main daily newspaper *Suara Timor Lorosae* (Voice of Timor-Leste) and threatened journalists (Cokely et al. 2000; Soares and Mytton 2007). Since then, several media development projects have focused on media reconstruction within the country. Media development programmes, such as those supported by the United Nations Educational, Scientific and Cultural Organization (UNESCO), are seeking to diversify and strengthen state and commercial media by training in journalistic standards and responsibilities.⁴⁴ Rising public access to functional Internet services has

TABLE 5.2

Distribution of Facebook Users, by Age and Gender, Timor-Leste (percent)

Age	Total	Women	Men
13–17	20.0	7.0	13.0
18–24	46.0	17.0	29.0
25–34	25.0	8.0	17.0
35–44	5.0	2.0	4.0
45–54	1.5	0.4	1.2
55–64	0.4	0.1	0.3
65+	1.3	0.3	1.0
Total	100.0	35.0	65.0

Source: Data from “Digital in APAC 2016”, We Are Social, Singapore, <http://wearesocial.com/sg/blog/2016/09/digital-in-apac-2016>.

resulted in more online newspapers. *Suara Timor Lorosae* and *Timor Post* now offer comprehensive free-access sites.⁴⁵

Radio is the most popular media platform in both urban and rural areas. Over 50 percent of the population have radios in the home (World Bank 2013). These are mostly battery operated because of the inadequate electricity supply. Two Timorese in three say they listen to the radio, while only one in three says they read a newspaper regularly (World Bank 2013). However, the number of radio stations in Timor-Leste is declining. Under the 1999–2002 transitional Government, 15 stations were launched, but only six were still active in 2006 (Kelly and Souter 2014). The prevalence and reach of Indonesian media may be one of the reasons for the relative weakness of domestic broadcasters (Kelly and Souter 2014). The number of listeners appears to have risen, from 65 percent in 2006 to 70 percent in 2011, and radio accounts for the widest reach of any of the available mass media (Soares and Dooradi 2011).

Community radio is especially important in Timor-Leste. Soares and Dooradi (2011, p. 43) note that “radio, especially community radio stations, fills the gap for the need for local/district news.” Community radio stations such as Radio Comunidade Lorico Llan Dili, Comunidade Maliana and Comunidade Ermera receive considerable audience recognition in the areas of their broadcast reach. Community radio stations are generally not for profit, non-political and focus on providing a local voice for audiences, as well as opportunities for youth participation in media within the community. Their broadcast content tends to be a mix of local news, music and talk radio. The



Numerous challenges constrain the development of ICTs in Timor-Leste.

remit of community radio stations is also closely linked with the provision of public information on a wide range of social and development issues. Television is popular in Timor-Leste, but still has a relatively limited reach. Radio Timor-Leste's television arm, Televisão Timor-Leste, has a local monopoly and offers limited access in rural areas. Except for its local news offerings, it is also less popular (World Bank 2013). In entertainment programming, Indonesian satellite channels are popular among television viewers (World Bank 2013).

ICT sector challenges

Numerous challenges constrain the development of ICTs in Timor-Leste. Prior to the rapid expansion of the mobile network, the market potential of the country was considered too small to support such an expansion (World Bank 2013). A reduction in cost barriers occurred despite the narrow per capita gross domestic product (GDP) of \$1,105, and new ICTs have transformed public access. Nonetheless, a strong ICT regulatory and policymaking capability needs to be maintained within the Government; the need to improve international connectivity is ongoing (World Bank 2013).

Timor-Leste was 134th of 143 countries on the World Economic Forum's 2015 networked readiness index.

An additional challenge to the expansion of ICT access is language fragmentation. Timor-Leste's various ethnic groups speak over 30 local languages. Tetum, the most prominent language, is spoken by about 80 percent of the population. Portuguese, the official language during colonial rule, is now spoken by only 5 percent of the population, and Bahasa Indonesian is spoken by about 60 percent of the population. The Government has adopted Tetum and Portuguese as official languages, which has complicated the introduction of new ICT systems and skills development, especially because trade and education are still largely conducted in Bahasa Indonesian (Das and O'Keefe 2005). Language fragmentation and illiteracy can lead to the exclusion of some sections of society from the benefits associated with new ICTs. Minority languages have much less mainstream or social media content, while formal illiteracy and low ICT or e-literacy represent insurmountable barriers to ICT access for many people and shrink the potential of social enterprises to cover areas in which minority languages dominate.

Lafayette (2005) uses the image of wrestling with a crocodile to articulate the issues associated with securing assistance for countries such as Timor-Leste in information technology (IT) from industrialized nations. Computing resources and components are scarce in Timor-Leste, and there are severe challenges and costs associated with shipping donated goods and with the sporadic, inadequate electricity supply. This culminates in a "complete lack of consideration of the utility of computer technologies in the East Timorese context" (Lafayette 2005, p. 133). While the concerns apply to desktop computers and related systems such as those utilized by government departments or universities, the market success of Internet-capable mobile phones that are disposable is diluting the impact of these concerns among the wider public.

Timor-Leste was 134th of 143 countries on the World Economic Forum's 2015 networked readiness index (table 5.3). The index is a measure of the ability of the population and the institutions of a country to make use of new technology. It is based on indicators on infrastructure, skills, the business environment and so on. Timor-Leste was dropped from the survey in 2016 because of inadequate data collection.

While the 2015 results are disappointing, they are an indication of the extent of the

TABLE 5.3

Component Indices, Networked Readiness Index 2015, Timor-Leste

Indices	Rank	Value, 1–7
2015 index, rank among 143 economies	134	2.7
Environment subindex	127	3.2
1st pillar: political and regulatory environment	129	2.7
2nd pillar: business and innovation environment	109	3.8
Readiness subindex	126	2.8
3rd pillar: infrastructure	105	2.9
4th pillar: affordability	129	2.8
5th pillar: skills	130	2.8
Usage subindex	137	2.4
6th pillar: individual usage	125	2.0
7th pillar: business usage	138	2.6
8th pillar: government usage	131	2.7
Impact subindex	132	2.6
9th pillar: economic impacts	131	2.4
10th pillar: social impacts	130	2.8
2014 index, rank among 148 economies	134	2.8
2013 index, rank among 144 economies	141	2.7

Source: Dutta, Geiger, and Lanvin 2015.

improvement needed in the readiness of the Timorese to use the Internet and other modern technologies.

In the category of skills, table 5.4 shows the type of data recorded.

Policymakers must learn from mistakes in other countries and take advantage of the fourth industrial revolution. This will require a much greater application of systems thinking in society, from farmers to decision makers, and a new approach to education will be needed to promote new literacies (St. Clair 2010).

Embracing ICTs in education and TVET for a knowledge-based society

Strengthening ICT-focused education is critical to the development of ICT-based initiatives and the networking that supports and promotes the wider solidarity economy. Comparative analysis of TVET initiatives in the Asia and Pacific region has identified four major problems relevant to training institutions in Timor-Leste that are tasked with supporting the e-literacy and networking ambitions of social entrepreneurs. These include the following:

- Social exclusion; access to the TVET sector across the region is limited among many groups in society
- The misalignment of training options with labour market demands
- The need to strengthen national qualification frameworks and standards to ensure the quality of training
- The human resource and infrastructural capacity of TVET and other training institutions to deliver effective and locally relevant skills development

The TVET sector in Timor-Leste has the potential to improve the skills that would be instrumental in translating the local economy in the wake of the fourth industrial revolution and therefore the livelihoods of a large share of the population. However, the sector faces defining constraints that need to be addressed.

ICT training in Timor-Leste

Tertiary and vocational education is a small sector in Timor-Leste (chapter 4). It encompasses institutes, universities, commercial training organizations, and non-profit

TABLE 5.4

Skill Component Indices, Networked Readiness Index 2015, Timor-Leste

Fifth pillar indices	Rank, of 143	Value, 1–7
5.01 Quality of educational system	135	2.4
5.02 Quality of mathematics and science education	140	2.1
5.03 Secondary education, gross enrolment ratio, %	114	56.6
5.04 Adult literacy rate, %	100	67.5

Source: Dutta, Geiger, and Lanvin 2015.

training providers. The technical exchanges between Australian international development actors and universities and providers in Timor-Leste have been considerable. With the support of the Australian Agency for International Development and the Australian Department of Foreign Affairs and Trade, the effort to strengthen and formalize the TVET sector has been extensive.⁴⁶

Although e-literacy and a networking capability are critical to social enterprises and innovation in the wider economy, there is only a modest focus on ICT training in tertiary and vocational education in Timor-Leste.

“ICT education has yet to be identified as a key part of Timorese education at any level”, notes the World Bank (2013, p. 42). “Timor-Leste has only a handful of tertiary education institutions that offer courses in computer science, computer technology and information management, or other ICT-related subjects.” The few options that do exist include Akademi Komputer, Canossa Professional Institute, Dili Institute of Technology, Dom Martinho University, the Institute of Business, and the UNTL. These institutions have only limited facilities and experienced teaching staff. Some curriculum gaps are filled through courses offered by charitable and volunteer organizations.

TVET is focused on six key training areas: administration and finance, construction, tourism and hospitality, education, training and assessment, and agriculture and automotive mechanics. Twenty-two national qualifications and five national certificates have been developed, though only two—Certificate I/II in ICT and Certificate IV in Public Sector Media Studies—address e-literacy, communication, or ICTs.

That ICTs do not feature as a priority in national plans suggests that the provision of training in this critical area will remain weak

Although e-literacy and a networking capability are critical to social enterprises and innovation in the wider economy, there is only a modest focus on ICT training in tertiary and vocational education in Timor-Leste.



Informal education provides several opportunities for ICT skills development.

in formal education (MED and UNDP 2012). An examination of the ICT skills required to support the growth of a solidarity economy and networking among social entrepreneurs must be undertaken to ensure that the training options are relevant and future orientated. Thus, for instance, while supporting the development of basic e-literacy is important, the absence of network engineers could significantly hamper the formal sector and the solidarity economy in the longer term.

Informal education provides several opportunities for ICT skills development. The United Nations Asian and Pacific Training Centre for Information and Communication Technology for Development has conducted multiple short ICT training programmes in Timor-Leste. Similarly, the Global Development Learning Network of the World Bank relies on distance-learning tools to deliver training programmes. The Dili Distance Learning Centre—the network’s key node in Timor-Leste—was established in March 2002 with funding from the Asian Development Bank, the Government of Portugal and the World Bank (World Bank 2013). The centre focuses on public administration through targeted training courses for civil servants (World Bank 2013).

Several training-related issues in Timor-Leste constrain the ICT sector and the wider economy, thereby hampering the potential of social entrepreneurship, as follows:

- Access to training in ICT skills, including word processing, the creation of spreadsheets and the design of presentations, should be broadened; much of the public service requires training in basic ICT applications (World Bank 2013).
- Training in computer maintenance and networked systems engineering should be enhanced through access to internationally accepted certifications, such as Cisco Certified Network Associate, Cisco Certified Network Professional, the IT Infrastructure Library, and CompTIA (World Bank 2013).
- The capacity to develop Internet and mobile applications should be enhanced to increase local language content and appeal to local audiences and users (World Bank 2013).

The roll-out of greater access to the Internet through mobile telecommunication and 3G wireless broadband will help solve some of the issues associated with ICT training.

“Given the large market in Indonesia,” notes the World Bank (2013, p. 29), “if the correct ICT infrastructure can be deployed in Timor-Leste, its students will be able to benefit from digital Indonesian educational content as well.” The country can usefully capitalize on its familiarity with Bahasa Indonesian language materials developed by the Universitas Terbuka, the Indonesian Open University, which utilizes open and distance learning systems (World Bank 2013).

Widening social inclusion in training

Establishing inclusive tertiary training programmes is difficult. Certain groups tend to become marginalized for a variety of reasons that may include ethnicity, caste or class, age, language proficiency, lack of education, health, disability, gender, financial hardship, remoteness, lack of transport, and lack of access to ICTs. For instance, around 60 percent of respondents to the 2016 Youth Well-Being Survey aspire to undertake further studies or training (chapter 2). However, only about one third of this group reported that they have received any training.

When youth who said they do not aspire to enrol in training were asked why not, they responded with the following reasons: currently studying, lack of information, heavy workload or lack of time, excessive distance to a training centre, lack of money, or marriage. There is room to meet young people’s aspirations to benefit from additional training opportunities.

A strong focus on the inclusion of girls and women in formal and non-formal education is crucial because they often bear the burden of norms and practices that might limit their participation in education and training. Efforts to spur their inclusion have involved the provision of sanitary facilities, baby changing facilities, and crèches. Such facilities have been found to produce a substantial positive effect on female participation in the TVET system (Marope, Chakroun, and Holmes 2015). Family-friendly timetabling can also make it easier for women to balance their household, employment and training commitments (Marope, Chakroun, and Holmes 2015). Without considerations of this kind, girls and women may continue to be excluded from educational opportunities.

Such concerns are widely recognized within the TVET sector, and many institutions are designed to focus on promoting gender equality.



For example, the Australia-Pacific Technical College and TVETs in Kiribati and Vanuatu have identified targeting strategies to promote wider TVET access among girls and women (ERF 2014). Promoting gender equality in training opportunities is also critical to the stimulation of new enterprise opportunities.

“In [societies] where men have customary leadership at village and family levels, the training [of women] has released talent and potential from a previously untapped source”, stresses the Australian Department of Foreign Affairs and Trade (DFAT 2012, p. 42).

More effort should be made to allow people living with disabilities to benefit from inclusion. Individuals who have difficulty seeing, hearing, walking, concentrating, and communicating are often among the most excluded members of society; their needs should be considered (DFAT 2012). For example, buildings must be constructed or altered so they are accessible. Appropriate training materials should be developed, and special arrangements should be made to facilitate school examinations and training tests for the disabled. Most TVET programmes in the Asia and Pacific region are designed to include the disabled. This inclusion is typically achieved by actively enrolling the disabled in the full range of courses available, as well as courses specifically for the disabled. For example, the Australia-Pacific Technical College offers two certificates in disability services and support in which 150 students are enrolled. Students living with disabilities account for 0.6 percent of the enrolments (ERF 2014).

According to the 2016 Youth Well-Being Survey, only 4 percent of youth report that their physical health is poor and prevents them from performing the activities they would like to perform. However, 36 percent indicate their physical health limits their daily activities. Around 20 percent report they had experienced an illness in their lives that had lasted more than six months. While these figures are not explicitly indicative of the share of youth with disabilities in Timor-Leste, it is critical that youth with disabilities enjoy equal rights and opportunities to receive training in skills and support in realizing their talents.

Individuals and groups are marginalized in many ways. Yet, most programmes overlook exclusion and, indeed, perpetuate the isolation of certain groups. The rural-urban divide in training must be reduced. The Vanuatu TVET Sector Strengthening Programme

(Phase II) focused on providing a flexible, modularized, demand-driven, and province-based programme that enables students to train close to home and undertake study while working full time. As well as prioritizing the inclusion of youth, girls and women, and the disabled, the programme sought to include people living in remote areas at all educational backgrounds and all ages. Now, people living in remote areas are able to benefit from TVET training, which they would have otherwise been unable to participate in because their areas are “only accessible by boat or by walking several hours through bushland” (DFAT 2012, p. 43).

No analysis exists on how training institutions in Timor-Leste might widen social inclusion through their programmes. An assessment of the situation can help in formulating strategies to eliminate the rural-urban divide and promote social inclusion through training opportunities in foundation or bridging programmes.

Addressing labour market demand and skills matching

The misalignment of skills with labour market demands is a significant barrier to the effectiveness of the TVET sector in the Asia and Pacific region, and it is a potential drag on the economy, including social enterprises. Because of this, many people are unable to gain employment because they do not have the appropriate skills for the jobs available on the market. This can prevent sectoral expansion. The skills that the private, public and social enterprise sectors demand are rapidly evolving, especially in ICTs, but the skills of potential employees are tending to lag (Martinez-Fernandez and Choi 2012).

The formal TVET sector and much of the informal training sector are supply-driven rather than demand-driven (Majumdar 2011). This is based on a lack of understanding of the needs of the labour market and leads to skill mismatches (Martinez-Fernandez and Choi 2012). Labour market assessments to enhance skills matching should be a priority in rapidly emerging areas, such as ICTs and IT. Without assessment, unemployment will continue to coexist alongside job vacancies because of unmet demand for skills (Marope, Chakroun, and Holmes 2015). Timor-Leste’s national qualifications framework plays a vital role in labour market assessment, skills matching and monitoring the quality

Labour market assessments to enhance skills matching should be a priority in rapidly emerging areas, such as ICTs and IT.

of instruction. Hence there should be greater dialogue on the Timor-Leste national qualifications framework with employers to guarantee the maximum relevance of training. Greater TVET collaboration with employers and the involvement of employers in the development and delivery of training programmes can help eliminate skills mismatching (Marope, Chakroun, and Holmes 2015). Generic transferable skills should also be covered in TVET initiatives.

“Technological progress creates the demand for a more knowledgeable and skilled workforce,” note Marope, Chakroun, and Holmes (2015, p. 55), “but also one that can adapt quickly to emerging technologies in a cycle of continuous learning.” This places emphasis on formal literacy and numeracy, but also on the rapidly emerging e-literacy requirements that underpin globalized economies. Many youth and adults in the Asia and Pacific region, including Timor-Leste, still lack such skills, often because they have received poor-quality education or education that offers no opportunity to build e-literacy (Marope, Chakroun, and Holmes 2015) (see chapter 4). Additional efforts are needed to strengthen the capacity of training providers to deliver ICT training that is capable of supporting emerging social enterprises in Timor-Leste.

Addressing the infrastructure to acquire and apply knowledge

“Many countries . . . lack sufficient facilities and equipment or qualified instructors,” Martinez-Fernandez and Choi (2012, pp. 14–15) point out. Many institutions in the Asia and Pacific region provide training that is technically handicapped by poor access to the latest equipment and facilities. ICT infrastructure is woefully inadequate in many TVET centres. To overcome these barriers and offer ICT courses that enhance social networking and the development of mobile applications and websites, facilities must be upgraded. Improvements in technical infrastructure can increase the inclusiveness, cost-effectiveness and quality of training (Martinez-Fernandez and Choi 2012).

Unqualified or poorly qualified instructors also pose a substantial barrier to the effectiveness of the TVET sector. Ensuring that the skills of trainers align with the skills sought by industry is critical, especially in a rapidly growing area such as ICTs. There must be more investment in professional development. The

evaluation of trainers and their teaching methods must become routine to ensure that quality is safeguarded. High-quality training is essential because, without it, graduates will enter the workforce without the skills necessary to satisfy industry demand. This will undermine the dynamism of the broader economy.

In many ways, a new paradigm is needed to expand the knowledge infrastructure in Timor-Leste. The World Summit on the Information Society proposed useful methods for introducing ICTs, but so far Timor-Leste have not implemented any of the approaches. Particularly meaningful for Timor-Leste would be the following targets set through the summit process (Partnership on Measuring ICT for Development 2014):

- Connect all villages with ICTs and establish community access points
- Connect all primary and secondary schools with ICTs
- Connect all scientific and research centres with ICTs
- Connect all public libraries, museums, post offices and national archives with ICTs
- Connect all health centres and hospitals with ICTs
- Connect all central government departments and establish websites
- Adapt all primary and secondary school curricula to meet the challenges of the information society, taking into account national circumstances
- Ensure that the world’s population has access to television and radio services

Evidence in many countries shows that the implementation of these targets, particularly those concerning educational institutions and public access institutions such as libraries, post offices, cultural centres, and so on, where staff can advise and assist the public, can have a huge multiplier effect on the ability of small businesses, including solidarity economy enterprises, to emerge and prosper (Corredera 2015; ITU and UPU 2010).

None of the commercial providers in Timor-Leste can supply the IT services universities need for research, administration, libraries, teaching and communication. Timor-Leste is one of the few countries in the region that does not have a dedicated national research and education network among universities and research institutes. The Marshall Islands, Tonga and Vanuatu have recently installed networks with the assistance of the Australian network and the European Union. A network

None of the commercial providers in Timor-Leste can supply the IT services universities need for research, administration, libraries, teaching and communication.



in Timor-Leste would link Timorese universities with their counterparts in other countries and encourage international academic collaboration (Foley 2016). The absence of a robust Internet connection at the National University of Timor-Leste (UNTL) is one of the factors holding back the introduction of online learning, which could considerably broaden the opportunities open to students (King 2016). If the universities had their own research and education networks, they could then give all their students computer literacy classes and train computer systems experts who could benefit the rest of the education system and the government (Foley 2016).

ICTs also flourish in libraries in many countries, and this enables many people to use computers for the first time (Partnership on Measuring ICT for Development 2014; box 5.1). Librarians must work closely with ICT professionals and become highly skilled in the technologies given that library science is an interdisciplinary field centred on knowledge management. It has not been adequately developed in the districts or nationwide in Timor-Leste to meet the needs of students or others seeking to learn. A bachelor degree or other diploma in library science should be available at Timorese universities. Every educational institution, even primary schools, should have a library. Likewise, IT technical certificates should be available in district educational institutions, and all students should be required to take IT literacy courses.

An analysis of the opportunities and constraints within TVET and non-formal training in the effort to build marketable ICT skills relevant to the needs of the fourth industrial revolution would be informative in developing a practical strategy.

ICTs and e-governance

The establishment of public sector electronic and telecommunication systems is critical in supporting e-governance, e-citizenship and opportunities to build e-governance literacy. Because of the rapid expansion of mobile telecommunication and wireless Internet access, there is clear potential for the Government of Timor-Leste to pursue e-governance strategies designed to increase Government-citizen and Government-youth dialogue, while transforming access to a wide range of public sector services and activities.

BOX 5.1

Examples of ICT Infrastructure in Other Countries

In many towns in Fiji, post offices serve as banking and Internet centres, but also as bookshops where schoolbooks and general reading materials are available.^a Under the Indonesians, there were post offices in Timor-Leste where one could use the Internet, but the relevant infrastructure was destroyed in September 1999 by elements of the Indonesian army when Indonesian-backed militias raided many educational and communication facilities (Taudevin 1999). The development of a good postal service would greatly enhance the business environment outside Dili. It would open up more facilities conducive to learning in rural areas and improve the willingness of educated people to live in rural areas (Corredera 2015; ITU and UPU 2010). The postal service could offer credit cards or internationally recognized debit cards, thereby enabling more Timorese to purchase books and other materials from foreign sources through the mail or Internet services. It would also make equipping rural libraries possible and facilitate the supply of textbooks to schools.

a: Post Fiji, Suva General Post Office, Suva, Fiji, <http://www.postfiji.com.fj/pages.cfm/services/>.

“Part of the international efforts to support countries like East Timor in their development process is through the implementations of ICT4Dev projects”, note da Silva and Fernández (2011, p. 4). “Among these projects, implementations of e-governance initiatives are perceived to have a significant degree of importance.” In 2007, the personnel management information system was launched to facilitate human resources management and administrative service assessment (World Bank 2013). However, implementation of the system encountered multiple challenges, namely, no network connectivity among government offices and departments, and email accessibility was uncommon (World Bank 2013). Similar projects, such as the electronic case management system implemented by UNDP and the Ministry of Justice to enable the tracking of cases within the judicial system, were only partially implemented (da Silva and Fernández 2010). In 2011, the tracking system, which was not yet fully operational, was being replaced by a more comprehensive integrated information management system that was designed to link all justice institutions in Timor-Leste. The new system was launched in October 2013 after delays during roll-out because of training and skills shortages, especially in the courts.

E-governance systems have been plagued by infrastructure and skills inadequacies. Such initiatives are widely considered crucial to enhancing government efficiency and transparency. Good governance is closely linked to public information provision and financial accountability. The Government recently developed a major extension of the financial

The establishment of public sector electronic and telecommunication systems is critical in supporting e-governance, e-citizenship and opportunities to build e-governance literacy.

E-governance strategies are key to strengthening effective citizenship among youth. They can also support social enterprises.

management information system used by the Ministry of Finance since independence; the system includes an online e-governance portal (da Silva and Fernández 2010). In 2011, the transparency portal was rolled out.⁴⁷ The multilanguage portal (English, Portuguese, Tetum) links users to four separate portals, as follows:

- *The budget transparency portal*: to monitor government budget expenditures, including the purpose of the spending and the amount of the budget remaining
- *The aid transparency portal*: to monitor the donations of development partners and the purpose of the spending to achieve government goals
- *The e-procurement portal*: to view current tenders and monitor the cost and who is awarded the tenders
- *The Government results portal*: to view the priorities of the Government, monitor delivery of programmes, and see who benefits from projects

Enhanced Internet access through mobile telecommunication is rapidly narrowing the gap between the usage rate of the e-governance portal and the large number of potential users. E-governance strategies are key to strengthening effective citizenship among youth. They can also support social enterprises. Public access to tendering and transparency in budgeting and aid can offer the emerging sector opportunities to compete with for-profit companies in the provision of government goods and services. No data are available on whether existing social enterprises in Timor-Leste participate in such tendering systems.

In a recent social innovation mapping report, Ashoka (2014), a non-profit organization, identifies several broad patterns of innovation in the work of technology-based social entrepreneurs. Thus, they find that social entrepreneurs can contribute to the social transition from digital literacy to digital citizenship. Training in simple digital literacy is not sufficient, especially because of the speed and frequency of innovation in the mobile telecommunication market. New technologies offer the digitally literate the opportunity to create and share unique media content and promote innovative business ideas. They allow consumers to become commentators on products and services and citizens to express their views on government transparency or accountability. “Social entrepreneurs influence central decision-making bodies by aggregating data that [are] reported by citizens”, notes Ashoka (2014, p. 9). The ability

to aggregate important citizen-driven data and deliver them in meaningful ways to decision makers can generate substantial change in social policy and other public policies.

Digital literacy is a prerequisite of digital citizenship. The potential for real time networking among citizens or between the Government and citizens has never been greater and is being actively pursued in numerous countries (Ashoka 2014). For instance, ICT Watch (Indonesia) exemplifies the role an active citizenry can play in promoting digital citizenship.⁴⁸ The organization is committed to protecting the freedom of information and encourages the promotion of Internet rights, while seeking to prevent government restrictions on ICT access or content.

It is now clear that training in simple digital or e-literacy alone is not sufficient. Timor-Leste must engage in purposeful strategies that encourage e-citizenship, alongside policies that lead to greater public access to ICTs. Young social entrepreneurs world-wide are altering public perceptions of what society means and how citizens can contribute to the society (Ashoka 2014). However, the potential of marginalized populations must be unlocked. Enhancing the access to ICTs among disenfranchised groups, such as residents of rural or remote areas, would foster innovative ways of interacting with the economy and society.

Embracing ICTs for social entrepreneurship

Strong links are being forged between the ICT sector and social enterprises in recognition that ICTs are able to accomplish the following:

- Facilitate the provision of new services or access to goods, for example, through e-commerce
- Help link demand (consumers) to goods and services in highly efficient ways such as through online retailers, who have lower overhead than shopowners
- Offer new ways to work or collaborate without the need for geographical collocation
- Provide new mechanisms for gathering and sharing information and data
- Raise awareness of social enterprise opportunities and activities and define new networks and communities of interest

Social enterprises are emerging in the developing world, but the supporting ICT infrastructure has lagged relative to the developed



world. However, the advent of cheap 3G mobile telecommunication and wireless Internet services in countries such as Timor-Leste are leading to a radical transformation in the use of new ICTs such as mobile phones and tablet computers as well as computing more generally. Countries such as Timor-Leste can be said to be rapidly networking because social media is growing exponentially, and the potential for innovation in the economy and among social enterprises is being realized. Social enterprise activities could contribute to key social development outcomes in Timor-Leste, and there is potential for the large youth population that is driving social networking and social media to become more engaged.

The global context

The importance of ICTs and social networking in driving entrepreneurship in the global economy is unequivocal. Developing countries, constrained by poor ICT infrastructure, generally lag in ICT access and use, though the gaps and digital inequalities evident with the rich countries are narrowing. ICT-focused, -enabled, or -promoted social entrepreneurship is firmly on the agenda in Timor-Leste. Major lessons that can help shape the future direction of policy and programme initiatives in Timor-Leste can be drawn from international experience; for example, see box 5.2.

Likewise, social entrepreneurship is often driven by the ability of peers to network, connect and learn. Decentralized networking should therefore be promoted for the benefit of peer communication, knowledge sharing and education. Social entrepreneurs are helping accomplish this by creating workspaces, online networks and practical opportunities to build the capacity of new social entrepreneurs (Ashoka 2014).

One of the most important features of social entrepreneurship revolves around the need to understand and engage key stakeholders, audiences and consumers. Technology alone is not necessarily sufficient because social entrepreneurs must often gather information on crucial issues, such as market potential or market access, directly in communities. Direct relationships and analysis give shape to social entrepreneurship, ensure relevance and allow for an ongoing dialogue over changes, failings and other impacts (Ashoka 2014). For example, ZMQ Software Systems (India), relying on mobile telecommunication, has designed interactive

games to disseminate messages on public health care, enterprise development and livelihood generation.⁴⁹ These games have been developed through long-term, direct engagement with communities and partner organizations.

Ashoka (2014) identifies widespread ICT-related barriers to the development of social entrepreneurship, including the following:

- Access to ICT infrastructure owned at the centre is restricted by business models according to which poor, rural, or remote populations are incapable of paying the basic costs of infrastructure and of access to infrastructure, and the investment in provision is therefore not worth the reward.
- Social enterprises cannot afford to drive technological innovation alone, particularly the high costs of technological solutions or upgrades. Social enterprises thus frequently struggle to utilize effectively the potential assistance and support that are available.
- TVET lags with respect to rapidly changing job markets, and young people are thus often not fully equipped with the ICT knowledge they require to be successful in the labour force.

In Timor-Leste, where youth unemployment is substantial, an obvious link can be forged between the potential of social enterprises and the access of youth to ICTs. The International Telecommunication Union has highlighted wider digital opportunities to address youth unemployment (ITU 2014). Technological advances in ICTs have effectively made digital literacy a prerequisite for employment and entrepreneurship, but they have also opened the door to participation in rapidly growing

BOX 5.2

Bridging the Digital Divide

Jokkolabs offers collaborative working spaces to young entrepreneurs across Africa, as well as access to an extensive network of social entrepreneurs. It is utilizing and promoting new ICTs to help launch social and business ventures through the sharing of resources and ideas. It also offers public ICT seminars and training programmes.^a

Similarly, the Digital Opportunity Trust seeks to address the issue of youth unemployment through peer-led engagement over a global network of cross-sectoral partnerships. The trust empowers young university graduates to become agents of change in their communities across Africa, Asia, Central America, and the Middle East through the development of technical skills. The trust's intern programme bridges the digital divide between formal education and the labour force through a two-week training exercise in entrepreneurship and ICT and workforce development, followed by a nine-month internship, after which participants are able to enter the workforce as skilled ICT-focused changemakers.^b

a: See the website of ICT Watch, Jakarta, Indonesia, at <http://ictwatch.id>.
b: See DOT (Digital Opportunity Trust), Ottawa, <https://www.dotrust.org>.

Globally, increases in mobile technologies are also expanding employment opportunities among youth, particularly in the demand for mobile phone-enabled services.

e-commerce markets (ITU 2014). Globally, increases in mobile technologies are also expanding employment opportunities among youth, particularly in the demand for mobile phone-enabled services (Baskaran and Mehta 2016; ITU 2014; Roh 2016). Employment innovations driven by ICTs include online job services and job matching, such as SoukTel's Job Match Programme, which, through an easy-to-use short message service system, connects job-seekers in Arab states with employers seeking staff (ITU 2014).⁵⁰

Crowdsourcing and microwork business models benefit individuals with higher-level ICT technical skills and have become a popular and flexible way for employers to add to their workforce. Thus, CrowdFlower is one of the largest platforms offering crowdsourced data and analysis for a wide variety of clients.⁵¹ Microwork refers to small tasks that have been broken out of a larger business process and that can be completed virtually on mobile or Internet devices by many individuals. An expanding number of microwork-based organizations are employing people to perform tasks such as labelling photos, describing products, or transcribing scanned documents (ITU 2014).

Application development has potential in emerging economies, and the availability of apps has inspired a new range of entrepreneurs. Games are considered the most lucrative apps to produce, although the app market is often driven by the marketing sector, which underpins sector profitability. Future demand in developing countries is expected to involve local apps. This represents an opportunity to address market gaps for apps in local languages and with local content. The app economy is also spawning technical hubs and incubators to provide connectivity, support structures, mentorship and collaboration (Hurriyati et al. 2015; Khalil and Olafsen 2010). These hubs include the Grameen Foundation's Applabs and infoDev's mLabs (ITU 2014).

ICT-driven social enterprises in Timor-Leste

There are many international examples of social enterprises harnessing ICT in innovative ways. However, few examples of social entrepreneurship in Timor-Leste are identifiable within the literature, and only a handful of these refer to the ICT sector.

The *Friends of Suai* was formed in Port Phillip, Australia, in 2000 at the request of

Xanana Gusmão (who was to become the first president of Timor-Leste) to assist in Timor-Leste's recovery efforts; it became one of 50 friendship groups in the Australian state of Victoria (Moreira 2009b). Because of this relationship, Victorian film-makers travelled to the city of Suai to explore opportunities to increase communication between the two friendship cities through participatory and digital media production.

In 2006, the Friends of Suai provided the technology to establish a youth centre as a media-training facility. The first outcome of this project was a short documentary film, "Circle of Stones". A youth media-training group (YoMaTre) was then formed, and workshops were held occasionally. Through a grant from the Port Phillip Council, a website, Suai Media Space, was subsequently launched as a social networking and media project designed to connect the people of Suai with the rest of the world. The website content is written and produced by young people from Suai.

The International Centre for Journalism provided additional training and equipment to the centre, which helped facilitate the social networking capacity.⁵² The social network associated with the Suai Media Space has a membership of over 200, and members migrated to a dedicated Facebook site. However, the Suai Media Space Facebook page was subsequently attacked by racist youth and was eventually removed. The Facebook group has since been replaced by the Hau Hadomi Suai Group (I love Suai).

Empreza Diak is a Timorese non-governmental organization (NGO) that focuses on supporting innovative businesses and social enterprises to promote positive social change. It supports sustainable, inclusive growth, works with the informal economy, and fosters capacity-building for entrepreneurship. Empreza Diak's work has benefited up to 3,000 people directly and over 15,000 indirectly. Founded in 2010, the NGO focuses on (1) promoting local products for local markets, (2) assisting businesses and social enterprises to boost opportunities for vulnerable women, and (3) partnering with public and private organizations to build sustainable businesses. It maintains an active Facebook page that supports the NGO's activities and links to associated entrepreneurs and business partners.⁵³

InfoTimor is a not-for-profit social enterprise seeking to assist in the rebuilding of Timor-Leste by expanding the role of ICTs within the economy. The organization



focuses on ICT skills and networking training, computer sales and refurbishment, and the provision of Internet services supported by very small aperture terminals (two-way satellite ground stations with dish antennæ). InfoTimor pursues education and employment opportunities among young people through partnerships with the Dili Institute of Technology, Infoexchange Australia, and the Government of Timor-Leste.⁵⁴

Despite these successful examples, the extent to which the ICT sector can support social enterprises needs to be better understood by policymakers in Timor-Leste. Primary research on how social enterprises are using ICTs, the barriers to more effective ICT use by social entrepreneurs, and the barriers consumers face in using ICTs to access e-commerce, e-governance, or ICT-based social enterprise initiatives would help fill knowledge gaps. International experience highlights that ICTs can drive substantial innovation in employment, while creating new social networks and market opportunities. However, social entrepreneurship cannot flourish in an ICT environment that is not supportive of innovation or that is unnecessarily restrictive in content or in fostering commerce. Promoting decentralized networking for peer communication, knowledge sharing and education can help social enterprises develop.

Summary

This chapter examines (1) the situation of ICTs in Timor-Leste in the context of the fourth industrial revolution, (2) the role of formal and non-formal training in supporting ICT skills development, and (3) the role of ICTs in supporting social enterprises. Lessons learned elsewhere are reviewed and compared with examples and lessons from Timor-Leste. This chapter provides analysis concluding that the coverage of mobile telecommunication and wireless Internet services in Timor-Leste is expanding rapidly. More competition would extend access additionally. The use of mass media is dominated by radio. Hence, any effort to promote more awareness of initiatives geared towards youth should rely on radio as a key channel. Social networking and the use of social media are growing rapidly, though almost exclusively through Facebook. While peer networking and connectivity are important for emerging social enterprises and need

to be actively promoted, there are considerable gender disparities in the use of social media. This needs to be addressed. The chapter draws out the importance of promoting social inclusion and eliminating the rural-urban divide in accessing training and ICT skills development opportunities. It is crucial to provide new opportunities for inclusive, innovative, flexible and decentralized forms of employment, knowledge creation and training. The misalignment of skills training and labour market demand is a significant barrier to the development of the ICT sector and social enterprises in Timor-Leste. TVET frequently lacks the technical infrastructure and trained staff necessary to deliver courses that meet the needs of the labour market. There should be greater dialogue with employers on the Timor-Leste national qualifications framework to guarantee the maximum relevance of training. Moreover, in TVET in Timor-Leste, there is only a modest focus on ICT training. More effort is needed to enable TVET institutions to deliver adequate ICT training in the wake of the fourth industrial revolution. ICT training should be capable of supporting the emerging social enterprise sector. ICTs do not feature as a priority in national plans in Timor-Leste. Until they do, the provision of ICT skills training and talent development in emerging sectors will remain weak.

The roll-out of government electronic systems has revealed skill shortages and a lack of e-literacy in the job market and in the public sector. Training in simple digital or e-literacy alone is not sufficient. Governments must engage in purposeful strategies that encourage e-citizenship, alongside policies that lead to greater public access to ICTs. Similarly, social entrepreneurship cannot flourish in an ICT environment that is not supportive of innovation or that is unnecessarily restrictive in content or in fostering commerce. Promoting decentralized networking for peer communication, knowledge sharing and education can help social enterprises flourish. The substantial use of Facebook by young people and the widespread access to radio should be used to promote social enterprises and spread awareness of the rationale behind them, how to launch them and where to obtain relevant ICT or social enterprise training. Overall, more formative research would help develop a concrete ICT strategy to help prepare the youth of Timor-Leste for the next industrial revolution.

Governments must engage in purposeful strategies that encourage e-citizenship, alongside policies that lead to greater public access to ICTs.





CHAPTER 6

PUBLIC INVESTMENT IN YOUTH



Primary school students attend class in Taiboco,
a sub-district of Oecussi.

© Bernardino Soares

Public Investment in Youth

Introduction

This chapter examines key issues revolving around public investment in youth education and training linked to the development of a solidarity economy and social enterprises in Timor-Leste. It also focuses on appropriate ways government financing might be used to support incubators for social enterprises among youth. Important considerations that are analysed include the following: (1) the distinction between human capability and human capital, which helps illustrate the advantages of youth education understood more broadly than simply collapsing investment in youth into skill training for particular projects; (2) the generally recognized value of concentrating on greater literacy as a foundation for structural change and new ways of working; (3) the need to address gender inequality in education and training in Timor-Leste and to recognize the major social consequences of gender inequality; (4) the desirability of enterprise building through the development of clusters, such as in rural livelihoods and food security or in health care, community development and ecotourism, that draw on the country's strengths, while not ignoring the country's fragility in human development; (5) the benefits of offering greater responsibility to marginalized youth and, where possible, of including their organizations in skill and livelihood initiatives; and (6) the relevance of proportionality in public investment, especially by prioritizing human development over physical infrastructure.

“Human capability . . . focuses on the ability of human beings to lead lives they have reason to value and to enhance the substantive choices they have”.

Human development concepts for skills and social enterprises

What are the Sen capability approach and the Say-Schumpeter tradition of social enterprise? How might they be applied to transform the large share of youth in the overall population in Timor-Leste, the youth population bulge,

into a youth dividend? What other concepts and methods might help achieve an understanding of the relevant public policy and investment priorities?

The economist Mahbub ul Haq and his colleague Amartya Sen are prominent among the pioneers of the project of human development of the United Nations Development Programme (UNDP). They believed that the entire liberal notion of economic development was in crisis (Haq 1973). Alarmed by the widening non-income inequalities in society (welfare equality and inequality had not yet appeared among conventional economic indicators), Haq took a practical approach to raising the profile of a new concept of human development.

Meanwhile, Sen was working on conceptualizing human development by using the notion of capabilities as a rival to the older economic concept of utility. He asserted that economic development necessarily involved the expansion of people's capabilities. Increases in income and the related concept of economic growth were only indirect and, often, ineffective measures of human development. Recognizing the links to rights, Sen posited that there is a close connection between entitlements and capabilities.

“Focusing on entitlements—what commodity bundles a person can command—provides a helpful format for characterizing economic development”, Sen (1983, p. 760) argued. (As his thoughts on capabilities evolved, Sen dropped this reference to commodity bundles.)

Sen often quoted the British moral philosopher Adam Smith (see Sen 1985). However, he departed from Smith's focus on exchange and production because, as he put it, “human beings are not merely means of production . . . but also the end of the exercise” (Sen 1997, p. 1960). Human development could not be understood simply as a means towards enhanced production. That was too narrow a view. He distinguished human capabilities from human capital, writing that “human capability . . . focuses on the ability of human beings to lead



lives they have reason to value and to enhance the substantive choices they have” (Sen 1997, p. 1959). Human capital, meanwhile, focused on “the agency of human beings—through skill and knowledge as well as effort—in augmenting production possibilities” (Sen 1997, p. 1959). Sen urged us, in building human capabilities, to go beyond the notion of human capital, after acknowledging its relevance and reach. The broadening that is needed is additional and cumulative, rather than being an alternative to the “human capital” perspective. (Sen 1997, p. 1960)

Thus, an instrumental view of education and training is bound to miss important social and individual value in capability-building. One might take this point one step further, pointing out that the social return on training young people for particular types of work may be less useful, but also less humanly valuable than educating them more broadly to be able to rethink and adapt those same types of work, as well as any work they may encounter.

Sen’s (1999) focus on individual choice and a general expansion of human freedoms led to a criticism of his “methodological individualism”, that is, his view involved accounting for “social phenomena . . . in terms of what individuals think, choose and do” (Stewart and Deneulin 2002, p. 66). One must also look elsewhere for the agencies involved in bringing about desired social change, such as how to build the human capabilities of young people and help young people find meaningful employment.

The late J. Gregory Dees popularized the link between entrepreneurship and social enterprise. He drew on a theorist of entrepreneurship of the 19th Century, Jean-Baptiste Say (1834), who defined an entrepreneur as someone who shifts economic resources out of an area of lower productivity into an area of higher productivity and greater yield. Others have discussed the wider view of entrepreneurship of the early 20th Century political economist, Joseph Schumpeter (1947, 1950, 1961), in the context of creative destruction, a theory of economic innovation in the business cycle. However, Dees combined this and Say’s theories to describe more clearly the microeconomic role of those rare agents who combine a social mission with business ventures (Dees 1998; McNeill 2012). Dees promoted a concept of social entrepreneurship with several key characteristics. First was the mission to

create social value. Second were a recognition and pursuit of new opportunities to serve that mission. Third was the process of innovation, adaptation and learning. Fourth was bold action with few resources. Fifth was a heightened sense of accountability towards those served. This sort of entrepreneurial activity arose among a rare breed of individual, not a class of people (Dees 1998). The concept involves employment creation, as well as advancing wider social objectives and transforming productive systems.

This idealized vision has not been translated into a model or an agreed definition of a social enterprise. It encompasses businesses with social objectives, but the extent to which these differ from other businesses or rely on other forms of accounting, such as the double bottom-line, is widely debated. One writer claims that attempts at definition “find a field which is more defined by its diversity than its consensus” (Hackett 2010, p. 212). Nonetheless, a study of social enterprises in East Asia concludes that “the most important single factor explaining the spreading of the social enterprise phenomenon . . . lies in the public policies that were implemented in the framework of the transitional welfare regimes and globalization process” (Defourny and Kim 2011, p. 90). The public policies included employment creation schemes and welfare-to-work programmes—for example, in Hong Kong SAR, China and in Korea—such as those suggested in the case of Timor-Leste. The same authors stress the role of the power of the state as a key factor driving and regulating social enterprises, which must also survive local market forces (Defourny and Kim 2011).

The link to the state and public policy leaves open the possibility that innovation may arise independently, especially in well-educated communities, and might then attract public support. Researchers have suggested that private social innovation might be seen as “complementary and sometimes as corrective to” public policy and practice (Groot and Dankbaar 2014, p. 17). The reference to complementarity may recall the work of the United Nations Conference on Trade and Development (UNCTAD 1998, p. 1) some years earlier, when “clustering and networking” were said to be “among the best options to support the growth of SMEs [small and medium enterprises]”, an acknowledged key engine of local employment creation. Drawing

Social return on training young people for particular types of work may be less useful, but also less humanly valuable than educating them more broadly to be able to rethink and adapt those same types of work, as well as any work they may encounter.

There is a large disparity between the mean years of schooling among Timorese men (5.3 years) and women (3.6 years).

on institutionalist ideas of circular and cumulative causation, local cluster development can build synergies, cross-links and economies of scale to build collective efficiency in industrial development (Argyrous 1996). Cluster development around SMEs is now well recognized as a superior developmental strategy for employment and industry (Ceglie and Dini 1999; Pietrobelli and Rabellotti 2010; Tambunan 2007).

The United Nations Conference on Trade and Development (UNCTAD 1998) points to superior cluster development in Bangalore, India, where there were high levels of technological development, skills, innovation and trust. This was the result of a public investment in technical colleges and defence industries, alongside the contributions of private engineering and IT industries. One may also imagine a more modest, specialized cluster wherein investment in health care personnel is supplemented by cooperation among various linked initiatives involving health care facilities, local medical professional development, health education and health tourism. This may be relevant to Timor-Leste.

A focus on social enterprises in certain cluster areas selected through public policy need not preclude a more open seeding of innovation in other areas, but it may be a good launching point. Furthermore, identification of a nation's strengths and weaknesses might form useful reference points for public policy. This chapter therefore draws on the concepts of human capability and social enterprise development and uses the most recent data on the key strengths and fragilities of Timor-Leste to propose coherent, evidence-based options for relevant public investment strategies.

Investments in capabilities, education and training

A word of caution about any initiative that seeks to identify improvements in human and youth capabilities with training for specific work programmes. The human development concept has not been conceived as an instrument. According to Sen (2003), one must reach beyond investment in human capital or in training for a particular purpose. Human capability-building in communities and nations must have sufficient breadth and depth to involve nourishing development programmes, aiming at wider social benefits and unleashing the creative energies implied in the solidarity economy and in social enterprise development.

Timor-Leste has achieved advances in education and other areas of human development since independence, but some of these advances seem only limited. Life expectancy at birth has risen substantially since the 1990s, as have the adult literacy rate and the mean years of schooling. However, the latter two appear to have stalled (table 6.1). According to UNDP, the mean years of schooling increased in the first years after independence, but has remained static, at 4.4 years, since 2010. This compares poorly with the average mean of 6.8 years in developing countries. Furthermore, there is a large disparity between the mean years of schooling among Timorese men (5.3 years) and women (3.6 years) (table 6.2). Many countries that are poorer than Timor-Leste exhibit higher average educational attainment (UNDP 2016).

Combined school enrolment rates rose from 59 percent in 1999 to 66 percent in 2004 (UNDP 2006). Lack of capacity and resources constrained educational development.

TABLE 6.1

Selected Human Development Indicators, Timor-Leste, 1996–2015

Indicator	1996/97	1999	2001	2004	2007	2010	2014	2015
Life expectancy at birth, years	54.4	56	56.7	55.5	60.7	67.3	68.2	68.5
Adult literacy, ages 15+, %	40.6	40.4	43	50.1	50.6	58.3	64.1	67.5
Underweight children under age 5, %	51	45	45	43	46	45	38	
Mean years of schooling			2.8	3.3		4.4	4.4	4.4

Sources: UIS 2015; UNDP 2006, 2007, 2009, 2015, 2016; UNICEF 2015.



Nonetheless, a valuable school feeding programme was introduced in some districts. The first draft of the food security policy included reference to this programme, backed by the World Food Programme, which would both “encourage school attendance and improve nutrition of school-age children” (MAFF 2005a). This reference was dropped from the final food security policy, but the school feeding programme seems to have been maintained, at least in primary schools (MAFF 2005b). Extension into secondary schools would help retention rates.

A significant initiative in health education was launched in 2003, when the country’s leadership took on a health care cooperation programme with Cuba. This programme rapidly became the backbone of the country’s primary health care and medical training, dwarfing all other health aid programmes in the country and in the region. By late 2005, 1,000 medical scholarships were being offered to young Timorese, and hundreds of Cuban health workers had come to work in the country. A literacy programme, based on the Cuban *Yo, sí puedo* (Yes, I Can) method, was introduced in 2005. It was first undertaken in Portuguese, but was soon transformed into the Tetum programme *Los Hau Bele!* (Anderson 2008). As a result of the programme, more than 70,000 people gained basic literacy. A follow-up Cuban literacy programme, *Yo, sí puedo seguir* (Yes, I Can Continue), is being run in various countries, for example, Colombia.⁵⁵ However, in Timor-Leste, there was no systematic second-stage programme, leading one researcher to declare that “it is of serious concern that there are no post-literacy activities or classes being organized in any coordinated way for graduates either by governmental or by civil society organizations, although some post-literacy classes are now being piloted in some districts” (Boughton 2010, pp. 69, 71). It is not clear whether the UNDP adult literacy data for 2008–2013 or literacy data of the United Nations Educational, Scientific and Cultural Organization (UNESCO) take the *Los Hau Bele!* Programme fully into account (UIS 2015; UNDP 2015). Yet, recent data show that Timor-Leste’s adult literacy rate, 64.1 percent, is well below the developing country average of 79.9 percent (see table 6.2).

In its *Skills Outlook 2013*, the Organisation for Economic Co-operation and Development (OECD) reinforces the human development concept that basic education and

TABLE 6.2

Human Development Fragilities, Timor-Leste and Developing Countries

Indicator	Timor-Leste	Developing countries
Mean years of schooling, 2015	4.4	6.8
Men	5.3	7.3
Women	3.6	5.4
Inequality in education, 2015, %	47.6	32.3
Child malnutrition, stunting under age 5, 2008–2015	50.2	31
Public health expenditure, 2015, % of GDP	1.3	5.6
Public education expenditure, 2005–2014, % of GDP^a	9.4	4.7
Adult literacy, 2005–2015	67.5	79.9
Labour force participation rate, ages 15+, 2015, %	55.5	64.3

Sources: DGE, 2015; UIS 2015; UNDP 2016; UNICEF 2015.

Note: GDP = gross domestic product.

a: The UNDP data for Timorese investment in education are anomalous; compare with table 6.6.

narrow vocational training are not substitutes for broader, more intensive education. Literacy is not simply a basic skill, but a continuum that is critical for workers in workplaces that are being transformed. The OECD relies on five levels of skill proficiency, in which level 1 refers to basic functional skills, such as the ability to “read relatively short texts to locate a single piece of information that is identical to the information given . . . , understand basic vocabulary, determine the meaning of sentences and read continuous texts with some degree of fluency” (OECD 2013, p. 8). However, the OECD focuses attention on the higher levels of skill proficiency necessary for adaptation and change. At levels 4 and 5, the differences between, for example, Finland and Italy, are quite dramatic (table 6.3). These differences have major consequences in enterprise and industrial development.

TABLE 6.3

Adult Skill Proficiency Rate, by Level, Selected OECD Countries (percent)

Country	Below level 1	Level 1	Levels 2 and 3	Level 4	Level 5
Australia	3.1	9.4	68.6	15.7	1.3
Finland	2.7	8.0	67.2	20.0	2.2
Italy	5.5	22.2	68.4	3.3	0.1
Japan	0.6	4.3	71.4	21.4	1.2
Spain	7.2	20.3	66.9	4.6	0.1
United States	3.9	13.6	66.8	10.9	0.6
United Kingdom	3.3	13.1	69.1	12.4	0.8

Source: OECD 2013.

Based on the observation that 34 percent of workers reported structural changes in the workplace and 42 percent reported new ways of working, the OECD report suggests that countries at greater levels of development in higher levels of skill proficiency will be able to adapt more effectively to structural change. Levels 4 and 5 in proficiency supposes university educational attainment and the ability to “perform multistep operations to integrate, interpret or synthesize information from complex texts that involve conditional and/or competing information . . . [and to] make complex inferences and appropriately apply background knowledge as well as interpret or evaluate subtle truth claims” (OECD 2013, p. 8). This research reinforces the results of many surveys on the skills employers generally seek in employees. They typically value soft skills—such as the ability to work on a team, leadership, communication skills, problem-solving skills and a strong work ethic—rather than practical workplace skills, which can be taught on the job (Andrews 2015; NACE 2015).

Keeping children in school longer is one of the best remedies for youth unemployment. Because of high youth unemployment rates in the 1980s, Australia undertook to keep young people in school. The retention rates to year 12 rose from less than 50 percent in the early 1980s to almost 80 percent in the early 1990s. Girls caught up to and passed boys in school completion rates (ABS 2011). Subsequently, the principal findings of a study on the factors affecting youth unemployment included that “low school achievement in literacy and numeracy was consistently associated with youth unemployment . . . year 12 completion reduced the incidence of unemployment [after controlling for other factors, and] . . . post-school qualifications were of little benefit, after controlling for the effects of school achievement” (Marks and Fleming 1998, p. v). Thus, higher school completion rates to year 12 were the major factor in reducing Australian youth unemployment through the 1980s and early 1990s.

Another consideration in favour of foundational investments in education is the tremendous social value associated with the education of girls and women. The low schooling rates in Timor-Leste are characterized by a large gender gap, a weakness that has wide social costs in health, family planning and labour productivity. A study of 115 countries over 1960–1990 carried out for

the World Bank showed that, while higher incomes were associated with improvements in mortality rates, the education of women was a much more powerful influence (Wang et al. 1999). Thus, education among adult women was more than twice as effective in reducing child and women’s mortality rates and more than four times more effective in reducing fertility rates (Wang et al. 1999). The Brookings Institution has published an impressive compilation of evidence to support each of the following 10 assertions about the education of girls and women: (1) it increases economic growth and agricultural productivity; (2) improves women’s wages and jobs; (3) saves the lives of children and mothers; (4) leads to smaller, more sustainable families; (5) results in healthier, more well educated children; (6) reduces the incidence of HIV/AIDS and malaria; (7) reduces child marriage rates; (8) empowers women; (9) increases women’s political leadership; and (10) reduces the harm to families from natural disasters and climate change (Sperling and Winthrop 2016). This should represent an urgent reminder of the need to invest in broader, more intensive education, including among girls and women and through targeted training programmes, to create a sound basis for social development. The late Katarina Tomaševski, the United Nations special rapporteur on the right to education, made clear a decade ago that the best way to address gender inequality in education was to remove all forms of school fees, including the costs of school uniforms, books and transport, because “the key to a changed global design of education is an affirmation that education is a public responsibility” (Tomaševski 2006, p. 250). Fee-free education, combined with school feeding programmes, to year 12 is the most effective way to address gender inequality and the schooling deficit. A healthy and safe school environment is also critical. A clean water supply and sanitation facilities in schools help control diarrhoea, which can aggravate malnutrition, while making schools generally more welcoming places, particularly for young girls (Nazer 2015).

Clusters around Timor-Leste’s strengths and fragilities

Without discounting the possibility of supporting other youth initiatives, there seems a powerful logic in the focus of the limited

Keeping children in school longer is one of the best remedies for youth unemployment.

The low schooling rates in Timor-Leste are characterized by a large gender gap, a weakness that has wide social costs in health, family planning and labour productivity.



resources of Timor-Leste on specific areas in which there is potential for cross-fertilization and complementary development. The nation should build on its existing strengths. Building on strengths and effective organizations is consistent with UNDP's Youth Strategy 2014–2017, which stresses the “capacity development of young people and youth organizations”, alongside Timor-Leste's 2016 National Youth Policy and related strategies and action plans to support and empower young men and women (UNDP 2014, p. 4; SSYS 2016). Cluster development is a well-established method of growing comparative advantage and nurturing employment through SMEs. Such clusters might be launched by building on the country's strengths to address the country's fragilities.

The strengths and untapped potential are evident in the cultural history that makes Timor-Leste stand out among small nations. The remarkable, free, and well-staffed universal health care system is another area of strength, although, despite this strength, the health sector suffers from a lack of public investment (see table 6.2). Other fragilities can be seen in a critical reading of *Human Development Report 2016* (UNDP 2016). Relative to the developing country average, overall schooling rates are weak, and the disadvantage of women in education appears to account for much of the overall inequality in education. The amount of public expenditure on education might seem reasonable, but it is reflected in outcomes because average schooling rates are low and have been stagnating (see table 6.2). The incidence of child malnutrition is high, which is aggravated by poor sanitation and diarrhoea, while rural livelihoods are not being enhanced, and there is a steady stream of rural youth from the countryside to the capital. Food security is a critical issue because of poor production and the lack of proper education. Delinquency is a problem and often appears to be a function of unemployment among urban youth. (The issues associated with delinquency and the concerns about perceived safety among youth are detailed in chapter 2.) Each of these areas deserves public policy attention, and each also should become a serious focus of cluster development supported by social enterprise and employment initiatives.

The fragilities in educational development and gender equality in education should be addressed through a fully funded programme

of fee-free education up to year 12, as urged by Tomaševski (2006) and as reinforced in the National Strategic Development Plan 2011–2030 (Planning Commission 2011). Beyond the poor schooling rates and despite the significant number of prominent, well-educated Timorese women, including the 38.5 percent representation of women among the members of Parliament, as required by a gender quota (UNDP 2015), capability development opportunities among Timorese girls and women are shallow. Initiatives focused on girls and women in each of the new training and employment schemes should be a priority. This should focus on promoting key roles for women in priority cluster development, such as (1) rural livelihoods and food security and (2) health care, community development and ecotourism. Each of these clusters targets a combination of national strengths and fragilities to achieve a knowledge-based society and a flourishing solidarity economy.

Rural livelihoods and food security

A focus on rural livelihoods and food security would highlight strengths of Timor-Leste, where 50 percent of workers are active in agriculture and where there is a widespread system of customary family land tenure, alongside chronic problems of malnutrition and of dependence on food imports (UNDP 2015). Meanwhile, the rural health care infrastructure accounts for many rural services. If supplemented by new schools and roads, this could help retain young people in viable rural livelihoods and slow the flow of rural migration to the cities, where it contributes to urban unemployment.

Progress has been achieved in reducing the infant mortality rate, which fell from 88 per 1,000 live births in 2002 to 45 in 2009. This appears to be linked to an increase in the provision of care through skilled birth attendants. There also seems to have been some advances in child nutrition. Yet, a national nutrition survey in 2013 found that half of all Timorese babies were stunted (MOH 2015). This was down from 58 percent in 2010, but higher than the 49.4 percent in 2002 (Grieve 2013). Stunting in children may be accompanied by permanent organ damage, including brain damage. Breastfeeding has been encouraged, and the rate is quite high, but anaemia among mothers and babies is also high (MOH 2015). The Ministry of Health, in the 2014 National

Seeding social enterprise initiatives among rural livelihoods and food security projects could help build wider community capacity.

Nutrition Strategy, recognized that “the nutrition situation of the country overall remains poor, with 50.2 percent stunting, 11 percent wasting and 37.7 percent underweight children under five years of age” (MOH 2014, p. 6). The greatest nutritional problem identified was child stunting, but some micronutrient deficiencies were also detected, particularly maternal anaemia (23 percent) and vitamin A deficiency among children (MOH 2014).

Grieve (2013) points out the need for food education in the face of heavily advertised junk food. The 2014 National Nutrition Strategy included programmes to enhance nutrition and health care among mothers and girls, improve general food security, promote better hygiene, and increase education in optimal nutrition practice (MOH 2014). The associated recommendations could be reinforced through rural social enterprise projects. Programmes in support of rural livelihoods based on small farming should become a key pillar of national food security. Seeding social enterprise initiatives among rural livelihoods and food security projects could help build wider community capacity. This might involve, for example, management training in the use of household land and projects in critical local infrastructure, combined with reinforced rural services.

Relevant experiences elsewhere are informative. With a population of around 90 million, Vietnam managed to transition from a food importer to a food exporter after the Doi Moi market reforms of the 1980s. A major feature of the reforms was the focus on a network of small farmers. The reforms led to a dramatic rise in rice output and incomes, improved productivity, and better returns on rice production between 1985 and 2006 (Kompas et al. 2012). Even the World Bank (2016), which is committed to promoting private foreign investment and usually supports large corporate projects, acknowledges that the impressive output of Vietnamese agriculture has been based on smallholder farming. Small farms in Vietnam diversified from rice production into a wider variety of products. The biggest rice exporter in the world, Thailand, also draws on a base of small farming (OBG 2016). Much can thus be achieved by retaining and building on a base of small farming, rather than pursuing large agro-industry projects. This necessarily means the preservation of the household-based land tenure system and avoiding the alienation of customary land

to large corporate projects. The logic of small farm development has buttressed since the global food price rises of 2008 and the wider recognition of the multifunctionality and productivity of small farms (Rosset 1999).

Agricultural researchers have found that small farming output in the Pacific islands has been greatly underestimated and that average local produce sales by customary landowners in Papua New Guinea are much higher than wages derived from rural formal employment (Anderson 2015; Bourke et al. 2006). In India, smallholdings in agriculture still exhibit higher productivity than large holdings (Chand, Lakshmi Prasanna, and Singh 2011). Rosset (1999, p. 1) has developed the concept of the multifunctionality of small farms, that is, they are

More productive, more efficient, and contribute more to economic development than large farms. [They] can also make better stewards of natural resources, conserving biodiversity and safeguarding the future sustainability of agricultural production.

The Food and Agriculture Organization of the United Nations (FAO) has likewise recognized the important role of family farming and smallholders in food production (FAO 2014).

In the 2014 Youth Strategy, UNDP (2014, p. 28) reported on African youth programmes that “guarantee linkages between job creation, food security, peace and inclusive development.” Such programmes, often centred on farm business management, can be particularly valuable because they draw on the strong links agriculture can build with other parts of the economy, such as construction, local infrastructure, tool-making, transport and retail. This has led de Janvry and Sadoulet (2010, p. 1) to conclude that “GDP [gross domestic product] growth originating in agriculture induces income growth among the 40 percent poorest, which is on the order of three times larger than growth originating in the rest of the economy.” Sustainable rural livelihoods can therefore be a tremendous sink for rural unemployment, while slowing internal migration to the cities. They can also reinforce national food sovereignty, a necessary process of protecting local food supplies, reducing import dependence and avoiding the shocks of international price fluctuations or wholesale market manipulations (Rosset 2009). For

these reasons, the linking of social enterprise and other public policy initiatives to a cluster of rural livelihoods and food security deserves consideration.

Health care, community development and ecotourism

A second cluster—ecotourism, community development and health care—could bring together the country's strengths in international recognition, community cohesion and the most rapidly growing health care sector in the region to address the ongoing challenges of weak tourist development and serious underinvestment in health care. Weak development in one of the two areas, ecotourism or health care, can undermine the other area, while a strengthening of both could produce useful synergies. This is a characteristic of the dynamics of clustered, cross-link development.

Timorese leadership has always cherished the ambition to develop tourism. The National Strategic Development Plan highlights the serious aspirations for growth in tourism, but also the limited tourism infrastructure and facilities (Planning Commission 2011). The districts are concerned to remain involved, to own tourism operations and maintain social and environmental controls. Tourist attractions include adventure and historical tourism, the indigenous culture, trekking, marine tourism and scuba diving, and unspoiled locations, such as hot springs, caves and islands (Jebson 2014). But how might the vicious cycle of underdevelopment in the sector be transformed into a virtuous cycle?

Tourist development requires sturdy infrastructure, including national roads, but also a sound public health care environment. Tourists are reluctant to travel to areas associated with crime and violence or serious public health risks. The country has achieved important advances in public health. It possesses a large cohort of doctors who have been trained in preventive care and the promotion of the benefits of regular medical care and who have helped expand treatment, vector control and education so that some areas, such as Lautém District, have been declared free of malaria (Anderson 2010, 2014). However, the risks of dengue, tuberculosis and other diseases haunt the population and dampen the interest of potential tourists. Advances in public health care would represent a win-win development

because they will help the people of Timor-Leste, while enhancing the attractions of local tourism.

Yet, investment in the national health care network is limited. Health spending in 2004 accounted for more than 12 percent of the national budget, but this had fallen to 4 percent by 2016 (see below). As with educational development, to make a real difference, investment in health care must be substantial and sustained and include substantial expenditure on human capability. Timor-Leste received a one-off windfall benefit through the exceptional doctor training programme with Cuba. The generosity of the Cuban Government and the diligence of the Timorese students paid off. The number of doctors in the country rose from 60 or 70 to more than a thousand in only a few years. However, if there is no major follow-up in public investment, many of the gains will erode.

Cuba's external economy offers a good example of the potential of extensive and sustained investment in health. The Cuban tourist sector draws in almost \$4 billion a year, and Cuba's service exports, mainly health care, earned more than \$10 billion in 2014 (ONEI 2015). This is the fruit of Cuba's long-term investment in people. Health care tourism is a huge specialist industry these days. India, Indonesia, Thailand and other countries are reaping great benefits.

Such development requires deep and sustained investment in people. More vigorous investment in additional training, health care education, science and health technology, the development of local medicine, and health care facilities would enable a more profoundly cross-linked health sector to emerge that could become a leading feature of the economy of Timor-Leste. Social enterprise programmes could be used as a supplementary approach in health care education, ecotourism, or related areas such as disease vector control and environmental management.

Other areas

A focus on priority areas for the development of social enterprise programmes, or other, similar programmes should not impede support for additional initiatives. Environmental protection programmes could be linked to health care and ecotourism programmes. Environmental projects are valuable because they help develop the

Advances in public health care would represent a win-win development because they will help the people of Timor-Leste, while enhancing the attractions of local tourism.



social conscience of young people, encouraging them to become responsible leaders who can set an example. They are also popular. In a survey of social enterprises in the Netherlands, key activities among respondents were social cohesion, transport and energy efficiency (Groot and Dankbaar 2014). Many of these activities were linked to environmental protection. Most were for-profit operations; some involved co-operatives and not-for-profit entities. Almost 95 percent of Timorese youth consider the environment important to livelihoods, but also in culture, history and spiritual matters (chapter 2). Nearly 86 percent of youth also feel responsible for protecting the environment. These are clear indicators of the awareness of ecological stewardship among youth. However, less than half of youth, around 40 percent, have participated in an environmental protection activity. There is thus room to encourage youth to take entrepreneurial action to protect the environment. Enterprise development around waste management, reforestation and improving access to clean energy would be relevant in addressing Timor-Leste's fragilities in environmental action.

The results of the 2016 Youth Well-Being Survey reveal that an average 60 percent to 70 percent of Timorese youth justify, in certain cases, killing, stealing, lying, creating violent conflict, using drugs, smoking, having unprotected sex before marriage, gambling, cock-fighting, excessive use of alcohol or getting drunk, or sexual misconduct and abuse. There is often widespread concern about delinquency and community safety. Many youth draw a link between unemployment and crime, stating that, if young people have nothing to do, if, for instance, they are not in education, employment, or training (NEET), they may become tempted to carry out socially undesirable activities, such as using drugs or creating conflict.

Cuba developed a programme in the late 1990s that engaged unemployed youth, including youth involved in crime and delinquency. Special social workers were trained through short courses to manage social projects under the supervision of professionals. Youth were trained to take part in project brigades to eliminate corruption at government-owned petrol stations, implement the energy savings programmes that emerged from Cuba's 2006 energy revolution, and

carry out similar projects in other countries in the region (EcuRed 2017). The collective mission was to help work for "a society of equal opportunities, spiritual development, inclusion and social responsibility for all citizens . . . , highlighting human sensitivity and a sense of justice" (EcuRed 2017). More than 30,000 young people were trained and deployed through the programme (Mayoral 2004). Similar supervised and responsible projects among participants in youth groups, including groups in the martial arts, a focus of concern in recent years, might be run in Timor-Leste (ETLJB 2013).

The selection, supervision and review of such projects are important. The benefits of providing marginalized youth with employment, but also with opportunities to shoulder social responsibility resonate across the relevant literature. UNDP's Youth Strategy reflects the aim of engaging youth in social research, policy formation, youth leadership, the exchange of skills, civic engagement, and supplying an arena for the voice of historically marginalized youth (UNDP 2014). To the extent that social responsibility can be successfully delegated, one might expect the youth dividend to be expanded more by such an approach than by simple employment schemes.

A social enterprise scheme to support youth in Timor-Leste might be developed in the following way. The Government could offer a tender for small subsidies, say, \$5,000 to \$10,000, or more in exceptional cases, to realize proposals for youth enterprises selected after an evaluation process. The process would require that the proposals cover mandatory elements, such as accountability, defined group organization, clear social objectives, a plan, a component focused on capability-building, and so on. The priorities of the enterprises might include training in farm management, meeting a critical local need, food security, local market development, ecotourism development, health care promotion, environmental protection, the mobilization of voluntary labour initiatives, or the mobilization of local resources. An evaluation and monitoring committee would be required. One-off annual grants might be repeated, pending a positive evaluation, but independent commercial viability could also be required. Programmes that fail to achieve established goals would receive no further support.



Several small social enterprises are already active in Timor-Leste, in coffee production and marketing and in training; some enterprise projects are linked to foreign non-governmental organizations (NGOs). They might be evaluated to determine the support they might provide to youth initiatives before they are allowed to gain access to government funding. A key criterion might be that the enterprises should embody national priorities, support national institutions, foster capacity-building, and define an exit strategy for any non-nationals involved once the enterprises become sustainable. These are also general principles of aid programmes (Anderson 2012).

Government investment priorities and key directions for the future

Public investment decisions are taken after weighing various factors and setting priorities in what is necessarily a deeply political process. This section examines how the Petroleum Fund of Timor-Leste could be used to establish a social investment fund to finance an incubator for the solidarity economy and social enterprise activities. The goal would be to apply the concepts of capability development through social enterprises to enhance the youth dividend, that is, the positive development and welfare outcomes that may be drawn from the large share of young people in the population. Should this goal

be achieved, the implications would be sufficiently broad to require wider guidelines on public investment.

The analysis does not address the issue of government draw-downs on the Petroleum Fund beyond fund sustainability. The practice and the risks of excessive draw-down are a wider political matter. The Government has also been using these funds for a variety of purposes, as it sees fit, for some years now. However, recent patterns in budget allocation place great weight on investment in physical infrastructure, but less weight on investment in human capabilities through education and health care and also less weight on rural livelihoods.

In the first years after the restoration of independence in 2002, the investment shares of education and health care in the combined state and donor budget declined. The 2010 state budget allocated 10.2 percent to education, down from 15.0 percent five years earlier (table 6.4). More recently, the share has ranged between 6.4 percent and 11.4 percent (table 6.5). Budgets rose steadily with oil and gas revenue, and, while the absolute amounts often increased in the more highly neglected sectors of education, health care and agriculture, the shares remained low. According to UNDP, a lower budget share represents a smaller commitment. A more dynamic human development approach, with a focus on building human capability or human capacity, including human capital, would have involved much greater investment in education and health care.

TABLE 6.4

Public Budget in Key Sectors, Timor-Leste, 2004–2010

Budget	2004–2005	2005–2006	2006–2007	2008	2010
Combined sources, \$, millions	203.6	291.6	598.6	502.5	858.9
Education, %	14.9	13.4	10.7	11.7	11.3
Health care, %	12.2	11.3	9.2	8.2	6.9
Agriculture, %	8.8	4.6	5.8	5.9	3.7
Infrastructure, %	—	—	8.8	13.2	26.6
State budget, \$, millions	107.8	120.4	315.9	347.7	660.0
Education, state budget, %	15.3	15.1	11.1	13.0	10.2
Health care, state budget, %	9.0	11.9	8.1	6.9	5.4
Agriculture, state budget, %	1.5	3.7	4.4	4.8	2.5
Infrastructure, state budget, %	—	—	15.8	12.8	28.5

Sources: MOF 2004, 2005, 2006, 2007, 2009.

Note: Prior to 2005, the state budget was divided into two accounts, the Consolidated Fund for East Timor and the Trust Fund for East Timor. Autonomous agencies are included among the combined sources of the total budget, but not in the state budget. — = not available.

TABLE 6.5

Public Budget in Key Sectors, Timor-Leste, 2011–2016

Budget	2011	2012	2013	2014	2015	2016
State budget, \$, millions	1,307	1,674	1,798	1,500	1,570	1,562
Health, % (\$, millions)	3.2 (42)	3.2 (54)	3.8 (69)	5.1 (76)	4.7 (74)	4.2 (66)
Education, % (\$, millions)	6.4 (84)	7.2 (120)	7.9 (142)	11.4 (171)	9.2 (144)	8.6 (135)
Agriculture, % (\$, millions)	1.1 (15)	1.6 (26)	2.0 (36)	2.3 (34)	2.3 (36)	1.9 (30)
Infrastructure, % (\$, millions)	52.0 (682)	53.0 (894)	49.0 (882)	40.0 (598)	36.0 (570)	—

Source: Data of 2011–2016 in La'o Hamutuk (database), Timor-Leste Institute for Development Monitoring and Analysis, Dili, Timor-Leste, <http://www.laohamutuk.org/>. Note: The data are taken from summaries of the proposed budgets and not rectified actual spending. The 2004–2010 series shown in table 6.4 is derived directly from government budget documents. The format of the state budget documents has been changed. — = not available.

The National Strategic Development Plan 2011–2030 expressed the admirable goal of school construction and teacher training to ensure universal secondary school completion through grade 12 by the year 2020 (Planning Commission 2011). However, while the gross amount of investment in education rose, the share did not. Instead, the priority investment was infrastructure, as the prime minister announced in 2009:

The 2010 budget prioritizes investment in infrastructure. The future of our country depends upon the building of basic infrastructure. We need infrastructure to develop a modern and prosperous Timor-Leste.

(Gusmão 2009, p. 15)

There was a strong commitment to investment in infrastructure. Planned expenditures rose from \$44.5 million in 2008 to \$229.0 million in 2010, representing a jump from 15.8 percent to 28.5 percent of the state budget. Infrastructure

TABLE 6.6

Government Expenditures on Education, Selected Economies, 2013 (% of government budget)

Budget share, %	Economies, number
Less than 7.3	2: Azerbaijan and Monaco
7.3	Timor-Leste
7.4–14.9	56
15.0–20.0	38
20.0–24.9	11: Aruba; Belize; Benin; Côte d'Ivoire; Costa Rica; Guatemala; Hong Kong, China (SAR); Iran; Jamaica; Malawi; Puerto Rico
25+	3: Ethiopia, Senegal, Zimbabwe

Source: UIS 2017.

spending rose to a peak of around 53 percent of the state budget in 2011–2012, after which it began a steady decline. Nonetheless, in 2015, at 36 percent of the budget, investment in infrastructure was still more than double the combined allocation to education, health care and agriculture (see tables 6.4 and 6.5). Some of the budget expenditure on schools and roads may be of lasting benefit. However, the potential for waste and corruption was reinforced by the view that a stimulus package for private business was as much a legitimate policy aim as investment in infrastructure (Gusmão 2009). There were a number of project failures and allegations of corruption. A more focused state commitment to national infrastructure might be accompanied by state support for locally identified small infrastructure initiatives managed within districts by supervised local youth groups.

A case must be made for greater investment in people. Skill strategies must draw on the wider human capability developed through the education system and reinforced by the public health care system. Timor-Leste has realized important and promising achievements in both areas, but investment in education and health care is still seriously inadequate.

In 2012, the country's expenditure on education compared poorly with the corresponding expenditures in Malaysia, Morocco and Thailand, which had put around 25 percent of their budgets into education.⁵⁶ The lack of commitment in Timor-Leste to education and health care is real. UNESCO data for 2013, which differ from some of the data above, show that, of 111 economies, only two had a lower proportion of investment in education than Timor-Leste (table 6.6). Fourteen countries had allocated more than 20 percent of their budgets to education,



and three countries more than 25 percent. In Timor-Leste, the Government's commitment to education and health care was quite inconsistent with the goal of the National Strategic Development Plan to ensure that all children complete 12 years of schooling (Planning Commission 2011). Timor-Leste has a high birth rate, which persists at a high rate partly because of the low educational attainment of Timorese girls. The Government would thus have to raise the investment in education more than twofold to even begin to approach the goal of the development plan. Best practice would be to commit more than 25 percent of the state budget to education and training. This would include investment in mass teacher training and the employment of many more teachers, along with the construction of appropriate facilities.

To be world class in any area and to advance the possibilities of young people, the country must boost its investment in education and health care. Adequate investments in education, accompanied by investments in family planning, can lead to the desired policy scenario, that is, the one that yields the largest human development gains and realizes the demographic dividend (chapter 2). Hence, investments in family planning services must be raised to ensure that young people have expanded access to these services.

Timor-Leste must also help improve the rural livelihoods on which a large majority of the population still rely. These rural livelihoods cannot be disconnected from urban youth unemployment because, if neglected, rural areas will remain a reservoir that feeds the latter. In 2014, over 70 percent of Timorese were still living in rural areas, and most of them were working in agriculture; indeed, they depended on that work for food security. Yet, as an agriculture and fisheries official stated, "the MAFF [Ministry of Agriculture, Forestry and Fisheries] budget remains a small percentage of the overall Timor-Leste government budget and is not in proportion to the number of persons employed in rural activities nor the number of people living with food insecurity in the rural areas" (da Cruz 2016, pp. 31, 34). The tiny commitment of less than 2 percent of the 2016 budget to agriculture demonstrates a lack of will to strengthen rural livelihoods.

Food security must be built on a foundation of stable rural livelihoods. Yet, the effect of the oil economy is fairly plain in rural

Timor-Leste. It has become cheaper to buy rice than to grow it, and this has undermined local production. By 2011, almost all rice farmers said they were buying rice, and two thirds of them were doing so every month (Spyckerelle et al. 2016). There have been advances in maize production and in the acquisition and use of better seeds, but rice production has been in decline since 2012. In 2015, about 20,000 hectares were under rice cultivation; around half the 40,000 hectares under rice in 2006, 2008 and 2012 (Spyckerelle et al. 2016). Measures to strengthen local markets to improve food security have been suggested, and this has contributed to the calls to realize the wider concept of food sovereignty, whereby communities more directly control their own food supplies (Islam et al. 2016; Truman 2007). More intensive investment in rural livelihoods could thus usefully become the focus of education and social enterprise initiatives.

Summary conclusions and recommendations

The following recommendations are based on the analysis, research and other considerations supporting this chapter.

- 1) The building human capabilities and youth capabilities should not be instrumentally linked to a particular training or work programme, without consideration of capability-building. This necessarily means investment in broader human and youth capabilities, particularly education, health care and rural livelihoods. Because of the deficits in educational outcomes in Timor-Leste, this means that investment in skills and in the development of social enterprises and other relevant programmes should be linked to much more comprehensive investment in education. Experience elsewhere shows that raising school completion rates up to grade 12 can become a major factor in reducing youth unemployment.
- 2) Before it could achieve a primary goal of the National Strategic Development Plan, to ensure universal secondary school completion through grade 12 by 2030 or even by 2020, the Government would have to more than double public

- investment in education, including substantial investment in teacher training, high-quality education facilities and appropriate teacher employment and, in accordance with the 2006 report of the United Nations rapporteur on the right to education, the elimination of all direct or indirect school fees (Planning Commission 2011; Tomaševski 2006).
- 3) The ongoing educational deficit and other disadvantages of girls and women in Timor-Leste are damaging children and women's health, obstructing family planning, hindering infectious disease control and disempowering girls and women. The deficit should be confronted through a comprehensive approach aimed at eliminating all school related fees, training and creating employment for a sufficient number of teachers and extending the coverage of school feeding programmes into secondary schools through grade 12. Through inclusive education policies and practices, a nurturing schooling environment that responds to the diversity of student needs must also be ensured to create a learning environment that makes youth feel safe and motivated. The value of education should be continuously communicated to parents and communities to improve student retention, particularly among young girls reaching puberty.
 - 4) In the development of youth training and jobs programmes, the Government should consider seeking to reach the the fourth or fifth level of skills proficiency of the OECD among the population (OECD 2013). This would help workers adapt to structural transformation and changes in the workplace. Basic literacy is insufficient for a country with ambitions at human development and innovation through social enterprises.
 - 5) To address deficits in youth and adult literacy, the Government should consider adoption of *Yo, sí puedo seguir*, the second stage of the Cuban literacy programme, after reviewing the successful completion of *Yo, sí puedo* (Los Hau Bele!), the first stage. Ongoing adult or second chance education remains important.
 - 6) In developing a social enterprise programme, as in other training and employment programmes, the Government should consider establishing strategic clusters as focal points for investment. Cluster development is a widely recognized strategy for job creation through SMEs as links among industries are built. The clusters might usefully be designed to address the country's strengths and human development weaknesses. The opportunity to build on existing strengths should not be missed.
 - 7) One focus of cluster development should be rural livelihoods and food security, drawing on the country's relative strength in customary land tenure, small farming and the majority of the workforce that is in agriculture, while confronting malnutrition and food insecurity, which are chronic problems. Rural livelihoods, farm management training, local market and infrastructure development and food security can be the useful focal points of skills development, social enterprises and employment programmes.
 - 8) Another focus of cluster development should be health care, community development and ecotourism. This cluster would draw on the country's relative strengths in a well-staffed, but under-invested national health care system, community resilience and immense tourist potential, while eliminating the deficiencies in public health, community development and weak tourist marketing and development. Health care, environmental education and remediation, community organization and critical local infrastructure could be the focus of skills development, social enterprises and employment programmes.
 - 9) Concentration on a cluster development strategy does not mean that other worthwhile initiatives should not be pursued. Thus, efforts might usefully focus on providing marginalized youth and, where appropriate, their organizations, under proper supervision, with substantial responsibilities in social enterprises. This would have the advantage of building on employment provision to foster youth social conscience and leadership.

- 10) The Government should seek to develop a social enterprise support scheme among youth. A tender could be offered for small subsidies of \$5,000–\$10,000 or more (in exceptional cases) for youth enterprise proposals. The proposals would be subject to an evaluation process that would require mandatory elements in the enterprises, for example, accountability, group organization, clear social objectives, a plan and a key capability-building component, as well as other, preferred or priority elements. These might include farm management training, meeting critical local needs, a food security project, local market development, ecotourism development, health care promotion, environmental protection, the mobilization of volunteer labour and the mobilization of local resources. An evaluation and monitoring committee would be required. One-off annual grants might be repeated, pending a positive evaluation, but independent commercial viability could also be a criterion for more grants.
- 11) Before any social enterprise support is provided for projects linked to foreign NGOs, the Government should consider the following: (a) whether the projects are consistent with national priorities and do not compete with or undermine national institutions, (b) whether they include genuine capacity-building elements, and (c) whether there is a plausible exit strategy for any non-nationals.
- 12) A much higher priority should be assigned to investment in people, particularly young people. To achieve world class human development and a substantial youth dividend, drawing on international best practice, the Government should consider allocating 25 percent of the budget to education and training, returning health care spending to at least 12 percent and quadrupling investment in agriculture to at least 8 percent. This would help build meaningful human capability.



APPENDIX



The National HDR Preparation Process

Project guidance

The theme of this *National Human Development Report* (National HDR) was initially endorsed by the Council of Ministers of the Sixth Constitutional Government of Timor-Leste in April 2015. The project appraisal committee agreed in a meeting held in May 2016 that the Ministry of Finance, through the General Statistics Directorate and the Secretariat of State for Youth and Sports, was the strategic partner in the endeavour. Ongoing project guidance was provided by a project steering committee, which included representatives from the Office of the Council of Ministers, the Ministry of Finance, the United Nations Development Programme (UNDP) and Flinders University, Adelaide, Australia.

Consultations, public engagement and capacity-building

As a part of the report preparation process, a series of initial consultative workshops were organized in Dili in May 2016 to contextualize the report theme and discuss the proposed report structure and primary data collection tools. The participants included government officials from line ministries, national and international non-governmental organizations (NGOs), United Nations agencies, donors, research institutions and academics, as well as participants from the Youth Council, the Youth Parliament and other youth groups.

Following this consultative exercise, a four-day enumerator training exercise was conducted by Flinders University and UNDP among 30 appointed staff of the General Statistics Directorate to pilot and roll out the 2016 Youth Well-Being Survey. Primary data collection for the survey was completed in August 2016.

While data analysis was under way, a two-day Youth Forum, Well-Being, Social Entrepreneurship and the Sustainable Development Goals, was organized by UNDP in October 2016 with over 200 youth participants. At the forum, through several panel and focus group discussions, youth were given a platform to discuss the challenges they face and their aspirations for well-being.

In November 2016, a two-day training session, the Measurement of Human Development and Youth Well-Being in Timor-Leste, was delivered by Flinders University in Adelaide, Australia and UNDP with the support of the National Statistics Directorate. This training session was targeted on a small group of public servants and academics

involved in strategic planning and statistical and policy analysis. Twenty-five participants attended the session, including representatives of the Ministry of Education, the Ministry of Health, the Ministry of Finance, the Ministry of Social Solidarity, the National Youth Council, the Secretariat of State for Youth and Sports and academic institutions, including National University of Timor-Leste (UNTL), Dili Institute of Technology and Universidade Oriental Timor Lorosa'e.

The training equipped the participants with the following:

- A comprehensive understanding of the concepts of human development, the demographic dividend, and youth well-being and relevant policy implications
- Practical skills to measure and interpret the human development index (HDI) and undertake analysis of the demographic dividend and youth well-being

In November 2016, following the training exercise, the preliminary results of the Youth Well-Being Survey were distributed through a stakeholder workshop with over 80 participants.

Between January and March 2017, to seek more in-depth information related to some of the survey results and to ensure wider youth participation in the preparation of the National HDR, UNDP, with the support of the Secretary of State for Youth and Sports, collaborated with youth centres in 10 municipalities and consulted with more than 200 youth through focus group discussions.

The National HDR team fully engaged the Government and government-sponsored institutions as the main architects of public policy through these consultative initiatives. To promote wider visibility of the project, the above events were publicized in the local print media, national television, local radio, and social media. Periodic project newsletters were produced to distribute information on the report preparation process and preliminary results. These were complemented by news articles and opinion pieces that were published on the websites of UNDP and Flinders University to provide the opportunity for ongoing public debate.

Validation and peer review

Expert advice was regularly sought during each stage of the project. The report reflects many perspectives, but relies primarily on national expertise. The National HDR team attended regular meetings with the General Statistics Directorate, the Secretariat of State for Youth and Sports, the United Nations Population Fund and

the United Nations Youth Results Group, an interagency working group on youth, to ensure the credibility, transparency and integrity of the analysis presented in the report.

The National HDR team tapped into four technical background papers commissioned among external authors through a competitive process. Each paper produced by the experts was reviewed by two external peer reviewers

before they were used integrated into the main report. The full draft of this report was internally reviewed by the country director and resident coordinator of UNDP as well as the HDR office in Bangkok, followed by an external peer review. A consultative validation workshop prior to the launch of the report also provided the opportunity for national stakeholders to review and embrace the report's key messages and recommendations.

Projections of the Demographic Dividend

The assumptions on various projections, especially those on education and economic policy, have been based mainly on the experience of South-East Asian countries (table B.1). It has been assumed that the best outcome in any indicator in the year 2015 (in some cases a bit earlier depending on data availability) among the South-East Asian countries would be achieved by Timor-Leste within a period of about 35 years

from 2015, that is, by the year 2050. For example, the mean years of schooling (both sexes) for Singapore for the year 2015 was slightly above 10.0 years, whereas it was only 4.2 years in Timor-Leste in 2015. Thus, the assumption made for Timor-Leste for the year 2050 is to achieve mean years of schooling equal to the current mean years of schooling of Singapore, that is, 10 years.

TABLE B.1

The Assumptions behind Various Policy Scenarios, 2015 and 2050

Scenario	Year	Education					Family planning				Economic policies				
		Expected Years (Female)	Expected Years (Male)	Mean Years (Female)	Mean Years (Male)	Mean Years (Both)	CPR Modern (Married Women)	CPR Traditional (Married Women)	Postpartum Insusceptibility (Months)	Sterility (Percent All Women 45-49)	GCI 1A: Public Institutions	GCI 6.14: Imports as a % GDP	GCI 7A: Labour Market Flexibility	GCI 8A: Financial Market Efficiency	GCI 9B: ICT Use
	2015	12.10	13.70	3.60	5.30	4.20	24.1	1.9	9.1	7.8	3.16	55.40	4.52	2.63	1.09
Base	2050	12.10	13.70	3.60	5.30	4.20	24.1	1.9	9.1	7.8	3.16	55.40	4.52	2.63	1.09
Econ Only	2050	12.10	13.70	3.60	5.30	4.20	24.1	1.9	9.1	7.8	5.00	100.00	5.50	5.00	4.00
Econ + Educ	2050	17.00	17.00	10.00	10.00	10.00	24.1	1.9	9.1	7.8	5.00	100.00	5.50	5.00	4.00
Econ + Ed + FP	2050	17.00	17.00	10.00	10.00	10.00	58.1	5.0	9.1	4	5.00	100.00	5.50	5.00	4.00

Source: UNDP 2016, Barro and Lee 2013, Timor-Leste's 2016/17 Demographic and Health Survey (unpublished); STAT compiler, latest data available 2005–2013 and Schwab 2014.

The Methodology for Measuring Well-Being

The methodology used to measure subjective well-being in the report is largely dependent on the assumption that the variables of interest are ordinal or, rarely, categorical variables, which contrasts with human development index-(HDI) data that are predominantly cardinal. The difference between the categorical and the ordinal variables is that ordinal data contain a clear ordering of the variables (low, medium and high). So, one can put people in the categories of achieved or not achieved, but one may also order the categories as low, medium and high.

The Alkire-Foster (2011) methodology is the basis of the current measurement. In this system, the step of identifying who falls into the category of achieved or not achieved relies on two cut-offs: one within each dimension to determine the category (achieved or not achieved) with respect to each variable in that dimension and a second cut-off (a nominal one) that is applied across dimensions. This nominal cut-off identifies youth who are in the category not achieved sufficiency in well-being by counting the dimensions in which a person has achieved sufficiency in well-being. The step of summarizing the various statistics (nominal, ordinal, categorical)—aggregation—relies on the Alkire-Foster measures, appropriately adjusted to account for variance.

To measure well-being at each domain, the two thirds rule is applied for calculations at each of the eight domains. For example, there are 21 variables in the ecology domain. This means that the maximum score an individual could obtain in this domain is 21 (that is, if she scores 1 in each variable), and the minimum is 0 (that is, if he scores 0 in each variable). By the two thirds rule, an individual would need to score a minimum of 14 (which is two thirds of 21) to be considered achieved sufficiency in well-being. The domain is then recoded as 0 for not achieved sufficiency in well-being (those who scored less than 14) and 1 for achieved sufficiency in well-being (those who scored at least 14). Thus, the number of respondents would be distributed between a score of 0 and a score of 1. In this way, each domain has a distribution of respondents between 0 and 1.

A Likert-type (1932) scale is used, with values ranging from extensive insufficiency to extensive sufficiency and a midpoint of neither insufficiency nor sufficiency. Because one cannot be sure that the intervals between each of these (five) values are the same, then one cannot say that this is an interval variable, but one can say that it is an ordinal variable.

Recoding each variable: Responses for each variable were recoded into binary categories: 1 achieved; 0 not achieved.

Missing data are variables that include responses such as

“Don’t know”, “Can’t say”, “Not Applicable” and were examined on a case-by-case basis to identify whether to assign 1 or 0 to the responses. The majority of these responses were recoded 0 (not achieved).

The level of well-being achievement (for all domains combined) is measured as follows. A person could score 0 in all eight domains, 0 in seven domains and 1 in one domain, 0 in six domains and 1 in two domains, 0 in five domains and 1 in three domains, and so on, or 1 in all eight domains. Thus, nine boxes, ranging from 0 through 8, can be organized for each of the scores. These can then be used to put a person scoring 0 in each of the eight individual domains in the box marked 0, a person scoring 0 in seven domains and 1 in one domain in the box marked 1, a person scoring 0 in six domains and 1 in two domains in the box marked 2 and so on, until a person scoring 1 in all eight domains is entered in the box marked 8. This will give a distribution of the respondents according to various levels of satisfaction. A person scoring a 1 in each of the eight domains will be considered to have achieved extensive sufficiency in well-being; a person scoring 0 in each of the eight domains will be considered not achieving any sufficiency in well-being (extensive insufficiency). The scores in between may be classified into moderate levels of sufficiency or insufficiency. The individual boxes may be considered as a nine-point scale. However, for convenience, these nine individual boxes are categorized as follows:

- 0 = extensive insufficiency in overall well-being: insufficient in all eight domains
- 1–3 = moderate insufficiency in overall well-being: insufficient in five to seven domains
- 4 = neither insufficiency nor sufficiency in overall well-being: sufficient in four of the eight domains
- 5–7 = moderate sufficiency in overall well-being: sufficient in five to seven domains
- 8 = extensive sufficiency in overall well-being: sufficient in all eight domains

These categories represent an ordinal scale, but not an interval scale, because the differences represented by the categories are not equal. Thus, a summary index in the form of a statistical mean cannot be calculated, but a median can certainly be calculated. However, if the respondents are distributed according to individual values of 0 through 8, one may calculate the average number of domains in which a person has achieved well-being. This could be another summary index of life satisfaction.

Based on the distribution of the respondents according to individual values of 0 through 8 (that is, the number of respondents achieving well-being in no domain, in one domain, in two domains, and so on), a mean value of

individual scores for each district is calculated to show the average number of domains in which the respondents in each district have achieved sufficiency in well-being (that is, the intensity of sufficiency). This may be expressed as a percentage. The complement of this percentage would indicate the share of respondents who have achieved sufficiency in well-being, given that policymakers should be concerned about improving the situation of the group that does not

achieve sufficiency in well-being. This mean number of domains of achieved sufficiency in well-being (or not achieved sufficiency in well-being) is ranked to give a comparative picture of the districts surveyed in this study. Apart from the ranking, the mean value can also be interpreted in other ways. For example, a mean value of 5.16 for Timor-Leste will mean that, on average, youth have achieved sufficiency in five of the eight domains.

A Note on the Computation of the Human Development Index and the Gender Development Index⁵⁷

Introduction

Subnational, national, regional, and global *Human Development Reports* rely on various human development measures, such as the human development index (HDI), the gender development index (GDI) and, depending on the availability of appropriate data, other indices. This *National Human Development Report* (National HDR) also provides measures of the HDI and the GDI. Measures of a separate HDIs for men and women are calculated to calculate the GDI. A unique feature of this report is the estimation of an HDI for a single age group in Timor-Leste, namely, youth ages 15–34. It may not be incorrect to claim that no other National HDR has ever attempted to calculate an HDI for a particular age group. A youth HDI was calculated to complement the youth well-being score, which has been calculated based on data collected in the 2016 Youth Well-Being Survey, which has been carried out specifically on youth in Timor-Leste for this report.

Calculation of the HDI and GDI for youth and the overall population

Data and methods

The data used in these calculations are taken from national sources as far as possible, which consist mainly of the data collected through the 2015 Population and Housing Census of Timor-Leste (DGE 2015). Data on education, school enrolments, the share of men and women in the labour force and in the total population are taken from the census data. Data on life expectancy have been taken from a monograph on mortality analysis and are also based on the 2015 census data (DGE forthcoming).

The method of calculating the HDI and other indices is based on the latest version of the technical notes produced by the United Nations Development Programme (UNDP 2016a). The calculation of each index is nonetheless explained in detail here. The method of calculating the youth HDI is also based on the UNDP methodology, but with appropriate modifications, as explained.

Calculation of the HDI, GDI and their components, the total population

Components of the HDI

According to the technical notes (UNDP 2016a, p. 2):

The human development index (HDI) is a summary measure of achievements in three key dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions.

The indices are normalized with reference to standards on the minimum and maximum values of the measure of each component to render them comparable with similar indices on other populations.

A long and healthy life

The component on a long and healthy life is measured using life expectancy at birth. The minimum and maximum values of life expectancy are 20 years and 85 years, respectively. The value of life expectancy at birth is converted into a normalized index, as follows:

Life expectancy index, both sexes = (observed life expectancy at birth – 20) / (85 – 20) **(D.1)**

This is life expectancy at birth for both sexes combined. Considering that women normally enjoy a longer life expectancy at birth than men and assuming that the average difference between the life expectancy of women and men is five years, the normalized life expectancy indices for men and women are calculated as follows:

Life expectancy index, men = (observed life expectancy at birth, men – 17.5) / (82.5 – 17.5) **(D.2)**

Life expectancy index, women = (observed life expectancy at birth, women – 22.5) / (87.5 – 22.5) **(D.3)**

For Timor-Leste in 2010–2015, the life expectancy at birth and the normalized values (the life expectancy index) are shown in table D.1.

TABLE D.1

Life Expectancy at Birth, 2010–2015, Centred at 2013

Population segment	Years	Life expectancy index
Total, both sexes	64.87	0.69031
Men	63.64	0.70985
Women	66.17	0.67185

Source: UNDP calculation based on data in DGE, forthcoming.

Note: Life expectancy for both sexes is computed based on the assumption of a sex ratio at birth of 105 males per 100 females.

Access to knowledge

Access to knowledge is measured as an average of the normalized indices of the two components, that is, mean years of schooling (*MYS*) for the population ages 25 or above and expected years of schooling (*EYS*) for the population ages 3–18.

Mean years of schooling. The *MYS* is calculated as follows:

$$MYS = \sum HS_x \cdot YS_x, \text{ (D.4)}$$

where HS_x is the share of the population completing each level of schooling, and YS_x is the official duration in years required to complete each level of schooling (UIS 2013). The implicit assumption is that there has been no repetition by anyone at any education level and that the duration at each level has remained unchanged. The calculation of the *MYS* for the total population of Timor-Leste is shown in table D.2.

The cumulated duration for a level of education is the total number of years of education required to achieve that level of education. The cumulated duration for completing primary education is taken as 6.465 years, not 9.0 years, the sum of the durations of pre-primary and primary education. This has been done to account for the fact that pre-primary education is not compulsory, and only 15.5 percent of children complete pre-primary education (MOH 2014). Thus, only

15.5 percent of the students completing primary education would have completed pre-primary education, which means these students would have completed 3.0 years of primary school and 15.5 percent of 3.0 years, that is, 0.465 years of pre-primary education.

Polytechnic-diploma education requires the completion of pre-secondary (basic) education. Thus, people who have completed polytechnic-diploma education would have completed 9.465 years up to basic education and 2.0 years of polytechnic-diploma education.

University education requires the completion of secondary education. Therefore, those who have completed university education would have studied the 12.465 years required to complete secondary education and the 4.0 years required to complete university education, a total of 16.465 years.

Under the National Equivalence Programme for adults, non-formal education is provided to help those people who have not had a chance to go to school to fast-track an education. The first level of equivalence reduces the time necessary to accomplish the 6.0 years of the first and second cycles of education down to 3.0 years, while the second level reduces the years required to complete the third cycle down to 2.0 years, a total of 5.0 years. This is the cumulated duration to complete non-formal education, as those completing this type of education had not had any prior required level of education.

Based on the above, $MYS =$ the sum of the products of cumulated duration and the share of the population completing each level = 6.0 years. The *MYS* for men and women has been calculated in a similar way. MYS , men = 6.74 years; MYS women = 5.25 years. The normalized index is as follows: (MYS Index) = $(MYS - 0) / (15 - 0)$.

The minimum years of schooling are assumed to be at 0 (zero), that is, no one has ever gone to school, and the maximum years of schooling is assumed to be at 15 years (UIS 2013). Thus, the *MYS* indices for the total population and for men and women are as follows: MYS index (total) = 0.399951, MYS index (men) = 0.449628, and MYS index (women) = 0.349870.

TABLE D.2

Calculation of Mean Years of Schooling, Both Sexes, Timor-Leste, 2015

Population ages 25 or more, 2015 census	Never attended school	Pre-primary ^a	Primary	Pre-secondary, basic	Secondary	Polytechnic, diploma	University	Non-formal
Individual duration (years) →	0	3	6	3	3	2	4	5
Cumulative duration (years) YS_x →	0	3	6.465	9.465	12.465	11.465	16.465	5
477,111								
Proportion completing each level (p)	202,272	8,197	81,926	40,575	86,057	6,511	45,252	6,321
1.00000								
$MYS = 6.0$ years	0.42395	0.01718	0.17171	0.08504	0.18037	0.01365	0.09485	0.01325

Sources: Data of DGE 2015; MOH 2011, 2016.

a: The pre-primary completion rate is 15.5 percent.

TABLE D.3

Calculation of Expected Years of Schooling, Both Sexes, Timor-Leste, 2015

Age, years	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Σm_x
Share enrolled, m_x	0	0	0.460	0.655	0.778	0.825	0.860	0.863	0.884	88.00	0.880	0.870	0.833	0.803	0.769	0.704	11.06

Expected years of schooling (EYS). The indicator represents the “number of years of schooling that a child of school-en-trance age can expect to receive if prevailing patterns of age-specific enrolment rates persist throughout the child’s life” (UNDP 2016b, p. 201). The EYS formula is as follows (Rigotti et al. 2013):

$$EYS_a = \sum_a^w n_x(m_x), \text{ (A.5)}$$

where $nm_x = nfx/nPx$; a = the age at the start of the school trajectory; w = the upper age limit of schooling; n = the age interval; nfx = the number of pupils between ages x and $x + n$ enrolled in school in a year; nPx = the population between ages x and $x + n$; nm_x = the enrolment rate among pupils between ages x and $x + n$ in that year. In the present case, $n = 1$; $a = 3$, and $w = 18$. Therefore:

$$EYS_3 = \sum_3^{18} (m_x) \text{ (A.6)}$$

Based on the above, $EYS =$ the sum of the shares enrolled in school at each age = 11.06 years (table D.3).

The EYSs for men and women are calculated in a similar way. EYS , men = 11.0 years; EYS , women = 11.1 years. The normalized index (EYS Index) = $(EYS - 0) / (18 - 0)$.

The minimum expected years of schooling are assumed to be at 0 (zero) years, that is, no one ever goes to school, and the maximum expected years of schooling are assumed to be at 18 years (UIS 2013). Thus, the EYS indices for the total population and for men and women are as follows: EYS index (total) = 0.616667, EYS index (men) = 0.611111, and EYS index (women) = 0.616667.

Therefore, the education indices for the total population and for men and women are as follows: education index (total) = $(0.399951 + 0.616667) / 2 = 0.508309$, education index (men) = $(0.449628 + 0.611111) / 2 = 0.530370$, and education index (women) = $(0.349870 + 0.616667) / 2 = 0.483268$.

Decent standard of living

Decent standard of living is measured using gross national income per capita expressed in 2011 purchasing power parity US dollars. There are a few estimates of this HDI component for a time period close to the 2015 census. Per capita gross national income was \$2,245.70 in 2015 according to national accounts data (DGE 2016), while World Bank gives \$4,340.⁵⁸ However, the national accounts data are not converted to 2011 purchasing power parity US dollars, while the World Bank data are so

converted. Therefore, the \$4,340 provided by the World Bank has been used to calculate the indicator of decent standard of living.

The formula for calculating the normalized index of per capita income is as follows:

$$\text{Income index} = [\ln(\text{Observed income}) - \ln(100)] / [\ln(75,000) - \ln(100)], \text{ (D.7)}$$

where \$75,000 is the maximum income; \$100 is the minimum income, and \ln is the natural logarithm. Thus, the income index for the total population = $[\ln(4,340) - \ln(100)] / [\ln(75,000) - \ln(100)] = 0.56955$.

The income shares of men and women are calculated from the per capita income of the total population and the respective shares of men and women in the economically active population (table D.4). While the data on education and life expectancy at birth cover the entire population, the data on income leave out a large share of potential contributors to the national income, namely, women who are mostly engaged in unpaid domestic work and often also in informal sector work that is not officially recognized as contributing economic goods and services to the national economy.

The gross national income per capita for the total population is \$2,290 (see above). The wage ratio between women and men = 0.8.⁵⁹ The wage bill of women is therefore (UNDP 2016a): $[0.8 \times (\text{female share of the economically active population})] / [0.8 \times (\text{female share of the economically active population}) + \text{male share of the economically active population}] = (0.8 \times 0.40831) / (0.8 \times 0.40831 + 0.59169) = 0.355695$.

The estimated income per capita among women is $(0.355695 \times 4,340) / 0.49215 = 3,136.7$. The share of men in

TABLE D.4

Men and Women in the Economically Active Population, Timor-Leste, 2015

Indicator	Number	Share
Total economically active	360,011	1.00000
Men	213,015	0.59169
Women	146,996	0.40831
Total population	1,183,643	1.00000
Men	601,112	0.50785
Women	582,531	0.49215

Source: Calculated based on data in DGE 2015.

the wage bill is $1 - 0.355695 = 0.644305$. The estimated income per capita among men is $4,340 \times (0.644305 / 0.50785) = 5,506.1$. The income index among women = 0.52050. The income index among men = 0.60550.

Human development index across the total population and men and women

The HDI for the total population is therefore as follows: HDI (total population) = (life expectancy index for the total population x education index for the total population x income index for the total population)^{1/3} = $(0.69031 \times 0.508309 \times 0.56955)^{1/3} = 0.585$.

Calculated in a similar fashion, the HDI for women is $(0.67185 \times 0.483268 \times 0.52050)^{1/3} = 0.553$; the HDI for men is $(0.70985 \times 0.530370 \times 0.60550)^{1/3} = 0.611$, and the gender development index (GDI) is HDI women / HDI men = 0.905.

Human development index for youth

This is the innovative section of this note. It describes the computation of the HDI of a segment of the population defined by age, namely, the population of youth, which, in this report, is defined as people ages 15–34.

The components of the youth HDI are the same as the components of the HDI of the total population, that is, a long and healthy life, access to knowledge and a decent standard of living. However, the computation of the associated values requires innovation.

A long and healthy life

There are a few options for measuring this dimension of human capability, such as the number of expected years of life between the ages 15 and 35, life expectancy at age 15, life expectancy at age 35, or the average life expectancy at ages 15

and 35. The first option, the number of expected years of life between the ages 15 and 35, is not considered here. It would provide an overestimate of a long and healthy life because mortality is at its lowest in any population precisely in the age range 15–35. This indicator would thus not supply a measure of the capability to lead a long and healthy life beyond age 35, unlike life expectancy at birth for the entire population.

Of the other three options, the average of the life expectancy at ages 15 and 35 appears the most promising as a measure of the capability to lead a long and healthy life. The results of relevant calculations based on the life-tables on men and women constructed with data collected during the 2015 census are shown in table D.5.

Access to knowledge

Access to knowledge is measured as an average of the normalized indices of the two components, mean years of schooling (MYS) for the population ages 25–34 and expected years of schooling (EYS) for the population ages 3–18 (table D.6).

Decent standard of living

According to the 2015 census, 37.5 percent of the population ages 15–34, that is, youth as defined for this report, are employed. Youth who are employed are assumed for purposes of the calculations to earn the per capita income of Timor-Leste, \$4,340 a year.

The other 62.5 percent are either unemployed, or not in the labour force. The computation of the decent standard of living component for the youth population is complicated by this large group of youth who are not contributing to the economy of the country. Yet, general observations in the country and the region and anecdotal evidence indicate that substantial proportions of youth in Timor-Leste are supported by immediate family members, friends, or distant relatives in meeting basic needs in food and non-food items. The per capita income of this portion of the youth population is therefore assumed to be living at the poverty line, that is, the subsistence income needed to purchase meet the minimum needs in essential food and non-food items. Anecdotally,

TABLE D.5

Calculation of a Long and Healthy Life among Youth, Timor-Leste, 2015

Age	Sex	Life expectancy
15	Men	55.39
35	Men	38.42
15	Women	57.92
35	Women	40.77
15	Both	56.63
35	Both	39.57
Average at ages 15 and 35		48.1
Life expectancy index		0.778487

Source: Calculations based on data in DGE, forthcoming.

Note: The maximum and minimum values used in the computation of the life expectancy index for youth have been taken from the average life expectancy at ages 15 and 35 for the highest (25) and lowest (1) levels in the east model in the Coale and Demeny (1983) model life-tables, that is, 53.56 and 28.92 years, respectively.

TABLE D.6

Calculation of Access to Knowledge among Youth, Timor-Leste, 2015

Age	Indicator	Value
3–18	Expected years of schooling	11.1
3–18	Expected years of schooling index	0.616667
25–34	Mean years of schooling	8.975136
25–34	Mean years of schooling index	0.598342
Youth education index (average of the EYS and MYS indices)		0.607505

some of these unemployed youth may also be deriving a subsistence income by engaging in informal sector jobs, but such income is not officially validated, and therefore data on youth participation in the informal economy and their contribution to GDP are not available for the youth HDI calculations.

The international poverty line of \$1.90 a day. Assuming that the 37.5 percent of youth who are employed earn a per capita income of \$4,340 and that the 62.5 percent of youth who are unemployed or not in the labour force have a subsistence income of \$693.50 a year (\$1.90 per day), the per capita income of the total youth population is $(0.375 \times \$4340 + 0.625 \times \$693.50) = \$2060.9$, say, \$2061. The income index is therefore 0.457061.

The HDI for youth across the total youth population and among young men and women

The HDI for the total youth population is as follows: $= (0.607 \times 0.778 \times 0.457)^{1/3} = 0.600$.

Calculated in a similar fashion, the HDI values for young men and young women are 0.625 and 0.571, respectively (table D.7).

TABLE D.7

Summary Table, HDI, Timor-Leste

Index	Total	Men	Women	Youth		
				Total	Men	Women
HDI	0.585	0.611	0.553	0.600	0.625	0.571
GDI, female HDI / male HDI	0.905					0.914

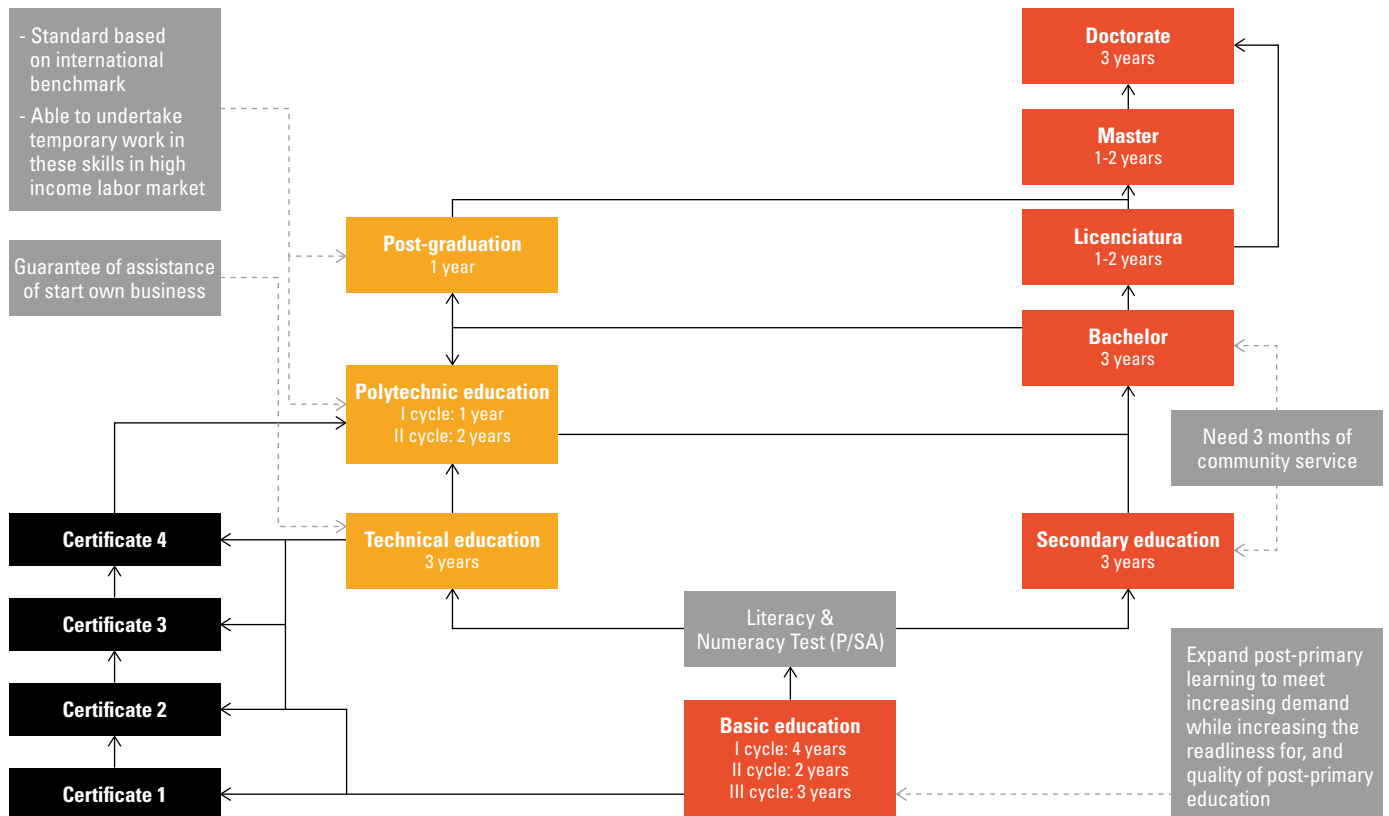
Insights into Timor-Leste's National Qualifications Framework

The Timor-Leste national qualifications framework approved in August 2011 has 10 levels (figure E.1). Certificates 1–4 in the framework are considered technical and vocational education and training (TVET) courses and are under the authority of the Instituto Nacional de Desenvolvimento de Mão de Obra (National Labour Force Development Institute), which operates under a mandate of the Secretariat of State for Vocational Training Policy and Employment (SEPFPOE). It designs competency skill standards appropriate to Timor-Leste, issues national qualifications documents and accredits training providers. With its seven industry subcommissions, the institute has steadily raised the number of content areas and levels in which courses are registered. Basic and levels 1 and 2 course materials have been developed through the recently established Learning Resource Development Centre, and 14 training providers deliver national basic qualifications

and qualifications at levels 1–4. These include government agencies, institutes and academies certified by the Agencia Nacional para a Avaliação Acreditação Académica (National Agency for Academic Accreditation and Assessment), civil society organizations and private companies. Among the major institutions accredited by the National Labour Force Development Institute are two government centres, the Centro Nacional de Emprego e Formação Profissional (the National Centre for Employment and Professional Training; box E.1), which was launched in Tibár, Liquiçá District, as a Portuguese aid project, and the Centro de Desenvolvimento Empresarial, Formação Profissional e Desenvolvimento Social (Centre for Entrepreneurship Development, Vocational Skills Training and Social Promotion) in Becora, Dili District, which is usually known as the Centro Senai and which was launched as a Brazilian aid project.

FIGURE E.1

Education System, Training and Labour Market Pathways, Timor-Leste



Source: Ministry of Education 2011.

The National Centre for Employment and Professional Training

After the 1999 United Nations–sponsored popular referendum on the future of Timor-Leste, several Timorese leaders went to Portugal to visit the Instituto do Emprego e Formação Profissional (institute of employment and professional training), a technical school in Lisbon. The delegation was seeking to establish Timor-Leste’s first technical school. Mari Alkatiri (the first prime minister of an internationally recognized Timor-Leste) and Xanana Gusmão (the first president of Timor-Leste), members of the delegation, wanted to help rebuild Timor-Leste. The following is based on an interview with the director of the National Centre for Employment and Professional Training, who was one of the first persons to be approached by the Timorese delegation at the time.

“I was a mechanical engineer with a degree from Indonesia. To rebuild the country, we started with four departments: masonry, electricity, plumbing, and carpentry.

“Initially, we had 30 students, and this increased to 60. By 2006, we had 400 graduates. The management was handed over to Timor-Leste in 2007. In 2009, the National Centre for Employment and Professional Training was recognized as a public institution. It is part of the SEPFOPE, but has administrative and financial autonomy. Since its establishment, the centre has graduated 3,300. The number of students rose dramatically after 2007.

“The centre now offers training in nine departments, including welding, general construction, hospitality, and agriculture, and smaller courses on solar panels, maritime industries and ports, water pump installation, project management, and leadership. At current capacity, 200 students can be accepted per semester. We can have up to 600 graduates a year thanks to our mobile training courses that we offer on demand on and outside the campus.”

Results

“Around 53 percent of our graduates are immediately employed or receive contracts for at least one year after they graduate. Another 30 percent find shorter-term jobs or part-time periodic contracts. We encourage this group to become self-employed and involved in microenterprises.

“We have a micro-incubator programme. We support our graduates with administrative assistance and equipment. We network with industry, and, if we are awarded a contract, we employ our graduates for the work so that they keep practicing and learning by doing, while earning income. These are generally government clients, but they are sometimes in the private sector, such as the Heineken factory in Timor-Leste. We build big recycled rubbish containers for the bottles. In some districts, private companies have built centres. For instance, we receive the contracts for our incubator programme members to build sanitation systems. We try to support them fully.

“In some cases, if they get enough experience and feel confident, they come back to our centre to enrol into a higher degree training programme, from level 1 to level 2.

“We also have mobile training and service delivery. For example, Bobonaro District has water problems. They offered to pay for the cost of our travel and materials; we only have to do the repairs and make the pumps work.

“Google gave us funding to install 800 solar systems in villages; we installed half of them in Viqueque, and, the remaining half, we will complete soon.”

Student profile

“The average age of our students is 22. The majority of our students are men. Currently, 30 percent of our students are women. During the first five years of our existence, we only had 4 percent women students. There are some dropouts from primary or secondary school, but they are generally secondary school graduates.

“The majority live in Dili. A school bus transports them to the centre. We are building a dormitory with 60–70 beds. We will be able to host some students from districts. We will have 20 beds for trainers and special guests.

“We currently have 24 trainers. They are trained in many different places, including in Australia, Indonesia, and Portugal.

“For advance-level training courses, we are working on getting graduates from UNTL [the National University of Timor-Leste].”

Enrolment process

“The candidates have to register at the SEPFOPE employment centre. When they are in the database, they generally obtain an identity card. Every semester, we announce our available spots, for example, that we have room for 70 students. Whoever is on the list must physically report to SEPFOPE during the convocation of applicants. Sometimes, there are 1,500 on the waiting list, but this doesn’t mean that you must wait for years. You only have to follow up with SEPFOPE and be present at the proper time. We assign priority to people who have undergone the reporting process, but were not placed in the previous year (those who have applied two or more times). SEPFOPE conducts the first screening, and we give a test to see if they can read and write and also have basic numeracy skills. We do a test and an interview to qualify the candidate and do counselling to determine if the young person’s interests fit with the course that they have applied to study.”

Cost of training

“The students don’t have to pay. Their unit cost is covered by the Government. We have adopted the TVET model and have Australian standards in place. In Australia, they spend \$8 per student per hour, but we are spending \$0.83 per student per hour. We think this funding level is low for the expectation of high quality. We think the unit cost ought to be raised. Our annual budget from the Government is around \$200,000–\$500,000. We have additional funding from others; hence, our annual budget can go up to \$800,000. For example, the Australian Department of Foreign Affairs and Trade funds two of our programmes, a village development programme and Besik, a water and sanitation programme, through Cardno [a professional infrastructure and environmental services company based in Australia]. ATI Australia, a technology supplier that supports training, is providing funds for training in solar panels.”

The main challenges

“I think industry needs to invest in human resource development and commit to upgrading the skillset of their own staff.

“There is sometimes a mismatch between training and the expectations of industry. Most of the time, they expect too much too soon. After six months of training, the expectation is that our young people will compete against skilled people from Indonesia or the Philippines.

“If industry collaborates with us more, then we can also more readily equip our graduates according to the expectations of industry. However, we want learning to be partly also the responsibility of industry.”

The Centro Don Bosco in Comoro is run by the Salesian religious brothers. Another major training provider is the East Timor Development Agency, a Timorese civil society organization founded in Australia in 1998 by diaspora Timorese and brought back to Dili at independence (Hunt 2008). The Training Centre for Allied Health Services of the Instituto de Ciências de Saude (Institute of Health Sciences), the Instituto Nacional Administrativo Publico (National Institute for Public Administration) and the Police Academy are also accredited by the National Labour Force Development Institute. Secondary schools registered with the Ministry of Education can likewise apply for accreditation to deliver national qualification documents.

Levels 5–10 in the national qualifications framework are regulated by the National Agency for Academic Accreditation and Assessment, which accredits higher education institutions and, although independent, operates under a mandate from the Ministry of Education. Eleven institutions are accredited by the agency: four universities (Universidade de Dili [University of Dili], Universidade da Paz [University of Peace], the National University of Timor-Leste [UNTL], and Universidade Oriental Timor-Lorosáe [University of Timor-Leste East]) and seven institutes (Dili Institute of Technology, East Timor Coffee Institute, Instituto Católico para a Formação de Professores [Baucau Diocesan Catholic Teachers College], Instituto de Ciências Religiosas São Tomás de Aquino [institute of religious studies Saint Thomas Aquinas], Instituto Profissional de Canossa, Institute of Business, and Instituto Superior Cristal).

The framework only addresses formal education. A great many other types of education and training are conducted in Timor-Leste, and many of these issue graduation certificates.

Confusion around choices

At grade 9, the last year of *educação básica* (basic education), Timorese students are divided into two categories according to the results of a national examination. The status of the students depends largely on cognitive skills, which determine whether the students attend a vocational and technical high school or a general high school. The vocational and technical high schools ostensibly prepare students for the workplace. In reality, most students aim to go to university or a higher-level high school. At the end of grade 12, another examination determines who will be admitted to the UNTL. This process often leads to much confusion.

Young people of school age lack information about their career options and are not accustomed to making decisions about their future. They have typically had little chance to choose subjects at secondary school, and some are not even allowed to choose their courses at university despite the provision in section 50, clause 1 of the Timorese Constitution that “every citizen, regardless of gender, has the right and the duty to work and to choose freely his or her profession” (Planning Commission 2002).

A major problem in some fields is the difficulty of finding a course at an appropriate level to meet the needs of both prospective students and employers. For example, there is a one-year diploma in financial management for students wishing eventually to work in banks or small businesses. Many employers would like to employ graduates of the programme. However, little information is available publicly on the programme. How are prospective students to learn about the programme?

Good education requires attention to the education level of entering students, education quality, subject matter and mode of delivery. In the education system in Timor-Leste, coursework is often not appropriate to the educational background of entering students. Frequently, literacy, financial literacy and computer literacy are prerequisites for many courses, but are not provided through the formal education system. They must therefore be acquired through non-formal education. Likewise, the learning that may have been acquired by the time of graduation may not be appropriate to the needs of employers.

Quality concerns: the disconnect between theory and practice

Education quality is influenced by the availability of a good learning environment in appropriate, good-quality facilities, including access to libraries, resource materials, equipment, adequately educated and trained teachers, and an appropriate balance between theoretical and practical components. Are students given an opportunity to test their practical skills and make observations, while still learning the theory associated with the course so the greatest advantage can be taken of experiential learning? Are the quality of teaching staff and the student selection process adequate?

Students who are accepted at a university, either the UNTL or one of the private universities or institutes, often find that their parents must save or borrow large sums of money to support them while they are studying. Moreover, only half the students entering tertiary education complete the coursework. Some will graduate and make a contribution to society as teachers, nurses, doctors, lawyers and so on. Many others will complete university courses only to discover that they have not acquired the skills needed on the labour market. Employers have been heard to complain that some graduates cannot even send an email. Most graduating students will not find paid, full-time formal sector employment. The *Licenciatura*, or four-year degree course in which the majority of students enrol, is unnecessarily difficult, as it requires a thesis (*monografia*) as if everyone were studying to become an academic.⁶⁰ Undergraduate courses are usually taught by instructors who have undergone no training in teaching methods in higher education, although they must now possess a master’s or Ph.D. Educational infrastructure, particularly libraries and Internet services, are usually not sufficient to cater for all the students researching their final year thesis.

Like their university-student friends, few students who complete training at centres, such as the National Centre for Employment and Vocational Training or the Centro Senai, and earn certificates accredited by the National Labour Force Development Institute find employment in the fields for which they trained (Francis 2016).

The Government is aware of some of these problems. At the “Finding Pathways in Education” Conference organized by the UNTL and Victoria University in July 2015, Prime Minister Rui Araújo commented on the disconnect between what is learned in school and the applications in daily life, which, he believes, is one of the biggest problems in Timorese education.⁶¹ It is apparent in all levels of the formal education system, from primary school to university. In his speech at the World Teachers’ Day celebration in 2016, he reminded teachers that

education is a right that is enshrined in our Constitution and that is unquestionably essential to the development of any

country. Education teaches students and trains them to apply their new knowledge, so that they may contribute to the various fields of the development of Timor-Leste.

As such, education must be regarded as more than the transmission of scientific contents. It must be regarded beyond the theoretical knowledge we transmit to our students. (Araújo 2016, p. 2)

The Government has begun to transform the system, beginning with basic education, to make school knowledge more usable and applicable to the world and to help transform the economy through work, in addition to preparing students linguistically and in science for a variety of fields. Under the leadership of Vice-Minister Dulce de Jesus Soares, the Ministry of Education has already realized significant reforms that will have a powerful impact on generations to come. However, for people ages 15–39 who will miss out on these reforms, new policies are needed now.⁶²

Understanding Attitudes towards Education through an Historical Lens

To understand the attitudes towards education in various parts of the system, it is useful to examine the history of education in Timor-Leste. Four distinct administrative periods have influenced the development of education in the country: (1) Portuguese colonial rule (the early 1500s to 1975), (2) the Indonesian occupation (1975–1999), (3) the United Nations administration (October 1999–May 2002) and (4) Timorese constitutional governments (May 2002 to the present). Each of these administrations introduced new ways of working—language, civil service and structure—into the education system and, indeed, into governance. Attitudes towards education and towards the appropriate subjects of study emerged from nearly 500 years of Portuguese presence in Timor-Leste, although the structures for implementing them probably owe more to the 24 years of Indonesian occupation and, possibly, post-independence donor countries (Earnest, Beck, and Supit 2008).

The Portuguese practised an assimilationist philosophy of colonialism wherein education played a key role because it was a means of conveying the Portuguese language, values and culture. School examinations also represented a screening mechanism to determine who among the Timorese was worthy of becoming a Portuguese citizen as well as the rank and status a Timorese could achieve within Portuguese society (Hill 2002).⁶³ Small numbers of Timorese benefited from high-quality education in schools run by the Jesuits (for boys) and the Canossian sisters (for girls). This was a European-type education that made almost no reference to local reality. By 1974, there were 39 students from Timor-Leste—most of them indigenous Timorese—studying at Portugal's five universities (Hill 2002). Fewer students took technical or vocational courses in Angola; João Viegas Carrascalão and Mari Alkatiri were among these students. Portugal educated a small elite.

Post-primary education was intended for only the few who reached *quarta classe*, grade 4 of primary school, which was sufficient to enter the civil service. Vocational education was virtually non-existent in East Timor because Portugal imported its own skilled workers to build all major projects. An *escola tecnica* (technical school) in Dili provided high school courses in commercial, administrative and technical subjects, in addition to the *liceu* (secondary school), the only Government-run academic high school as of 1975. Through a concordat with the Catholic Church, a second system, *ensino de adaptação* (adaptive education, a colonial system), was available for other students; among its objectives were curing laziness and not raising aspirations (Hill 2002).

Following the military invasion, the Indonesian administration expanded schooling, rapidly opening up education to hitherto excluded classes, causing a rush into high school. A university, the Universitas Timor Timur, was opened in 1985, although the preference of the Indonesian Government was to send top students to study at Indonesia's elite universities.⁶⁴ However, the methods they used did not give most students much choice in their studies or careers, nor was there much fieldwork. Students had to perform a month of compulsory charitable work (*Kuliah, Kerja, Nyata*, the student study service) in a rural area before they could graduate.⁶⁵ In an effort to undermine the clandestine resistance movement, the objectives of the Indonesian education system were to make the Timorese forget they were Timorese, to imbue them with Indonesian nationalism and to cream off the high achievers and send them to good jobs in Indonesia (Arenas 1998).

The Indonesians established vocational high schools starting at grade 10 and streamed students into them on the basis of an examination. These schools were restricted only to students who were less intelligent and thought to be unable to proceed with university study. The identity as a university student became prized among the young, regardless of what they were studying. The status of the vocational high schools became an unpopular option with students because of the lower status. Graduates of these schools were also unpopular with employers, who preferred to employ graduates of the general high schools. At the recommendation of the United Nations Transitional Administration in East Timor, the vocational schools were eventually discontinued as schools separate from the general high school (Maglen 2001; Sanderson 2001).

In 1961, Father Locatelli, an Italian Salesian priest, arrived in Timor-Leste and established the Fatumaca School for secondary education among boys, in Baucau. Over the next 55 years, the school went through many changes, adapting to many of the requirements of the Indonesian occupation, while still remaining a predominantly Timorese institution (Carleton 1977). Although notionally a vocational high school, its reputation as one of the leading academic schools in the nation arose because of the large numbers of its graduates who went on to university or who are founders of successful businesses in many fields. It is a case study in how to bring together practical and theoretical knowledge even though a 2008 evaluation observed that the school was still using an Indonesian curriculum (ETDA 2008).

During the Indonesian occupation, the Scouts played a key role in Timor-Leste, initially as part of the apparatus for trying to make young people forget they were Timorese and

turn them into good Indonesians, when all school students were required to join Pramuka, the Indonesian Scout movement. Later, many Timorese schoolchildren left Pramuka and joined the Corpo dos Escuteiros Catolicos (Catholic Scouts), commonly known as *Escouta*, which linked them with Scout groups in Ireland and Portugal and played a crucial role as complementary non-formal education for many Timorese. It became one of the few activities in Timor-Leste not under the control of the Indonesian military and effectively became a recruiting ground for the clandestine resistance (Pinto and Jardine 1997).

Under the Indonesians, the Pembinaan Kesejahteraan Keluarga (Family Welfare Movement) aimed at assisting the poorest and most remote women in developing livelihood skills. It was firmly under the control of the wives of senior civil servants, and, in Timor-Leste, this meant the military. Indonesian feminist writer Carla Bianpoen (2000) argues that its close relationship with the Indonesian army and the attitudes of superiority of Indonesian leaders towards Timorese women meant that it failed to communicate many valuable ideas about childcare, nutrition and improving cooking technology in Timor-Leste. Under the Indonesians, home economics was taught in the formal system, and two home economics teacher colleges (Sekolah Menengah Kesejahteraan Keluarga) trained teachers for secondary schools (Pedersen and Arneberg 1999).

There is a sense in which farming, the largest profession in the country, was deskilled during the Indonesian occupation. Farming requires a great deal of knowledge: of the soil, the environment, the weather and seasons, crops and animals, markets and economics. The establishment, in 1984, of the koperasi unit desa (village unit co-operatives, which, however, did not follow international co-operative principles) and the contracting out of these entities to the Indonesian army effectively deskilled farmers who had been multiskilled in diversified agriculture before the arrival of the Indonesians. Most of the rainforests in Timor-Leste were destroyed during the war, which also produced the famine of 1979 (CAVR 2003). This led to the transformation of Timorese eating habits from root crops and vegetables to white rice, white sugar, Super Mie (an Indonesian brand of instant noodles), and other Indonesian imports. Not only were many traditional farming, food processing, cuisine and cooking skills lost, but so were the forests where many Timorese gathered food and medicinal plants (CAVR 2003). Observers commented that the village unit co-operatives created dependence because farmers waited for investment from these groups and sold their products to them. Innovation and entrepreneurship were undermined (Gunn 2001; Rio 2001).

Under Portuguese rule, many Timorese were aware of shortcomings in the system and attempted to introduce new policies. For example, shortly after the Carnation Revolution, which peacefully overthrew an authoritarian government in Portugal in 1974, the Revolutionary Front for an Independent East Timor launched its first literacy campaign in rural areas. The campaign was based on Paulo

Freire's methods and, for the first time, used Tetum as the language of instruction (Boughton 2016; da Silva 2011; Hill 2002). Timorese in the resistance, including those studying in Indonesia, made quite a critique of the Indonesian education system (Arenas 1998; Cabral and Martin-Jones 2008).

Throughout the 1990s, many diaspora Timorese were considering new modes of education they could apply after independence, culminating in two conferences, the first in Peniche, Portugal, supported by the Government of Portugal, the second in Melbourne, Australia, supported by the Government of Australia and addressed by Xanana Gusmão, who became the first president of Timor-Leste, from his prison in Jakarta (ETRA 1999). The Peniche conference put forward a Magna Carta on 25 April 1998, the anniversary of the Carnation Revolution. The section on education promoted respect for

the right to a democratic education, safeguarded through the adoption of laws which establish a national system of education aimed at eliminating illiteracy and showing respect for differences of opinion, the promotion of freedom of technological and scientific research, and the critical study and analysis of social-cultural and scientific phenomena.⁶⁶

The Melbourne Conference on Strategic Development Planning for East Timor, held in April 1999, observed that

Education is a key sector in the transformation of the East Timorese society and economy. The schooling system and non-formal educational opportunities must be responsible and flexible to meet the needs of other departments and projects and promote equity and participation.

(Millo and Barnett 2004, p. 730)

The plan coming out of the conference called for the transformation of the teaching-learning process and educational liberation, a focus on the skills needed for development and the promotion of Timorese identity and valuable traditions. The goals of the strategic plan included the following (Freitas 1999; Millo and Barnett 2004; Nicolai 2004):

- Full exploration of Timor-Leste's human resources in all sectors of national interest
- Emphasis on quality in the teaching-learning process
- Co-ordination of foreign resources
- Promotion of the history of Timor-Leste
- Development of the national identity based on Timorese cultural identity and universal human values
- Fostering independent and critical thinking and a spirit of free and scientific inquiry

These bold ideas were not implemented because of the pro-Indonesian militia attack on Dili that was backed by elements in the Indonesian military following the referendum held in August 1999, which overwhelmingly favoured independence. Timor-Leste came to be governed temporarily by the United Nations Transitional Administration in East

Timor, a United Nations peacekeeping force staffed by officers from the United Nations Department of Peacekeeping Operations (a predominantly military operation), rather than diplomats from the Department of Political Affairs, which had been following developments in Timor-Leste over the previous 25 years and was well apprised of the background. The transitional authority adopted a policy of returning to normal as quickly as possible, particularly in education, even though the previous 25 years under military occupation had hardly been normal. In the lead-up to independence, an opportunity was lost to encourage the Timorese to design their own system of education and training, now that Timor-Leste was to be a small sovereign country and no longer a remote province of a huge country with different needs. While the system that emerged in the first few years after independence was largely based on the Indonesian curriculum, the two colleges for home economics teachers were closed. This removed from the formal education system the skills needed for the development of many home-based industries and led to the almost complete absence of staff and structure from the schooling system, with the exception of food and nutrition.⁶⁷

Under the two ruling powers, Indonesia and Portugal, which seemed to want to use education to cream off an elite of local people to serve elsewhere, the majority of the Timorese were ambivalent about the purpose of education: to bring skills, new knowledge, techniques and investment

into local communities to improve the quality of life or to help a few bright students leave the community, obtain good jobs elsewhere and send money back to their families. An effective system should accomplish both goals. Nonetheless, many people still seem to believe that Timor-Leste need not seek to enhance life and health in rural areas given that all educated people will always want to leave the village. Since independence, encouraging educated individuals to stay in rural areas in sufficient numbers to provide the health and education services to the majority promised in the Constitution has been difficult. Farming has been deskilled, and the agricultural labour force is now largely composed of workers who have dropped out of education.

Prime Minister Rui Araújo observed that there is a disconnect between what is taught in the education system and the application of knowledge in the world outside the classroom.⁶⁸ The view is still current that certificates and qualifications are more important than the knowledge gained while studying for these symbols of education, that theory does not have to be applied in practice and that gaining practical skills represents a low-status pursuit. While some of these attitudes exist in all countries, the history of education in Timor-Leste means they are particularly detrimental, leading the education system to become a conduit for the transfer of cash, in many cases from the poor to the middle class, as rural subsistence farmers struggle and borrow to send their children to private universities (Hill 2007).



Most important thing in life is dignity. A person can have dignity by having the skills and a decent job. In the absence of decent jobs, one can easily lose their dignity.

*A youth respondent to
the 2016 Youth Well-Being Survey*



CCT NCBA coffee drying field Tibar.

Notes

Executive Summary

- 1 The composite measure ranges between 0 and 1, 0 representing no development, and 1 representing the highest possible level of development.
- 2 This 70,000 includes the 62,000 infant deaths that will be avoided.

Chapter 1

- 3 For more on the SDGs, see “Sustainable Development Knowledge Platform”, Division for Sustainable Development, Department of Economic and Social Affairs, United Nations, New York, <https://sustainabledevelopment.un.org/sdgs>.
- 4 See “Sustainable Development Knowledge Platform”, Division for Sustainable Development, Department of Economic and Social Affairs, United Nations, New York, <https://sustainabledevelopment.un.org/sdgs>.
- 5 See “High-Level Event on the Demographic Dividend and Youth Employment”, United Nations Population Fund, New York, <http://www.unfpa.org/events/high-level-event-demographic-dividend-and-youth-employment>.
- 6 See “Sustainable Development Knowledge Platform”, Division for Sustainable Development, Department of Economic and Social Affairs, United Nations, New York, <https://sustainabledevelopment.un.org/sdgs>.

Chapter 2

- 7 World Population Prospects 2017 (database), Population Division, Department of Economic and Social Affairs, United Nations, New York, <https://esa.un.org/unpd/wpp/Download/Standard/Population/>.
- 8 See “Timor-Leste: Standard DHS, 2016”, DHS Program, ICF International, Rockville, MD, <https://dhsprogram.com/what-we-do/survey/survey-display-514.cfm>. Only the key indicators report is published and available to the public.
- 9 See WDI (World Development Indicators) (database), World Bank, Washington, DC, <http://data.worldbank.org/products/wdi>.
- 10 More on the rationale and the design of the DemDiv model and the way it functions can be found in the related technical guide; see Moreland et al. (2014).
- 11 The contraceptive prevalence rate is the share of women who are currently using or whose sexual partner is currently using at least one method of contraception. It is usually reported for women ages 15–49 who are married or in unions.
- 12 See Aid at a Glance Charts (database), Organisation for Economic Co-operation and Development, Paris, <http://www.oecd.org/dac/financing-sustainable-development/development-finance-data/aid-at-a-glance.htm>.
- 13 This 70,000 includes the 62,000 infant deaths that will be saved.
- 14 For data and an explanation of the indicator, see “Expected Years of Schooling (of Children) (Years)”, Human Development Report Office, United Nations Development Programme, New York, <http://hdr.undp.org/en/content/expected-years-schooling-children-years>.
- 15 See, for instance, “Bhutan’s Gross National Happiness Index”, Oxford Poverty and Human Development Initiative, Oxford, <http://www.ophi.org.uk/policy/national-policy/gross-national-happiness-index/>.
- 16 Often used interchangeably with a rating scale, a Likert-type scale is one of the most widely applied approaches to the scaling of responses. See Likart (1932).
- 17 Examples are the *Assam Human Development Report 2014* (OKDISCD and IHD 2014), Bhutan’s gross national happiness measure (Centre for Bhutan Studies and GNH 2017), *Human Development in Chile 2012* (UNDP 2012), the Better Life Initiative of the Organisation for Economic Co-operation and Development (OECD 2015), and the *World Happiness Report* (Helliwell, Layard, and Sachs 2017).
- 18 For inquiries on Timor-Leste’s 2016 National Youth Well-Being Survey, please contact Dr. Merve Hosgelen, email: merve.hosgelen@undp.org, or Dr. Udoy Saikia, email: udoy.saikia@flinders.edu.au.
- 19 Oecussi-Ambeno District is a coastal enclave separated from the rest of Timor-Leste by West Timor, part of East Nusa Tenggara, the southernmost province of Indonesia.
- 20 A *rama ambon* is a sort of slingshot used to launch a home-made dart. (See the glossary.)

Chapter 3

- 21 The definition of the age of youth was agreed by the General Assembly in 1981. In some analyses, youth are divided into teenagers or adolescents (15- to 19-year-olds) and young adults (20- to 24-year-olds). When the General Assembly, by a 1995 resolution, adopted the World Programme of Action for Youth to the Year 2000 and Beyond, it reiterated that the United Nations defined youth as the 15–24 age cohort (United Nations 1995). General Assembly resolutions issued in 2001 and 2008 and a 2007 resolution of the United Nations Commission for Social Development reinforced the use of the same age group for youth.
- 22 Data of 2016 in La’o Hamutuk (database), Timor-Leste Institute for Development Monitoring and Analysis, Dili, Timor-Leste, <http://www.laohamutuk.org/>.
- 23 “The SNA (paras. 6.18 and 6.22) and Principles and Recommendations for Population and Housing Censuses, Revision 1, United Nations, 1998, Series M, No. 67, Rev. 1, define the economically active population (‘usually active’ or ‘currently active’) comprising all persons of either sex above a specified age who furnish the supply of labour for the production of economic goods and services (employed and unemployed, including those seeking work for the first time), as defined by the System of National Accounts (SNA), during a specified time reference period.” (“Glossary of Statistical Terms”, Organisation for Economic Co-operation and Development, Paris, <https://stats.oecd.org/glossary/detail.asp?ID=730>).
- 24 The recent popularity of the NEET measure is linked to the potential it offers to address youth vulnerabilities (Elder 2015). It is even the subject of a target in Sustainable Goal 8. However, similar to labour force participation and economic activity or inactivity, the NEET is often misinterpreted. This is augmented by the numerous and diverse definitions used by international organizations to describe the NEET concept. The description referenced in the text here favours a simple, straightforward interpretation of the NEET as unemployed non-students, plus inactive non-students (both understood to be among the youth age group), divided by the youth population. Note that the inclusion of unemployed non-students and inactive non-students should be taken to clarify that the NEET does not encompass unemployed youth who are looking for work and therefore economically active and participating in the labour force. (See also ILO 2013a, 2013b.)
- 25 “Youth Employment Promotion Programme (Timor-Leste)”, International Labour Organization, Geneva (accessed 22 June 2017), http://www.ilo.org/asia/WCMS_159348/lang-en/index.htm.
- 26 “Situasaun Nutrisaun nian iha Timor-Leste”, Ministry of Health, Dili, Timor-Leste, <http://www.moh.gov.tl/sites/default/files/Nutrition%20&%20development%20Timor%20Leste.pdf>.
- 27 See “Ease of Doing Business in Timor-Leste”, World Bank, Washington, DC, <http://www.doingbusiness.org/data/exploreconomies/timor-leste>.
- 28 Personal communication of local contractors, visit to Suai in July 2016.
- 29 Personal communication of a women’s group, visit to Suai in August 2014.
- 30 Personal communication with a local community, visit to Suai in July 2016.
- 31 Personal communication with local NGOs, visit to Suai in July 2016.
- 32 Jacinto Barros Gusmão, general director of SEFPOPE, in a press release on 1 August 2016.
- 33 Interview with Andrew Mahar, Melbourne, 22 December 2016.
- 34 For an example of a Kor Timor shop, see “Kor Timor”, Timor Plaza, Dili, Timor-Leste, <http://www.timorplaza.com/stores/kor-timor>.
- 35 See “Friends of the Earth East Timor, Haburas Foundation”, Friends of the Earth International, Amsterdam, <http://www.foei.org/member-groups/asia-pacific/east-timor>.
- 36 See “Social and Economic Participation”, xpand Foundation, Melbourne, <http://xpand.net.au/>.
- 37 See “Tradewinds Timor-Leste Coffee”, Tradewinds, Melbourne, <http://www.tradewinds.org.au/assets/files/timorwholesalesupplierdocFeb2015.pdf>, p. 2.
- 38 See “International OVOP Exchange Committee”, Oita OVOP International Exchange Promotion Committee, Oita, Japan, <http://www.ovop.jp/en/>.

Chapter 4

- 39 Pramuka, the Indonesian scouts in Timor-Leste, collapsed when the Indonesians left, but some members established a locally led scout group. In 2008, they joined with the Catholic Scouts to form the national union.

- 40 See “Timor-Leste Conference: Finding Pathways in Education”, Victoria University, Melbourne, <https://www.vu.edu.au/about-vu/news-events/events/timor-leste-conference-finding-pathways-in-education>.

Chapter 5

- 41 The digital divide refers to the ICT haves and have-nots nationally or globally. A national digital divide often replicates an urban-rural divide that derives from differences in infrastructure provision. Gender may also play a significant role in dictating ICT access.
- 42 See “Digital in APAC 2016”, We Are Social, Singapore, <http://wearesocial.com/sg/blog/2016/09/digital-in-apac-2016>.
- 43 See “Mobile Facebook, Twitter, Social Media Usage Statistics in Timor-Leste”, Statsmonkey, Tamilnadu, India, <https://www.statsmonkey.com/table/21483-timor-leste-mobile-social-media-usage-statistics-2015.php>.
- 44 See IPDC Projects Database: Countries, Timor-Leste, International Programme for Development of Communication, United Nations Educational, Scientific and Cultural Organization, Paris, <http://www.unesco-ci.org/ipdcprojects/countries/timor-leste>.
- 45 See “Diariu Timor Post”, Timor Post Group, Dili, Timor-Leste, <http://www.diariutimorpost.tl>; “STL Online”, Suara Timor Lorosae Corporation, Dili, Timor-Leste, <http://suara-timor-lorosae.com/>.
- 46 See “The New TVET Training System in Timor-Leste”, International Centre for Technical and Vocational Education and Training, United Nations Educational, Scientific and Cultural Organization, Bonn, Germany, http://www.unevoc.unesco.org/fileadmin/user_upload/docs/TVET_in_Timor_Leste_01052012.pdf.
- 47 See Timor-Leste Transparency Portal, Ministry of Finance, Dili, Timor-Leste, <http://www.transparency.gov.tl/english.html>.
- 48 The website of ICT Watch, Jakarta, Indonesia, is <http://ictwatch.id/>.
- 49 See ZMQ, Technology for Development, New Delhi, <http://www.zmq.in>.
- 50 See “MatchMe”, SoukTel, Newark, DE, <http://www.souktel.org/our-approach/job-matching>.
- 51 Crowdsourcing in this case is the gathering of data from socially networked individuals viewed as a crowd. See “AI for Your Business”, CrowdFlower, San Francisco, <https://www.crowdflower.com>.
- 52 See Hughes (2011); Sentro Media Covalima, Suai Media Space, Melbourne, <http://www.suaimediaspace.org/youth/category/yomatre/>.
- 53 See Empreza Diak, Dili, Timor-Leste, https://www.facebook.com/pg/Empreza.Diak/about/?ref=page_internal.
- 54 See InfoTimor, Info Timor, Dili, Timor-Leste, <http://technology.tl>.

Chapter 6

- 55 “Yo sí Puedo Seguir”, Gobernación de Boyacá, Boyacá, Colombia, 20 September, <http://www.boyaca.gov.co/SecEducacion/2012-08-08-17-19-30/yo-si-puedo-seguir>.
- 56 Data of 2012 in La’o Hamutuk (database), Timor-Leste Institute for Development Monitoring and Analysis, Dili, Timor-Leste, <http://www.laohamutuk.org/>.

Appendix D

- 57 Prepared by Gouranga Dasvarma, Associate Professor in Population Studies, College of Humanities, Arts and Social Sciences, Flinders University, Adelaide, Australia.
- 58 For the World Bank number, see “GDP per Capita, PPP (Current International \$): Timor-Leste”, World Bank, Washington, DC, <http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?locations=TL>.
- 59 See “Frequently Asked Questions: Gender Development Index (GDI)”, United Nations Development Programme, New York, <http://hdr.undp.org/en/faq-page/gender-development-index-gdi#t371n2412>.

Appendix E

- 60 In the Australian system, the Licenciatura would be known as an honours degree, which accounts for a relatively small share of Australian students. The *Bachelato* (bachelor degree) is a three-year degree, without a thesis, but not many are available at the UNTL.
- 61 See “Timor-Leste Conference: Finding Pathways in Education”, Victoria University, Melbourne, <https://www.vu.edu.au/about-vu/news-events/events/timor-leste-conference-finding-pathways-in-education>.
- 62 The new curriculum includes basic literacy in Tetum (along with Portuguese, an official language of Timor-Leste), new content on Timorese history and culture and the introduction of school gardens, which are to be used at every school as a living laboratory for science, mathematics and other studies in the curriculum (Lemos 2016).

Appendix F

- 63 Assimilationist colonial countries include France, Portugal and Spain, the governments of which insisted that all education be in their language. Non-assimilationist countries include Germany, the Netherlands and the United Kingdom, the governments of which taught the elites in the colonialist language, but, under the influence of Protestant Christianity, allowed local languages to be used in early literacy and adult education so that people could read the Bible in their own language.
- 64 For fundraising, the Universitas Timor Timur was described as a private university supported by a foundation, although it was firmly under the control of the Indonesian Government.
- 65 In agriculture or education, the service exposed students to practical applications of knowledge. In some universities in Timor-Leste, the service is still active in fieldwork that must be carried out early in courses and be associated with the theories the students are learning.
- 66 “Magna Carta Concerning Freedoms, Rights, Duties and Guarantees for the People of East Timor”, adopted at the East Timorese National Convention in the Diaspora, Peniche, Portugal, 25 April 1998. <http://easttimorlegal.blogspot.com/2009/01/east-timors-magna-carta.html>.
- 67 The Government Teachers College for Home Economics became the bread baking and hospitality section of the Centro Senai.
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Children wait for their turn to dance at a traditional ceremony in Iliomar, sub-district of Lautem.

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The lesson from East Timor is
that nothing is impossible. If you
dream, if you believe, if you have
faith, you fight on, you persevere.

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