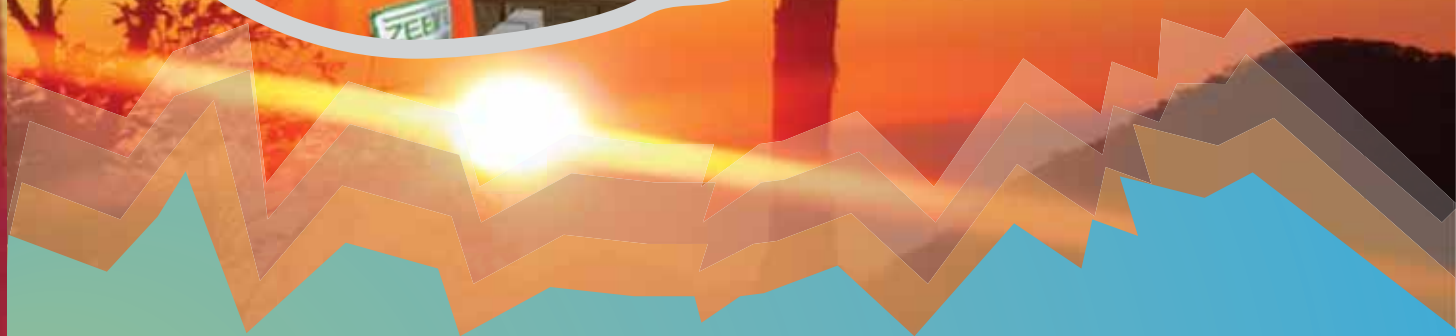


Timor-Leste Population and Housing Census 2015

Analytical Report on Labour Force Volume 10



Timor-Leste Population and Housing Census 2015

Thematic Report Volume 10

Analytical Report on Labour Force

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General Directorate of Statistics (GDS)
International Labour Organisation (ILO)
United Nations Population Fund (UNFPA)
Authors: Mr. Farhad Mehran & Sr. Francisco Crisanto
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Foreword

The 2015 Timor-Leste Population and Housing Census with the theme “**Census from people to people: Be part of it**” was conducted in July 2015 on a *de facto* basis by the General Directorate of Statistics, Minister of Finance. The 2015 Census is the third after those conducted in 2004 and 2010 (post independent Timor-Leste) and fifth after the 1980 and 1990 Censuses, both taken in Indonesian times. This Census was undertaken within the provision of the Statistics Decree Law No. 17/2003 and the 2015 Population and Housing Census Government Resolution no. 11/2014 of 9 April 2014.

The main objective of the 2015 Census was to collect, analyze and effectively disseminate demographic and socio-economic information required for policy and programme formulation, decision making in planning and administrative processes, and research. The Census preliminary results were published in Volume 1 on 21 October 2015 and were launched by His Excellency the Prime Minister of RDTL Dr. Rui Maria de Araújo. The 2015 Census priority tables were published in three volumes: 2, 3 and 4, and launched by the Vice Minister of Finance Eng. Helder Lopes on 17 November 2016. The ‘Sensus fo Fila fali’ (returning back the results of the Census) was launched by His Excellency Minister of State Dr. Deoniso Babo Soares on behalf of the Prime Minister of RDTL on 2 March 2017. After that an ambitious “Sensus Fo Fila Fali” project was undertaken by the General Directorate of Statistics, Ministry of Finance that culminated in a Census report for each of the 442 sucos in the country.

This fourth phase comprises drafting of analytical reports covering Census thematic topics including fertility, marriage, mortality, migration, population projections, education, labour force, housing, agriculture, gender, youth and an atlas. The preparation of these reports was a collaborative effort between the Government of Timor-Leste, the United Nations Population Fund (UNFPA), the United Nations Children’s Fund (UNICEF), the International Labour Organisation (ILO) and the Food and Agriculture Organisation (FAO). Drafting of the thematic reports involved local and international experts. The reports were authored under the supervision and guidance of the Census Technical Specialist from UNFPA. The authors were recruited on a competitive basis, ensuring that they had adequate knowledge of the topics they were to analyse.

All staff at the General Directorate of Statistics, Ministry of Finance and especially the Director General and the Director of System and Reports and his team are commended for their commitment and tireless efforts to successfully undertake all phases of the Census including the thematic analysis exercise.

The Government of Timor-Leste wishes to extend its sincere gratitude to the United Nations Population Fund (UNFPA), the United Nations Children’s Fund (UNICEF), the International Labour Organisation (ILO) and the Food and Agriculture Organisation (FAO) for providing technical, financial and administrative support throughout the Census process, and in particular acknowledges the contribution of the authors of each thematic report.

Last but not least, all Timorese people deserve special praise for their patience and willingness to provide the requisite information which forms the basis of these reports and hence benchmark information for development. We in the Ministry of Finance and Government as a whole hope that the data contained in these thematic reports will be fully utilized in the national development planning process by all stakeholders for the welfare of the Timorese people.


Sara Lobo Brites
Vice - Minister and Acting Minister of Finance



Executive summary

The census provides detailed information on the economic characteristics of the working age population including employment and unemployment, status in employment, industry and occupation. The 2015 Census data are compared with the corresponding data from the 2010 Census to provide information on the labour force trends. The data are also analyzed by municipality and with respect to particular population groups such as men and women, youth, children and the elderly as well as the migrants and persons with disabilities. The main results are summarized below.

Main labour force indicators

According to the census results, there were 717,553 persons of working age (15 years old and over) in 2015 in Timor-Leste, of whom 402,664 were in the labour force, 383,331 as employed and 19,333 as unemployed persons. The labour force participation rate was 56.1 percent and the unemployment rate was 4.8 percent.

Three municipalities had labour force participation rates below the national average: Dili (45.3 percent), Lautem (52.3 percent) and Baucau (54.6 percent). The labour force participation rates of all other nine municipalities were above the average national rate (56.1 percent), with the Special Administrative Region of Oecussi having the highest rate (68.0 percent). Dili had the highest unemployment rate (10.6 percent) followed by Lautem and Liquiça (each at 5.6 percent). By contrast, the Special Administrative Region of Oecussi had the lowest unemployment rate (1.9 per cent).

Trends

Compared with the results of the 2010 Census, the working age population increased from 613,782 in 2010 to 717,553 in 2015, corresponding to an average annual growth rate of about 3.2 percent, an annual growth rate higher than that of the population at all ages that was about 2.3 percent between 2010 and 2015. The faster growth rate of the working age population may be attributed to the lower fertility and the relative decrease of the size of the child population below 15 years of age.

The census results show that the labour force participation rate increased from 54.7 percent in 2010 to 56.1 percent in 2015, and the unemployment rate decreased from 9.5 percent in 2010 to 4.8 percent in 2015. As the analysis in chapter 6 of the report indicates, it is likely that the unemployment rate was either underestimated in 2015 Census or overestimated in 2010 Census and the true trend is an increasing unemployment rate during the period from 2010 to 2015 as measured with more reliable data obtained from the labour force surveys of 2010 and 2013.

Employment

According to the census results, there were 383,331 employed persons in 2015, against 341,694 in 2010, representing an average annual growth rate of roughly 4.8 percent. This result shows that employment grew faster than the working age population during the five-year period from 2010 to 2015. The apparent growth of employment has, however, been achieved through the growth of self-employment and particularly own-account employment. The share of own-account workers in total employment increased from 50.2 percent in 2010 to 57.3 percent in 2015, while the share of employees in total employment has remained essentially unchanged at about 31.1 percent in 2010 and 30.6 percent in 2015.

In terms of branch of economic activity, the data show that there has been a net relative decline of agriculture employment in favor of services during the period. The share of agriculture employment in total employment decreased from 68.8 percent in 2010 to 59.3 percent in 2015. Correspondingly, the share of employment in services increased from 26.1 percent in 2010 to 35.9 percent in 2015. Industrial employment remained almost unchanged at 4.9 percent in 2010 and 4.1 percent in 2015. The occupational composition of employment has slightly changed in favor of more skill-demanding

occupations, although it remains heavily dominated by agriculture and services. The data show a net increase of the share of managers from 2 percent in 2010 to 4 percent in 2015, and a significant increase in the share of professionals from 2 percent in 2010 to 6 percent in 2015. Correspondingly, the data show a decrease in the share of agriculture workers in total employment from 65 percent in 2010 to 60 percent in 2015 but a relative increase in the share of services and sales workers from 12 percent in 2010 to 15 percent in 2015.

The educational attainment of the employed population in the core age group, 15 to 64 years old, has generally increased during the five-year period. The share of employed persons with secondary education increased from 18.8 percent in 2010 to 20.3 percent in 2015. Similarly, the share of employed persons with university education increased from 5.6 percent in 2010 to 9.0 percent in 2015. The share of employed persons with primary education remained essentially constant at 19.9 percent in 2010 and 20.2 percent in 2015.

Unemployment

The census definition of unemployment includes persons not employed, seeking and available for employment as well as persons not employed, available for employment but not seeking work. The pressure on the labour market may thus be measured by the percentage of unemployed persons in the core age group 15 to 64 years old who were seeking employment. The results show that this percentage was about 78 percent in 2015 Census and 73 percent according to 2010 Census indicating an increasing pressure on the labour market, in line with the presumption of an increasing trend of the unemployment rate between the two periods.

The composition of the unemployed population by educational attainment shows that the unemployed are more concentrated at the higher levels of educational attainment than the general working age population. While about 36 percent of the working age population had secondary or higher education, the corresponding share among the unemployed was about 48 percent. In general, the unemployment rate increases with the level of educational attainment. The unemployment rate of the core age group (15-64 years) with primary or pre-primary education was about 4 percent. The unemployment rate was however substantially higher for persons with secondary education (8.3 percent) and university education (7.6 percent), although somewhat lower for persons with polytechnic or diploma (4.5 percent).

Persons outside the labour force

Persons outside the labour force are all persons not classified as employed or unemployed during the reference period and hence not currently in the labour force. They were in total 314,899 persons of working age outside the labour force in 2015. The majority of them were full-time students, 58 percent. They were in a sense part of the future labour force, as many would enter the labour market after completion of their studies. Compared with the results of the previous census, the share of full-time students in the population of working age outside the labour force substantially increased from about 17 percent in 2010 to 58 percent in 2015. The other categories of persons outside the labour force in 2015 were men and women with housework responsibilities (32 percent), pensioners, retirees and elderly persons (4 percent) and people with illness or disability (2 percent).

Women and men

The working age population was almost evenly divided between men (360,217) and women (357,336). The labour force participation rate of women (35.8 percent) was however substantially lower than the corresponding rate of men (71.1 percent). Comparison of the results of the 2015 Census and those of the 2010 Census shows that the gap between the female and male labour force participation rates has significantly narrowed and this across all age groups.

According to the 2015 Census data, the unemployment rate was higher among men than among women across all prime age groups up to the age group 40-44 years old, and after that the unemployment rates of men and women were essentially the same. Comparison with the results of the 2010 Census gives however a somewhat reverse pattern.

Three particular features of gender inequality in employment were examined using the 2015 Census data: women in managerial positions, female- and male- dominated occupations and gender occupational segregation. The results show that the number of women in managerial positions (2,910) was almost one-fourth of the number of men in managerial positions (8,387).

The analysis also shows that there are five major occupations with female-domination, namely: Textile, handicraft, leather and related workers and Weaver, knitter and related workers in each of which 97 percent of the employed persons are women; Housekeepers and related service workers, and Home-based social workers with 91 percent female workers in each of two occupational categories; and finally Cooks and chefs with 85 percent female workers. The major male-dominated occupations are: Car, taxi and light trucks or van drivers; Defense forces and other security guards; House builders; Carpenters and furniture makers; Bricklayers and related workers.

Overall, the index of occupational segregation was 0.23, indicating that 23 percent of the employed population of each sex should change occupations to arrive at an hypothetical occupational structure that is fully equal with respect to gender. The index of occupational segregation in Timor-Leste is below the value in many other countries, reflecting the large concentration of agricultural employment in Timor-Leste, an activity in which male and female occupations tend to be more balanced than in other branches of economic activity.

Youth

According to the census results, there were 242,343 persons in the age category 15 to 24 years old in Timor-Leste in 2015. The youth population comprised about 34 percent of the working age population, making Timor-Leste one of the youngest populations in the world. The impact of this “youth bulge” on the labour market is potentially enormous requiring careful analysis.

The youth labour force participation rate was 23.8 percent, below the average national rate (56.1 percent). This is because young people are mostly in school and only a few are working or looking for work. The labour force participation rate of young people has increased from 2010 when it was 19.0 percent. The youth unemployment rate (12.3 percent) was however higher than the national average (4.8 percent) as many young people seeking work cannot find employment and remain unemployed. The unemployment rate of educated youth with university education was even higher at 20.0 percent.

About 20.3 percent of the youth population was not in employment and not in education or training (NEET). Some of them were unemployed, but the bulk of them were economically inactive. The NEET indicator was higher among women (23.7 percent) than among men (16.8 percent), mainly due to the fact that many women get married after school and due to family responsibilities do not enter the labour market until later or not all.

Working children

There were 13,409 children in employment according to the data of 2015 Census, representing 5.5 percent of the children population 10 to 17 years old, 6.0 percent among males and 5.1 percent among females. The percentage of working children declined from 8.3 percent in 2010 to 5.5 percent in 2015, and remains significantly below the world average (13.8 percent for age group 5 to 17 years) and the regional average for Asia and the Pacific (22.1 percent for age group 5 to 17 years).

The census results show that school attendance of working children has increased among both boys and girls and for all age groups. In 2015, there were 4,375 children 10-17 years old combining work and

school, representing 32.6 percent of the total number of working children. Among boys, 28 percent were combining work and school in 2010, but increased to almost one-third in 2015 (32 percent). Similarly, the percentage of girls combining school and work, about 30 percent in 2010, increased to 33 percent in 2015.

The results indicate a net decline of paid employees among working children from 14 percent in 2010 to about 1.5 percent in 2015. The bulk of working children remain own-account workers or contributing family workers: 86 percent in 2010 and 98 percent in 2015. Most children were working in agriculture-related occupations, though some 14 percent were working as housekeepers, retail sales or street vendors, and drivers of car, taxi, light truck or van.

Elderly persons

The number of elderly persons aged 65 years or older increased from 50,078 according to 2010 Census to 68,488 according to 2015 Census, representing an annual growth rate of about 6.5 percent, more than twice the growth rate of the population at large. Relative to the size of total population, the share of elderly persons increased from 4.8 percent in 2010 to 5.8 percent in 2015. This shift of the population towards older ages reflects a declining fertility rate and rising life expectancy, a worldwide phenomenon also observed in Timor-Leste.

The labour force participation rate of the elderly population has also considerably increased, especially among older women living in rural areas (36 percent in 2010 to 53 percent in 2015). The change has been somewhat less drastic for older men living rural areas (from 25 percent in 2010 to 32 percent in 2015) and for older women in urban areas (74 percent in 2010 to 78 percent in 2015). For older men living in urban areas, there has been a slight drop in the labour force participation rate from 59 percent in 2010 to 54 percent in 2015, perhaps due to the increasing number of elderly men having the possibility of retirement in types of jobs mostly exercised in urban areas.

The results show a general decline of the unemployment rate of elderly people, most pronounced for older women in urban areas where the female unemployment rate dropped from 20 percent in 2010 to 6 percent in 2015. The general drop of the elderly unemployment rate follows a similar pattern observed for the population at large, put in doubt in the analysis of unemployment mentioned earlier due to the possible overestimation of unemployment in 2010 or underestimation in 2015.

Workers with disabilities

The census results show that there were 36,062 persons with disability among the working age population 15 years old and over, representing a prevalence rate of 5.9 percent and a decline from 7.2 percent in 2010. A person with disability was defined as any individual who responded to have “a lot of difficulty” or “cannot do at all” to one or more of the following conditions: “walking”, “seeing”, “hearing” and “intellectual/mental condition”. The disability with the highest prevalence rate was “seeing” (3.9 percent) followed by “walking” (2.5 percent) and “hearing” (2.2 percent).

A worker with disability was defined as a person with disability who is in the labour force, i.e., currently employed or unemployed. More than 80 percent of workers with disabilities were older people 40 years old and over, the majority men. About 25.7 percent of workers with disabilities were employees, i.e., working for pay for others. The percentage among men (29 percent), however, was significantly higher than the percentage among women (19 percent). The share of employees among workers with disabilities was 19.0 percent in 2010.

Migrants in the labour force

According to the results of the 2015 Census, the stock of the migrant population 15 years old and over at the time of the census was 67,245 persons, representing about 9.4 percent of the working age population. Among them, an estimated 27,613 were in the labour force, representing a labour force

participation rate of about 41.1 percent. In this report, a migrant was defined as a resident of a private household who has changed his or her municipality or moved to Timor-Leste from another country in the last five years.

The bulk of the working age migrants were internal migrants (64,506), of whom 49.7 percent were men and 50.3 percent women. About 43 percent of the internal migrants in the labour force remained in the same municipality of residence. The majority or about 57 percent of the internal migrants however moved from one municipality to another. Except for Dili all other municipalities were net exporters of labour force during the five-year period from 2010 to 2015. Dili was the only net importer of migrant workers: it imported 9,669 migrants in the labour force while exporting only 784.

There were 2,739 international migrants according to the 2015 Census results, 55 percent men and 45 percent women. The labour force participation rate of international migrants was 73.4 percent, significantly higher than the national rate (56.1 percent). Most international migrants in the labour force were coming from Indonesia (61.3 percent), followed by China (16.3 percent) and to a lesser degree from the Philippines (5.2 percent), Portugal (3.4 percent), Australia (2.8 percent) and Vietnam (1.0 percent).

Key labour force indicators, 2015 Census

	Total	Male	Female
Labour force participation rate (%)	56.1	66.0	46.2
- Urban	45.8	55.7	35.4
- Rural	60.8	70.9	50.9
Unemployment rate (%)	4.8	5.2	4.2
- Urban	9.2	9.4	9.0
- Rural	3.3	3.7	2.7
Employment-to-population ratio (%)	53.4	62.5	44.2
- Urban	41.6	50.4	32.2
- Rural	58.9	68.3	49.5
Total dependency ratio (%)	81.7	82.9	80.6
- Urban	60.0	59.8	60.2
- Rural	92.7	94.8	90.5
Youth labour force participation rate (%) 15-24 years	23.8	25.9	21.7
- Urban	15.6	17.7	13.4
- Rural	28.7	30.7	26.7
Youth unemployment rate (%) 15-24 years	12.3	14.0	10.3
- Urban	24.7	25.9	23.0
- Rural	8.4	10.0	6.5
Youth NEET (%) 15-24 years	20.3	16.8	23.7
Youth NEET (%) 15-29 years	22.3	17.1	27.4
Employed population (15-64 years)	341,694	201,155	140,539
- Urban	90,325	56,258	34,067
- Rural	251,369	144,897	106,472
Vulnerable employment (%) 15-64 years	66.5	61.3	74.1
- Urban	36.5	30.0	47.1
- Rural	77.3	73.4	82.7
Unemployed population (15-64 years)	18,317	11,860	6,457
- Urban	9,342	5,923	3,419
- Rural	8,975	5,937	3,038
Employed population (65+ years)	41,637	24,149	17,488
- Urban	3,374	2,002	1,372
- Rural	38,263	22,147	16,116
Unemployed population (65+ years)	1,016	528	488
- Urban	208	119	89
- Rural	808	409	399
Working children (%) 10-17 years	5.5	6.0	5.1
- Urban	1.8	2.1	1.6
- Rural	6.9	7.4	6.4
Workers with disabilities (15-64 years)	13,228	8,410	4,818
- Urban			
- Rural			
Migrants in the labour force	27,613	16,943	10,670
- Internal migrants	25,602	15,655	9,947
- International migrants	2,011	1,288	723

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Chapter 1: Introduction

This analytical report presents the data on labour force characteristics of the working age population of Timor-Leste based on the Census of Population and Housing conducted in July 2015. It is part of a series of thematic publications on the census results dealing with particular topics including Education, Gender, Fertility, Mortality, Agriculture and livestock, Migration and Urbanization, etc. The report follows the basic features of a similar report prepared on the basis of the 2010 Census results. It is, however, organized in a slightly different manner, with the body of the text presenting the analysis of the data and the statistical annex including the complete set of tabulated results.

Aside from an executive summary and a list of main indicators, the report is organized in fifteen chapters and five annexes. Following this introductory chapter, Chapter 2 describes the relevant census methodology including the main concepts and definitions and data quality. The census results on the size and composition of the working age population presented in Chapter 3 and on labour force participation in Chapter 4. Chapter 5 analyzes the data on the size and trend of employment, while Chapter 6 deals with the magnitude and evolution of unemployment. The data on the population outside the labour force are presented in Chapter 7.

Details on the structure of employment in terms of industry and occupation are presented in Chapter 8 and on status and sector of employment in Chapter 9. The subsequent chapters examine the labour force characteristics of particular population groups: women (Chapter 10), youth (Chapter 11), children (Chapter 12), elderly (Chapter 13), workers with disabilities (Chapter 14), and migrants in the labour force (Chapter 15). Chapter 10 focuses on three particular gender issues, namely, women and men in managerial positions, female- and male- dominated occupations and gender occupational segregation in Timor-Leste. The working age population is defined as the population 15 years old and over, without an upper age limit in line with the international standards on this topic.

Chapter 2: Census methods and concepts

Timor-Leste conducted its third population and housing census since independence in July 2015. The previous two censuses were carried out in 2004 and 2010. Among the specific objectives of the 2015 Census was the collection of data on the “size and deployment of the labour force” to provide benchmark information for sound development planning and in particular for analysis of the “working skills of the population ... against the needs of the nation.”

Scope and coverage

The scope of the census covered the entire geographic area of the country including the population living in private/conventional households as well as those living in non-conventional households such as hospitals, military barracks, boarding schools, etc. In principle, homeless persons usually living in the open on roadside or in streets without shelter were covered by the census. The specific data collected on employment and labour force were based on the following seven questions of the household questionnaire addressed to household members 10 years of age and over:

- P32. Main economic activity last week
- P33. Occupation at main job last week
- P34. Industry at main job last week
- P35. Sector of employment at main job last week
- P36. Main economic activity during the past 12 months
- P37. Secondary economic activity during the past 12 months
- P38. Duration of time engaged in economic activity last year

Last week or the reference week referred to the seven days from 4th to 10th July 2015, corresponding to the calendar week prior to the census enumeration night (night between 11th and 12th July). The past 12 months referred to the one-year period from 11th July 2014 to 10th July 2015. The data were collected on a paper questionnaire through face-to-face interviewing. The respondent was selected among any knowledgeable adult household members who would respond to the census questions for himself or herself, as well as for all other members of the household.

Question P32 (main economic activity last week) involved in fact several items, namely, labour force status (employed, not employed but available for work, not employed and not available for work) and status in employment (employee - government, employee - private, employer, own-account worker, contributing family worker, member of producers' cooperative). Among those identified as not employed, but available for work, the question distinguishes between those who sought work and those who did not seek work. Similarly, among those identified as not employed and not available for work, the question distinguishes between full-time students; persons engaged in household work; pensioners, retired, elderly persons; ill and disabled persons; and others.

Other questions in the census questionnaire relevant for the analysis of employment and labour force concern the demographic characteristics of the population (sex, age, marital status), literacy and education (school attendance, level of educational attainment), migration (place of birth, citizenship, reason for migration) and disability (type of disability, main cause). Members of institutions were enumerated using a shorter questionnaire which did not include questions on labour force characteristics.

Concepts and definitions

The Interviewer's Instruction Manual provides description of the main concepts and definitions (GDS, 2015).

- Employed

“An employed person is defined to be a person who worked for at least 1 hour for pay, profit or family gain during the reference week or was absent from work but had a job, farm or business.”

The manual further specifies that “unpaid work for own or household agriculture production, livestock rearing, business is also considered as employment.” Moreover, the instruction states that priority is to be given to employment over unemployment. Thus, a person who was seeking work or mainly engaged in home activities, but spent more than one hour growing crops for sale or own consumption should be classified as employed.

The interviewer's manual emphasizes the need for probes before recording the economic activity of a person, particularly, in the case of women, as many of them may be recorded as engaged in household work although they contribute in the family business or farm, and should be classified as employed. The manual lists some examples of employment, particularly relevant to women:

- a. A woman who grows vegetables to sell at the local market or for own consumption
- b. A woman who sells vegetables or fish in the market
- c. A woman who works as a domestic maid for payment
- d. A 16-year old full-time student who works without pay in the family kiosk for a couple of hours most evenings after school
- e. A wife who helps in agricultural production (sowing, watering and harvesting of crops) without pay
- f. A 20-year old woman who works part-time as a waitress in a restaurant
- g. A government employee who is on vacation
- h. A woman who spends about an hour a day tending to pigs, goats or sheep
- i. A woman who prepares eatables at home to be sold at the market

The definition of employment is in line with the international standards concerning statistics of the economically active population, employment, unemployment and underemployment (ILO 1982). It adheres to the one-hour criterion and respects the priority principle according to which employment activity is given precedence over unemployment activity and unemployment activity is given precedence over non-economic activity. It should be mentioned, however, that the forms of work considered as employment go beyond the scope of employment in the new international standards concerning statistics of work, employment and labour underutilization (19th ICLS 2013). According to the new international standards, employment is limited to work for pay or profit and excludes own-use production work.

- Unemployed

An unemployed person is defined to be a person who was not employed during the reference week but was available for work. It includes persons who were actively looking for work during the reference week as well as persons who were not working nor looking for work because they were discouraged, but would usually take up a job if offered.

The definition of unemployment applies the provision of relaxing the criterion of seeking work of the international standards (ILO 1982), i.e., it does not insist on the criterion of “seeking work” and persons not currently employed but available for work are classified as unemployed even if not seeking work. Also, the first component of the definition (i.e., not employed, seeking and available for work) seems to imply availability for full-time work and active job-search during the reference week rather than a

specified recent period such as the last four weeks. Aside from these considerations, the census definition of unemployment combines the definitions of unemployment and potential labour force of the new international standards (ILO 2013).

- Status in employment

The employed persons are classified according to status in employment into six categories:

1. Employee Government (working for Government for pay in cash or in kind)
2. Employee Private (working for a private firm/shop/individual for pay in cash or in kind)
3. Employer (employing one or more employees)
4. Own-account worker (not employing any employee)
5. Contributing family worker (working without pay in the business or farm of another household/family member)
6. Member of a producers' cooperative

It is further specified that category 4 comprises self-employed persons who worked for their own business or worked on own/family business or farm for family gain, and includes farmers, artisans, mechanics, traders in farm produce and family workers offering services in own or own family business. Any member of the household working on the land holding for pay should be recorded an employee under code "02". However, the Interviewer's Instruction Manual erroneously specifies code "01".

The categories of status in employment are in line with the International Standard Classification of Status in Employment (ICSE-93). The instructions, however, do not specify the statistical treatment of certain major categories of workers such as apprentices and trainees, owner-managers of incorporated enterprises, casual workers etc.

- Occupation

The occupation of an employed person is the kind of work usually performed in his or her main job during the reference week. Examples are street trader, subsistence farmer, primary school teacher, small-bus (Microlet) driver, etc. In the case of persons with more than one occupation during the reference week, the occupation of the main job refers to the one that occupied the highest number of hours during the week.

The responses were recorded in text in a specially provided space and coded in the office. The interviewers were instructed to probe in cases the respondent's reply was "none" or vague. The occupations were coded at the 4-digit level of the International Standard Classification of Occupations ISCO-88.

- Industry

The industry, trade, service of an employed person is the economic activity carried out at the establishment in which the person worked in his or main occupation during the reference week. Examples given in the census questionnaire are banking, supermarket, police, subsistence farming, fishing, domestic work, etc. The instructions specified that the industry is usually identified on the basis of the nature of goods and services provided. Like the case of occupation, the description of the industry of place of work were recorded in text in a specially provided space and coded at headquarters. The industry was coded at the 4-digit level of the International Industrial Classification of All Economic Activities ISIC Rev 4.

- Sector of employment

The sector of employment of an employed person refers to the type of organization in which the person worked in his or her main job during the reference week. The census questionnaire provided for 9 response categories:

1. Government
2. State owned enterprise (e.g. TVTL, EDTL)
3. Private-owned business or farm
4. Self-employed farmer
5. Self-employed non-farmer
6. Non-Governmental/Non-profit organizations
7. Embassies and bilateral institutions (e.g., USAID, CIDA, AusAID)
8. United Nations and other international organizations
9. Other

There are no international standard classifications concerning sector of employment. Guidelines on the delineation of private / public / government sectors are given by a United Nations Task Force on Harmonization of Public Sector Accounting (UN 2006).

- Main economic activity during last 12 months

The main economic activity during the last 12 months refers to the economic activity in which the maximum amount of time was spent during the reference year from 11th July 2014 to 10th July 2015. The response categories are the same as those provided for question P32 on main economic activity last week. Thus, according to this definition a person who was employed for 20 weeks during the year and then not employed for 10 weeks but available for work, and then not employed for 22 weeks and not available for work would be considered outside the labour force and classified in one of the categories: Full-time student, Household work; Pensioner, retired, elderly person, Ill, disabled, Other. This is in contrast with the fact that the person was for 32 weeks participating in the labour force.

The measurement of employment, unemployment and labour force on the basis of a long reference period such as a year is no longer part of the international standards adopted by the 19th ICLS 2013. It should also be stated that the data on main economic activity during the last 12 months were not fully analyzed in the 2010 Census Analytical Report on Labour Force.

- Secondary economic activity in last 12 months

The census questionnaire recognizes that some people may be involved in more than one type of economic activity/work for their survival, to boost their income or occupy their time. Also, people especially in rural areas may be working in their household chores but at the same time doing some other activities that generate income to boost their household income. Accordingly, the question on secondary economic activity in last 12 months provides for the following response categories:

1. None
- Farming (growing crops)*
2. Unpaid employment (self-employed or employed in family enterprise)
3. Paid employee (wage labourer)
- Livestock farming*
4. Unpaid employment (self-employed or employed in family enterprise)
5. Paid employee (wage labourer)
- Other activities*
6. Fishing
7. Making tais and other traditional handicrafts
8. Other household based production or services

9. Construction
10. Security guards.
11. Wholesale and retail trade/kiosk
12. Other paid employment (services like teaching, cooking, child care, house help, medical, massage, taxi driver, etc.)

In the case of multiple secondary economic activities the most important economic activity in terms of contribution to income or subsistence during the year should be reported.

- Duration of economic activity during last 12 months

Duration of economic activity during last 12 months refers to the number of months a person was engaged in economic activity from 11th July 2014 to 10th July 2015. The instructions do not specify how to determine one month of work. Is one hour of work during the month considered as one month of work? The answer categories are:

1. Worked for more than six months
2. Worked for 3 months or more but less than six months
3. Worked for less than three months

Additional concepts and definitions used in the analysis of the census data such as working age population, dependency ratio, youth not in employment and not in education and training (NEET), women in managerial positions, migrant workers, workers with disabilities will be given in the corresponding chapters of the present report.

Data quality

Like in all statistical inquiries, the results of the Population and Housing 2015 Census are subject to different forms of measurement errors including coverage errors, non-response errors, response errors and other errors such as coding and data entry errors.

- Coverage errors

Coverage errors may occur due to difficulties in reaching certain geographical areas or confusion in delineating the boundary of some enumeration areas. It may also occur due to failure in identifying certain eligible persons in the household, for example, lodgers, domestic workers or other non-family members of the household. It can also happen due to incorrect data on personal characteristics, for example, if the age of the person is incorrectly recorded as below the age set for measuring labour force characteristics (under-coverage error), or vice versa the age is incorrectly recorded as above the threshold age (over-coverage error).

- Non-response errors

Non-response occurs due to failure to obtain the required information from the household (unit non-response) or failure to obtain some items of information for the household (item non-response). Unit non-response may occur due to inaccessibility of certain dwellings or because no one was at home during the repeated visits of the census enumerator, or for other reasons. Unit non-response tends to be single-person households, as they are more likely to be missed in census enumerations. The under-coverage may disproportionately affect the measurement of labour force characteristics, because members of single-person households tend to be of working age and are often away from home due to employment. Item non-response may be measured by counting the number of missing values or unspecified responses to the census questionnaire. Table 1 shows the item non-response rate for the main employment questions of the 2015 Census questionnaire, figures that are extremely low compared with those of censuses in other countries.

Table 1. Item non-response rate on employment questions, 2015 Census

Question no.	Item	Item non-response rate
P33	Occupation	0.6%
P34	Industry	0.7%
P35	Sector of employment	0.0%

- Response errors

Response errors occur due to a variety of reasons including unclear questioning by the interviewer, miscomprehension of questions or intentional provision of wrong answers by the respondent. They can also occur due to memory failures, for example, forgetting to report an event or misplacing the timing of its occurrence, and thus reporting an incorrect duration of the event.

Response errors on labour force characteristics are likely to be more important in censuses than in specialized sample surveys such as labour force surveys. This is because of the limited possibility of including probing questions in the census questionnaire and the less intense training of interviewers on specific topics in a census than is generally the case in specialized surveys.

- Other errors

Other errors on employment characteristics in censuses concern in particular occupation and industry coding. A coding error occurs if a response is assigned to a code number other than the correct one. An occupation or industry coding error should be interpreted in terms of the level of coding. For example, if a coder has assigned occupation code 1317 (General manager for service industry) where the correct code is 1315 (General manager for hotel and restaurant), there is a coding error at the four-digit code of the classification, but not at the three-digit or two-digit or one-digit levels. However if the coder has assigned code 6130 (Agriculture and livestock worker) where the correct code is 9211 (Labourer/worker and agriculture worker), there is an error at the one-digit level of the classification. It should be noted that an error at a lower-digit level automatically entails an error at all higher-digit levels.

In general, the coding error of occupation is higher than the coding error of industry. An indication of this feature is observed in the percentage of employed persons with codes ending with the digit “9” for occupation and industry at the main job. Codes ending with “9” indicate that the occupation or industry description reported in the census questionnaire could not be precisely found in the classification system and had to be coded as “other”, suggesting insufficient information for precise coding of occupation and industry. The data presented in Table 2 show that the percentage of occupational codes ending with the digit “9” is somewhat higher than the corresponding percentage for industry.

Table 2. Percentage of occupation and industry codes ending with '9', 2015 Census

	Codes ending with '9'
Occupation	2.3%
Industry	1.9%

Finally, it should be stated that as in the case of 2010 Census, the unemployment rate in 2015 Census may have been slightly underestimated because some persons who would otherwise be unemployed were employed for the census activity during the enumeration period.

Chapter 3: Working age population

The working age population constitutes the human capital of a nation and defines its potential labour supply. From an economic point of view, the working age population is a factor of production and its aptitude and skills level contributes to the productivity of the national economy. From a social point of view, different categories of the population form social groups of particular concern and meeting their needs are major challenges faced by public institutions and society at large.

To determine the working age population, the international statistical standards stipulate that: (a) the lower age limit should be set taking into consideration the minimum age for employment and exceptions specified in national laws or regulations, or the age of completion of compulsory schooling; (b) no upper age limit should be set, so as to permit comprehensive coverage of work activities of the adult population and to examine transitions between employment and retirement.

For the purpose of the analysis of the census data, the working age population is thus defined as the non-institutional population 15 years old and over. The working age population comprised 717,553 persons according to the Timor-Leste 2015 Census. Compared with the figure 613,782 of the 2010 Census, it represents an annual growth rate of about 3.2 percent, significantly higher than the growth rate of the population at large calculated in Table 3 as 2.3 percent. This is explained by the fact that since the early 2000s fertility has been in decline and consequently, the proportion of the total population that are children has decreased relative to the proportion of young working age people (aged 15 to 25 or 15 to 29).

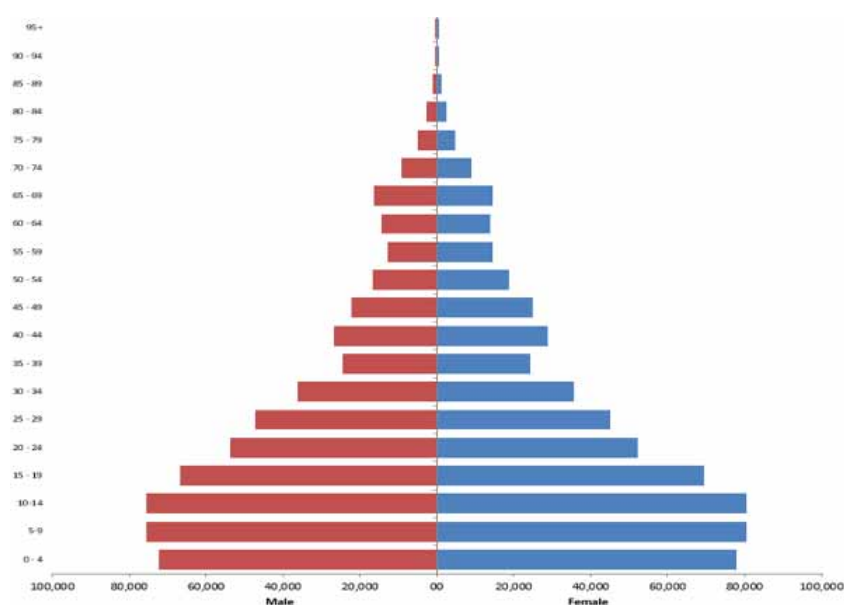
Table 3. Trend in size of population and of working age population 15+ years

	Population	Working age population 15+ years	Annual growth rate of population	Annual growth rate of working age population 15+ years
2004 Census	923,198	520,265	-	-
2010 Census	1,053,982	613,782	2.2 %	2.8 %
2015 Census	1,179,654	717,553	2.2 %	3.2 %

The data show that the working age population has been growing faster than the population at large during the last decade or so. The main reason may be attributed to lower fertility and the relative decrease of the size of the child population below 15 years of age during this period. The current structure of the population and to some extent its past evolution and future trend may be examined with the help of the age pyramid shown in Figure 1. The bottom part of the age pyramid shows that the size of the population in the first age group 0-4 years old is lower than the corresponding population in the age group 5-9 years old for both sexes, and almost equal to the size of the population in the next age group 10-14 years old. This pattern indicates a shrinking child population as noted earlier.

The age pyramid of Timor-Leste takes the form of a more or less symmetric pyramid with a small top and a shrinking base. It reflects a population with a declining birth rate and a relatively low death rate. The age pyramid however exhibits a dent in the age group 35-39 years old, reflecting the large loss of young people 20-24 years old prior to.

Figure 1. Population by sex and age group, 2015 Census



In general, lower fertility causes the population to get older and in the long run the growing proportion of elderly people tends to inflate the dependency ratio causing added burden on the shrinking core working age population to generate economic growth and the needed financial resources. The dependency ratio measures the number of children 0 to 14 years old and the number of older people 65 years old and over relative to the core working age population 15-64 years old. The calculations based on the census results in comparison to earlier censuses are given in Table 4. The data show a steady decline of the total dependency ratio from 88.1 percent in 2004 to 87.0 percent in 2010 and 81.7 percent in 2015.

Table 4. Change in dependency ratios, Census 2004, 2010, 2015

	Census 2004	2010 Census	2015 Census
Total dependency ratio	88.1%	87.0%	81.7%
- Child dependency ratio	81.6%	78.1%	71.2%
- Aged dependency ratio	6.5%	8.9%	10.6%
Total dependency ratio			
- Urban areas	71.7%	64.2%	60.0%
- Rural areas	93.9%	98.4%	92.7%

The main reason for this decline is the sharp regression of the child dependency ratio from 81.6 percent in 2004 to 78.1 percent in 2010 and 71.2 percent in 2015. During the same period, the aged dependency ratio has uniformly increased at a milder pace from 6.5 percent in 2004 to 8.9 percent in 2010 and 10.6 percent in 2015. The total dependency ratio has been and remains higher in rural areas than in urban areas. While the total dependency ratio has steadily declined in urban areas, the pattern has been erratic in rural areas, increasing from 93.9 percent in 2004 to 98.4 percent in 2010 and then declining to 92.7 percent in 2015. The high dependency ratio in rural areas indicates that for every nine children or elderly people in rural areas there are on average ten people in the core age group 15 to 64 years.

The dependency ratio is inversely correlated with the degree of urbanization. Thus, the higher the relative size of the urban population of a municipality the lower the total dependency ratio of that municipality is expected to be. This is because urban families are smaller (fewer children), there are more single people in urban areas, and there are fewer older people in urban areas. Table 5 gives the

total dependency ratio and the share of the urban population of the municipalities of Timor-Leste according to the results of 2015 Census.

Table 5. Dependency ratios and relative size of urban population by municipality, 2015 Census

Municipality	Dependency ratio (%)			Urban rate (%)
	Total	Child	Aged	
Timor-Leste	81.7%	71.2%	10.6%	29.5%
Aileu	80.5%	70.4%	10.1%	5.3%
Ainaro	105.3% ¹	89.9%	15.4%	9.9%
Baucau	88.2%	73.9%	14.3%	14.1%
Bobonaro	93.5%	79.3%	14.2%	13.1%
Covalima	86.0%	71.4%	14.5%	14.0%
Dili	57.0%	53.5%	3.5%	88.2%
Ermera	86.9%	78.5%	8.4%	7.0%
Lautem	100.0% ¹	86.6%	13.4%	19.1%
Liquiça	82.6%	71.6%	11.0%	7.2%
Manatuto	90.8%	77.3%	13.5%	7.9%
Manufahi	87.7%	74.1%	13.5%	13.7%
Oecussi	93.7%	80.6%	13.1%	18.0%
Viqueque	100.3% ¹	81.5%	18.8%	8.6%

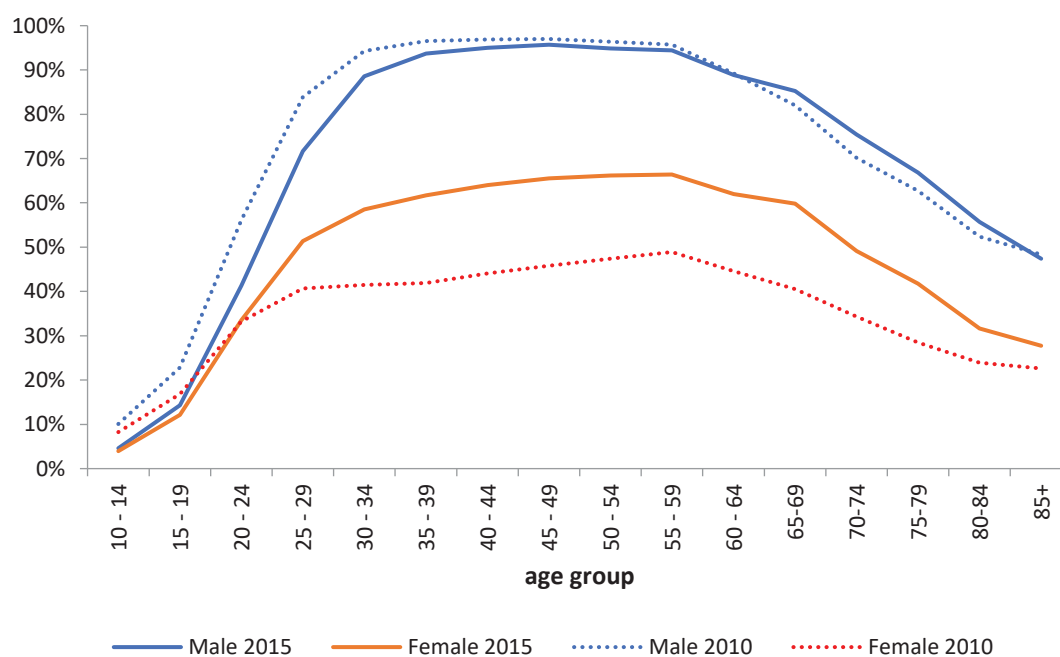
¹ Percentage values greater than 100 per cent represent populations with larger dependent than child and older aged populations than working age populations

Chapter 4: Labour force participation

Labour force participation defines the supply of labour for the production of goods and services of a nation. The labour force is the sum of employment and unemployment. The labour force participation rate is the ratio of the labour force to the working age population, expressed in percentage terms. It is an indicator of the level of labour market activity and measures the share of the working age population in the labour force. The breakdown of the labour force participation rate by sex and age group gives a profile of the labour force participation.

According to the census results, the overall labour force participation rate of the working age population in Timor-Leste increased from 54.7 percent in 2010 to 56.1 percent in 2015. The increase was relatively higher for women than for men. The pattern of labour force participation rate by sex and age group, calculated on the basis of the data of Census 2015 (solid lines) and 2010 Census (dotted lines), is shown in Figure 2. In general, like in most other countries, the curve has an inverted-U shape, more pronounced for men than for women. The male curve is above the female curve, reflecting higher labour force participation of men at all age groups. For each sex, the curve increases for young people when they leave school and enter the labour market and reaches a peak according to the 2015 Census data in the core age group 40-44 years for men and the age group 55-59 years for women. It then decreases slowly for both men and women, as people leave and retire from the labour market at older ages. The delayed peak of the female curve may perhaps be due to widowhood when older women are compelled to enter the labour force after their husband dies.

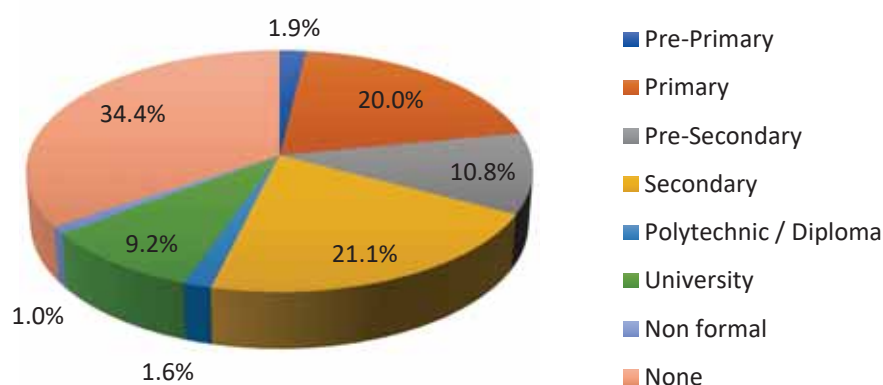
Figure 2. Labour force participation rate by sex and age group, 2010 and 2015 Censuses



Comparing the solid lines with the dotted lines, it is instructive to note the net increase of the labour force participation rate of women from 2010 to 2015 at all age groups except at the younger age 10-14 years, 15-19 years and 20-24 years at the age groups at which both males and females tend to increasingly remain in the educational system. By contrast, in the case of men, the labour force participation rate has in fact shifted to the right with a decrease across all age groups and more so in the younger age categories. Overall, there is a narrowing of the gap between the labour force participation of men and women.

The skill level of the labour force may be assessed by the educational attainment of the labour force participants. Figure 3 presents the composition of the labour force (15-64 years old) by level of educational attainment. The bulk of the core age labour force has non-formal education or below secondary education (68 percent). The share of the labour force with secondary education is about 21 percent and that with university education or polytechnic/diploma about 10%. The corresponding shares among the working age population are 25 percent for secondary education and 10.5 percent for university education.

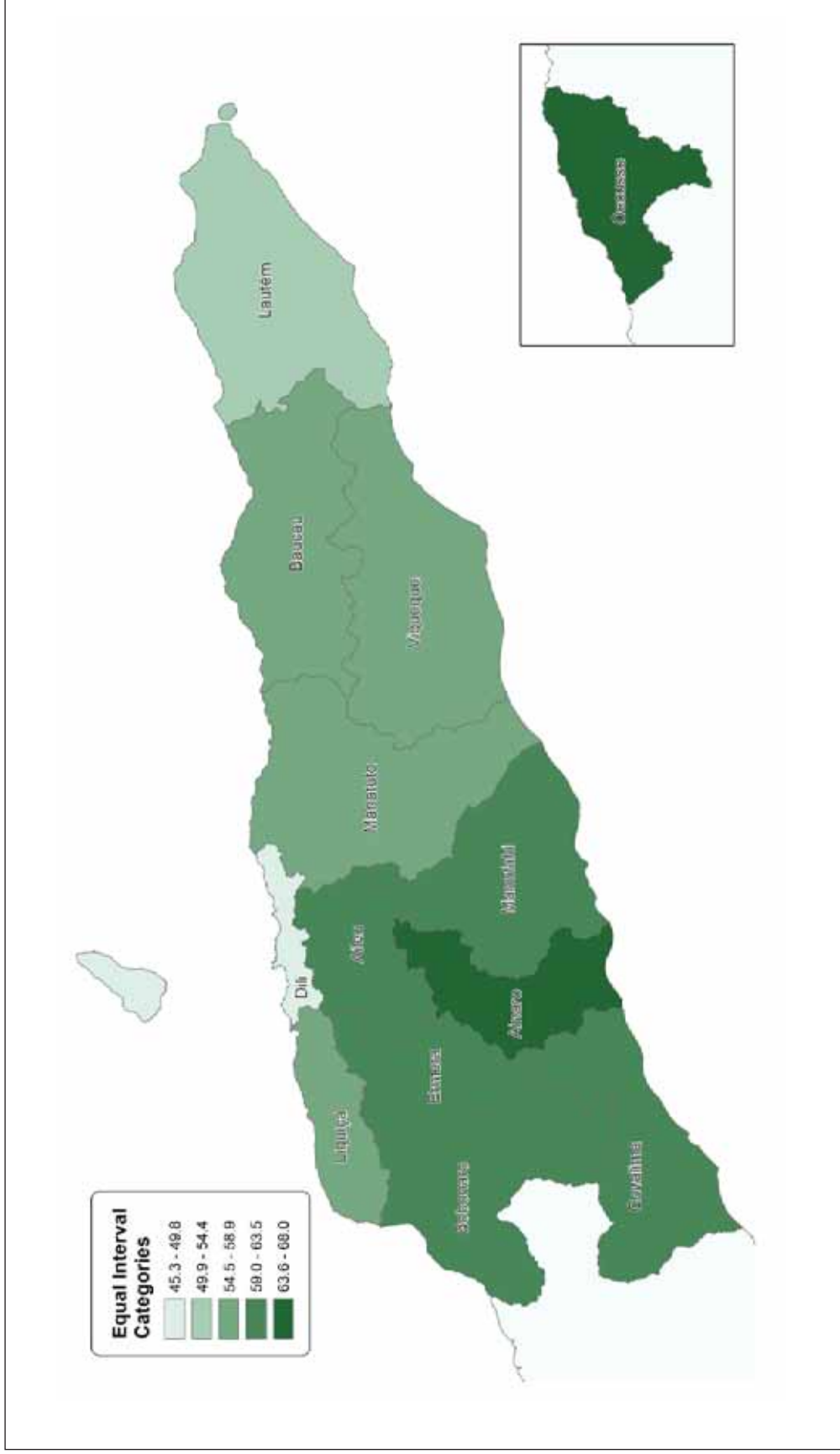
Figure 3. Composition of the labour force (15-64 years) by level of educational attainment, 2015 Census



The structure of the labour force by level of educational attainment and the structure of employment by level of educational attainment have an almost identical pattern, which suggests a balance between the supply and demand of the educated labour force. The educated labour force has generally a higher unemployment rate than the overall labour force, but this is often not due to lack of demand but due to the reservation wage (the lowest wage rate at which a worker would be willing to accept a particular job) of the educated labour force who may prefer to wait until an employment with desirable conditions is obtained rather than to accept employment at any condition. Figure 4 shows the pattern of the labour force participation rate by municipality.

Three municipalities have labour force participation rates below the national average: Dili (45.3 percent), Lautem (52.3 percent) and Baucau (54.6 percent). The labour force participation rates of all other nine municipalities are above the average national rate (56.1 percent), with the Special Administrative Region of Oecussi having the highest rate (68.0 percent). A similar pattern was reflected with the 2010 Census data: Dili was the municipality with the lowest labour force participation rate among the working age population 15 to 64 years old (49.9 percent) followed by Lautem (51.8 percent). The highest labour force participation rate, however, was recorded for Ainaro (64.4percent).

Figure 4. Labour force participation rate by municipality, 2015 Census



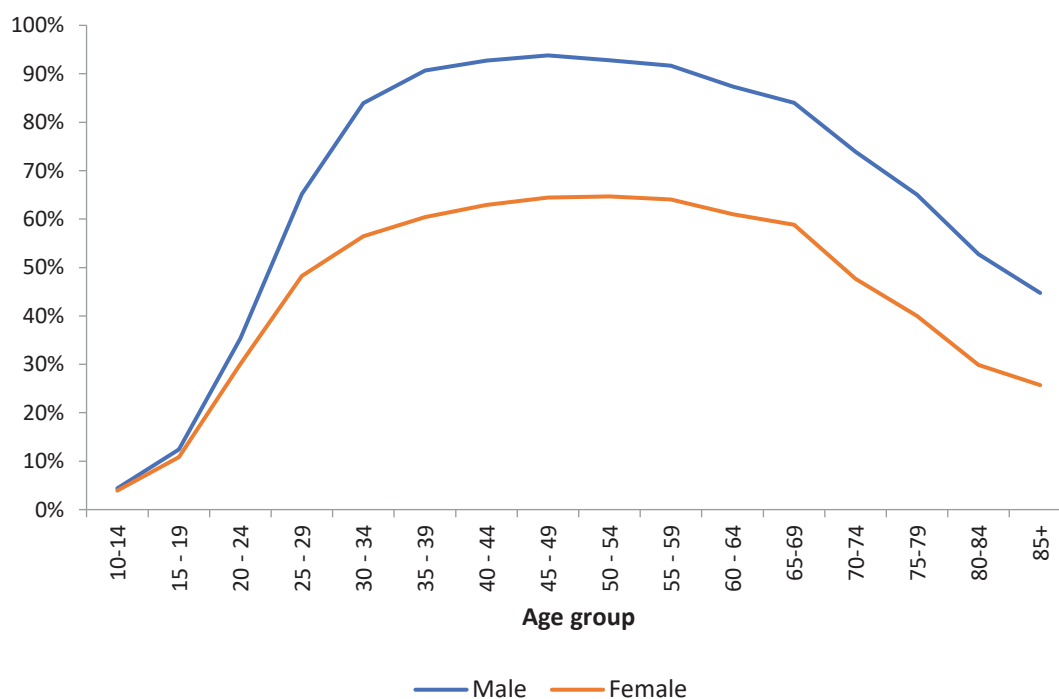
Chapter 5: Employment

In the 2015 Census 383,331 people were employed, representing an average annual growth rate of about 4.8 percent compared with the census results in 2010. This result shows that employment grew faster than the working age population during the five-year period from 2010 to 2015.

The employment-to-population ratio is the percentage of the working age population that is employed. The ratio was 53.4 percent according to the 2015 Census, about four percentage points higher than its value, 49.4 percent, in 2010 Census. The employment-to-population ratio of Timor-Leste, however, remains low compared with corresponding figures for 2015 in other countries in the region, 63.5 percent in Indonesia, 60.6 in the Philippines and 70.9 percent in Thailand (ILO, 2016). In general, a high ratio is considered to be above 70 percent of the working-age population whereas a ratio below 50 percent is considered to be low.

Figure 5 shows the pattern of the employment-to-population ratio by sex and age group. Similar to the labour force participation rate, the employment-to-population ratio was higher among men than women at all age groups with the widest difference at the core working age 30 to 64 years.

Figure 5. Employment-to-population ratio by sex and age group, 2015 Census

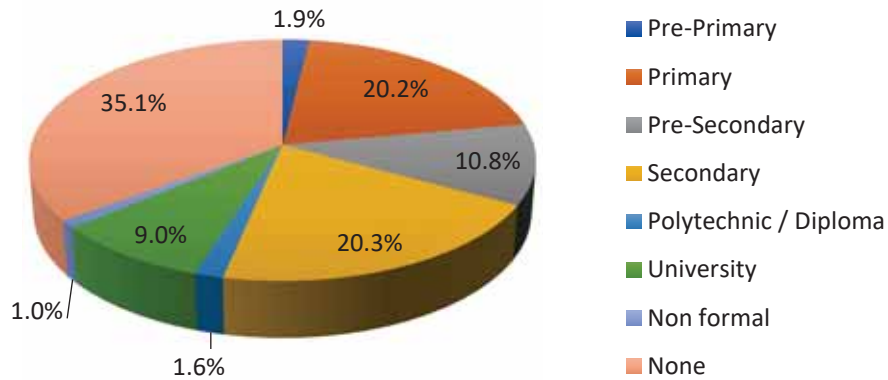


As a factor of production, the employed population is not homogenous. Different people have different skill levels. Skill may be measured in terms of length of work experience (on-the-job training) and level of educational attainment (formal training). In the absence of census data on length of work experience, the skill level of the employed population in the core age group 15-64 years is analyzed in terms of educational attainment as shown in Figure 6.

The composition of the educational attainment of the employed population (15-64 years) is about identical to that of the labour force (Figure 6). There is nevertheless a subtle difference. The percentage of employed persons with secondary and higher education (30.9 percent) is slightly lower than the corresponding percentage in the labour force (31.9 percent). This may reflect the fact that the supply of labour is slightly more skilled than the demand for skilled labour. Or, as it was mentioned earlier, the

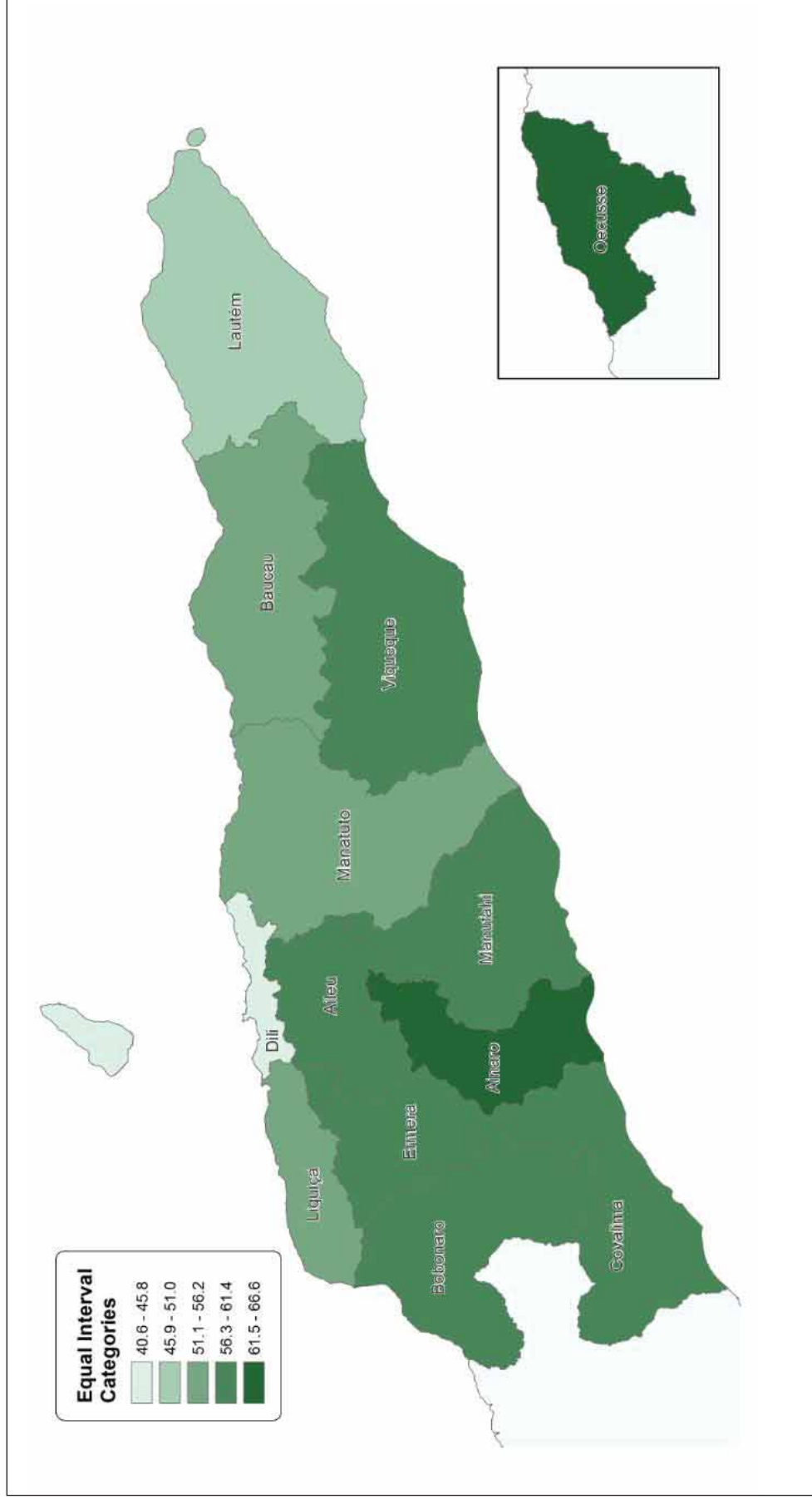
skilled labour force has a relatively higher reservation wage and tends to wait longer for employment with desirable conditions than to accept employment at jobs with lower skill requirement.

Figure 6. Composition of employed population (15-64 years) by level of educational attainment, 2015 Census



The pattern of the employment-to-population ratio by municipality shown in Figure 7 is almost identical to that of the labour force participation rate (Figure 4). Dili is the municipality with the lowest employment-to-population ratio (40.6 percent) followed by Lautem (49.6 percent) and Baucau (52.3 percent). Oecussi is the municipality with the highest employment-to-population ratio (66.6 percent). A logistic regression analysis of the employment-to-population ratio and labour force participation rate gives an almost perfect fit with an r-square of 0.993, indicating that the employment-to-population ratio and the labour force participation are strongly positively correlated, as one would expect.

Figure 7. Employment-to-population ratio by municipality. 2015 Census



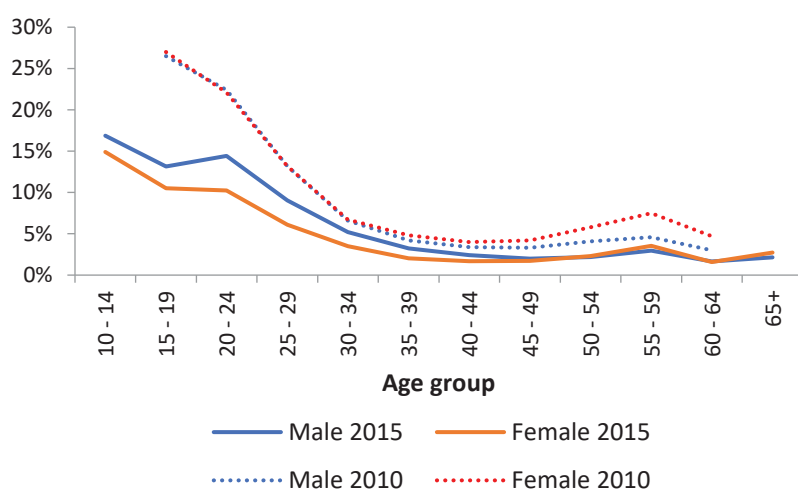
Chapter 6: Unemployment

There were 19,333 unemployed persons in the country according to 2015 Census, corresponding to an unemployment rate of 4.8 percent. Compared with the figure of 9.5 percent according to 2010 Census, it indicates a significant decrease in the unemployment rate. The result is, however, in sharp contrast with the data obtained from the labour force surveys of 2010 and 2013 showing a net increase of the LFS unemployment rate from 7.8 percent in 2010 to 11.0 percent in 2013 based on harmonized data to the new international standards (ILO 2013). In fact, the 2010 Census unemployment rate (9.5 percent) is itself at odds with the LFS 2010 unemployment rate (3.6 percent) calculated based on the same international standards (ILO 1982). As the LFS data are generally regarded to be higher quality, it is likely that the unemployment rate was either underestimated in 2015 Census or overestimated in 2010 Census and the true trend is an increasing unemployment rate during the period from 2010 to 2015.

International comparison of unemployment rates is generally complex due to national differences in concepts, definitions and measurement procedures. Yet, at face value, the 2015 Census unemployment rate in Timor-Leste (4.8 percent) is lower than the 2015 figures for Indonesia (6.0 percent) and the Philippines (6.3 percent), but considerably higher than the 2015 figure for Thailand (0.7 percent) (ILO, 2016).

Figure 8 shows the pattern of the unemployment rate by sex and age group for 2015 Census (solid lines) and 2010 Census (dotted lines). According to the 2015 Census data, the unemployment rate was higher among men than among women across all prime age groups up to the age group 40-44 years old, and after that the unemployment rates of men and women were essentially the same. The results of 2010 Census also show a declining unemployment rate by age for both men and women but the gender pattern is reversed: unemployment rate of women and men are essentially equal at all prime age groups up to 40-44 years old, and from that age group onward the female unemployment rate is consistently higher than the corresponding male rate. Exactly the opposite pattern is observed in 2015 Census.

Figure 8. Unemployment rate by sex and age group, 2010 and 2015 Censuses



The 2015 Census pattern is probably more realistic as young men are more likely to face unemployment than women in their search for employment to make a living and construct a family. It may also reflect improved data quality as some women more accurately reported as being outside the labour force rather than unemployed.

The pressure on the labour market by unemployment may be measured by the percentage of unemployed persons in the core age group 15 to 64 years old who were actively seeking employment. The results show that this percentage was about 78 percent in 2015 Census and 73 percent according to 2010 Census indicating an increasing pressure on the labour market, in line with the presumption of an increasing trend of the unemployment rate between the two periods.

Figure 9 shows the composition of the unemployed in the core age group 15 to 64 years old by level of educational attainment according to 2015 Census. The results show that almost half of the unemployed had completed secondary or higher education (49.4 percent). The corresponding figure according to 2010 Census was 37.9 percent indicating an increasing share of educated persons among the unemployed. Similar trends are obtained for men and women, respectively.

It is instructive to compare the composition of the unemployed population by educational attainment with the corresponding figures for the working age population at large. The results show that the unemployed are more concentrated at the higher levels of educational attainment than the general working age population. While about 36 percent of the working age population has secondary or higher education, the corresponding share among the unemployed is about 48 percent.

Figure 9. Composition of unemployment (15-64 years) by level of educational attainment, 2015 Census

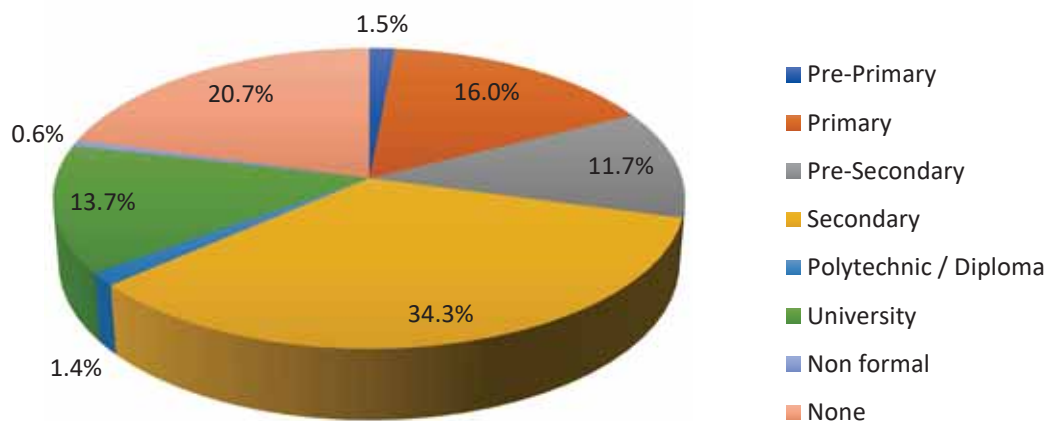


Figure 10 shows the unemployment rate of the core working age population 15 to 64 years old by level of educational attainment. The data shows that the unemployment rate increases with the level of educational attainment. It was about 3 percent for the labour force with no or no formal educational attainment, about 4 percent for persons with primary or pre-primary education, and about 5.5 percent for persons with pre-secondary education. The unemployment rate, however, was substantially higher for persons with secondary education (8.3 percent) and university education (7.6 percent), although somewhat lower for persons with polytechnic or diploma (4.5 percent).

Figure 10. Unemployment rate (15-64 years) by level of educational attainment, 2015 Census

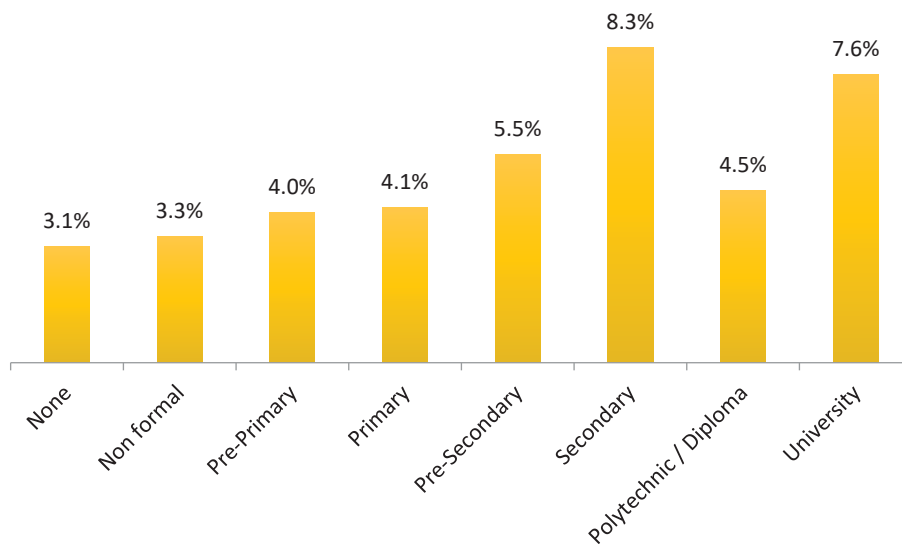
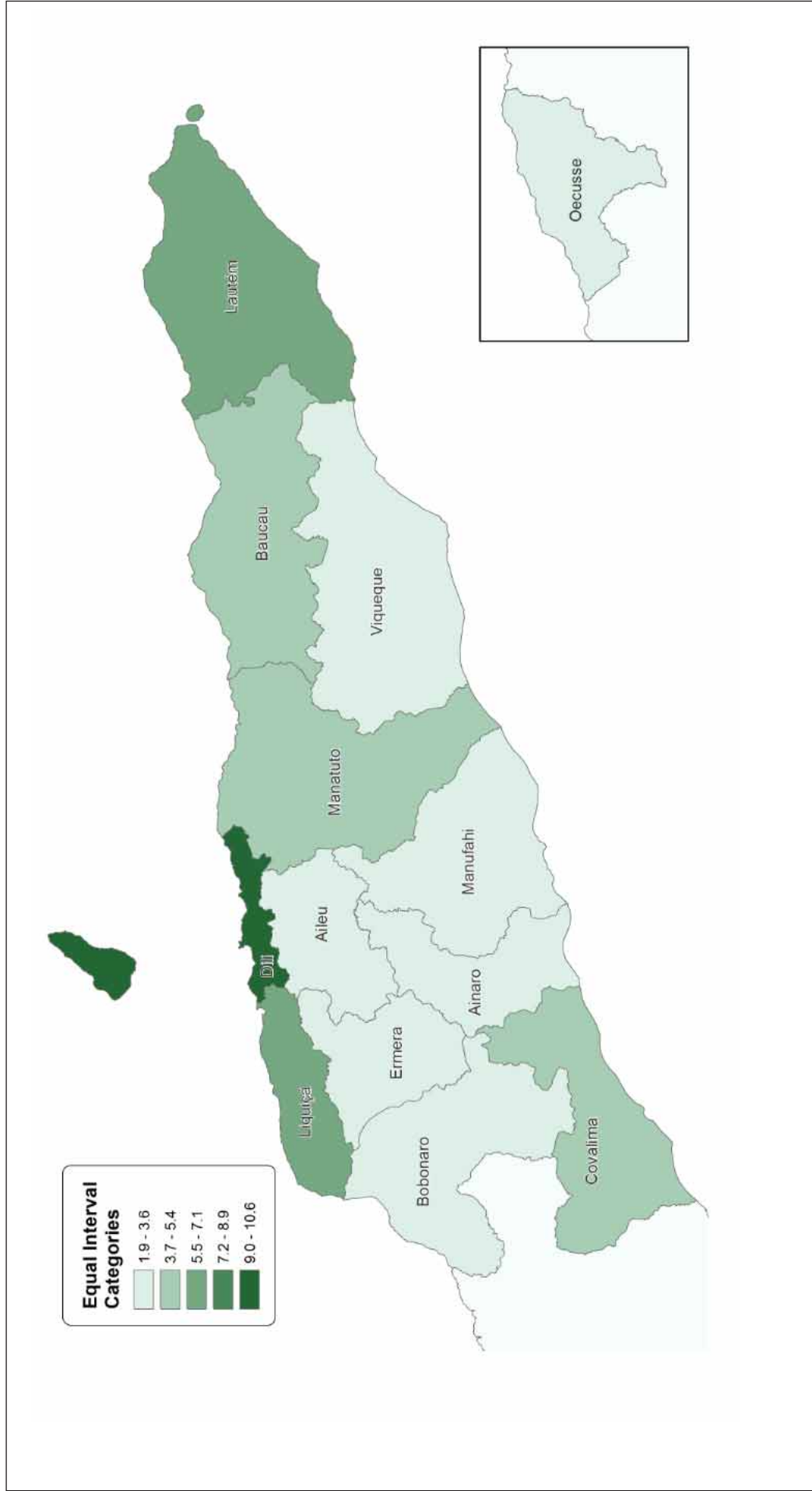


Figure 11 shows the unemployment rate of the core working age population (15 to 64 years old) by municipality according to 2015 Census. Dili had the highest unemployment rate (10.6 percent) followed by Lautem and Liquiça (each at 5.6 percent). By contrast, Oecussi had the lowest unemployment rate (1.9 per cent).

Figure 11. Unemployment rate (15-64 years) by municipality, 2015 Census



The female unemployment rate is lower than the male rate in all municipalities except Dili where the female unemployment rate (10.8 percent) is slightly higher than the corresponding male rate (10.5 percent).

It is also instructive to compare the pattern of the unemployment rate with that of the labour force participation rate presented earlier in Figure 7. There is a clear inverse relationship between the two rates. Dili has the highest unemployment rate and the lowest labour force participation rate. Conversely, Oecussi has the lowest unemployment rate and the highest labour force participation rate. The linear regression between the two rates shows a close fit with a significant negative slope. It suggests the existence of an underlying variable related to both rates, for example, the degree of concentration of market-oriented agriculture. The higher the concentration of market-oriented agriculture in a municipality, the higher the labour force participation rate and the lower the unemployment rate due to the job opportunities that market-oriented agriculture provides in the municipality.

The municipality unemployment data have been presented for the core working age population, 15 to 64 years old. The unemployment rates of the municipalities for the full working age population (15+ years old) are the difference between 1 and the ratio of the employment-to-population ratio of the municipality (Figure 7) and the corresponding labour force participation rate (Figure 4).

Chapter 7: Population outside the labour force

Persons outside the labour force, or, equivalently, the population not currently in the labour force are all persons not classified as employed or unemployed during the reference period and hence not currently in the labour force. In principle, persons outside the labour force are to be classified by reason for inactivity: (a) attendance at educational institutions, (b) engagement in household duties, (c) retirement or old age, (d) other reasons such as infirmity or disability. It should be noted that classification by *reason for inactivity* is different from classification by *status* such as student, homemaker, pensioner, disabled, etc. This is because only students, homemakers, etc. who had not carried out any labour force activity during the reference week are classified as not currently in the labour force.

Table 6 below shows the distribution of persons outside the labour force by sex and reason for inactivity as labeled by the 2015 Census questionnaire.

Table 6. Persons outside the labour force by sex and reason for inactivity, 2015 Census

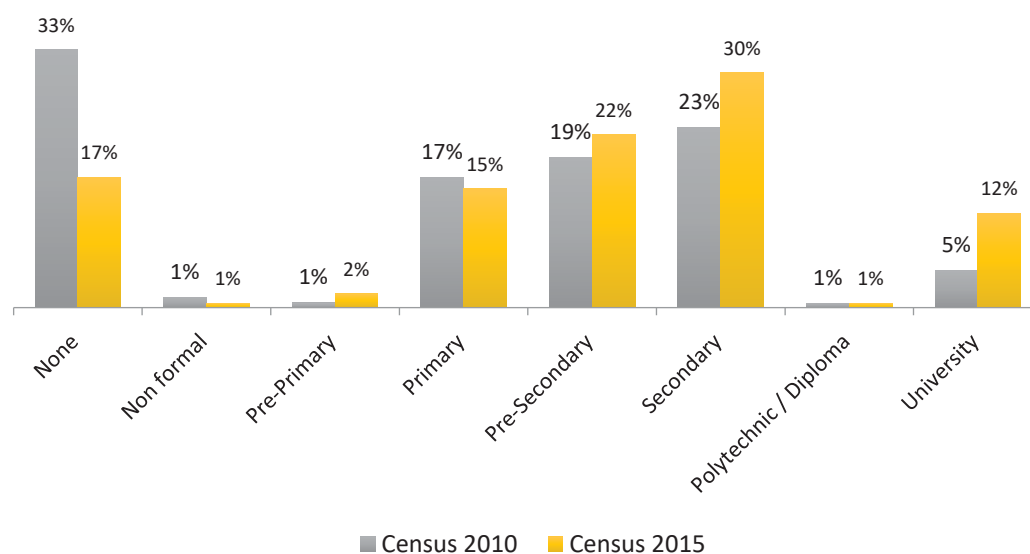
Reason for inactivity	Total		Male		Female	
	Number	%	Number	%	Number	%
Total	314,889	100%	122,525	100%	192,364	100%
Full-time student	183,216	58%	97,164	79%	86,052	45%
Household work	100,855	32%	10,854	9%	90,001	47%
Pensioner, retired, elderly person	12,227	4%	4,810	4%	7,417	4%
Ill, disabled	6,091	2%	3,071	3%	3,020	2%
Other	12,500	4%	6,626	5%	5,874	3%

The majority of the persons outside the labour force were full-time students, about 97,200 men and 86,100 women. They are, in a sense, part of the future labour force, as many would enter the labour market after completion of their studies. Full-time students among the population outside the labour force were considerably more among men (79 percent) than among women (45 percent). Others outside the labour force were men and women engaged in household work (32 percent), pensioners, retirees, and elderly persons (4 percent), and people with illness or disability (2 per cent).

Compared with the results of the previous census, the share of full-time students in the population outside the labour force (15+ years) substantially increased over time from about 17 percent in 2010 to 58 percent in 2015. Figure 12 compares the composition of the population outside the labour force by level of educational attainment according to the results of two censuses 2010 and 2015. The results show a net increase in the educational attainment of the population outside the labour force from 2010 to 2015. The number of persons outside the labour force with university degree has increased from 5 percent in 2010 to 12 percent in 2015. Similarly, the number of those with secondary education has increased from 23 percent in 2010 to 30 percent in 2015. By contrast, the share of the population outside the labour force with no formal education has decreased from 33 percent in 2010 to 17 percent in 2015.

It is also instructive to note that the proportion of persons with secondary education among the population outside the labour force (30 percent) is higher than the corresponding proportion among the working age population at large (25 percent). The proportion of persons with university education among the population outside the labour force (12 percent) is, however, about the same as the corresponding proportion among the working age population at large (11 percent).

Figure 12. Composition of persons outside the labour force by educational attainment, 2010 and 2015 Censuses



The distribution of the population outside the labour force by reason for inactivity for each municipality is presented in Table 7. The results show that the municipality with the highest percentage of full-time students among persons outside the labour force is Dili (65.5 percent) followed by Aileu (64.2 percent) and Ainaro (64.0 percent). The municipality with the lowest percentage of full-time students among the persons outside the labour force is Bobonaro (47.4 percent) followed by Manatuto (48.0 percent).

Table 7. Persons outside the labour force by reason for inactivity and municipality, 2015 Census

Municipality	Total number	%	Full-time students	Household work	Pensioner, retired, elderly	Ill, disabled	Other
Total	314,889	100.0%	58.2%	32.0%	3.9%	1.9%	4.0%
Aileu	11,520	100.0%	64.2%	30.2%	1.4%	2.2%	2.0%
Ainaro	12,478	100.0%	64.0%	26.6%	4.9%	1.7%	2.8%
Baucau	33,849	100.0%	52.8%	35.1%	5.5%	3.1%	3.4%
Bobonaro	21,755	100.0%	47.4%	42.3%	5.8%	2.0%	2.5%
Covalima	15,398	100.0%	58.7%	32.6%	4.6%	1.5%	2.6%
Dili	99,338	100.0%	65.5%	26.1%	2.0%	0.8%	5.6%
Ermera	28,138	100.0%	59.8%	30.8%	3.5%	2.3%	3.7%
Lautem	17,584	100.0%	52.6%	35.1%	6.9%	2.4%	2.9%
Liquiça	18,331	100.0%	50.4%	38.6%	3.8%	2.3%	4.9%
Manatuto	11,946	100.0%	48.0%	41.1%	5.4%	2.7%	2.7%
Manufahi	12,753	100.0%	57.7%	31.9%	4.3%	2.1%	4.1%
Oecussi	12,906	100.0%	57.9%	33.1%	4.7%	1.6%	2.8%
Viqueque	18,893	100.0%	51.2%	36.6%	5.2%	4.2%	2.9%

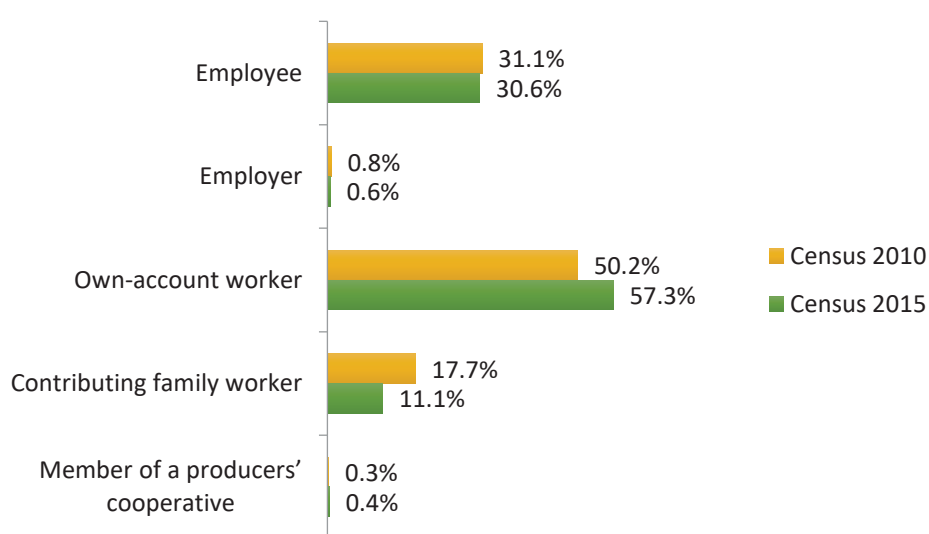
Chapter 8: Status in employment and sector of employment

This chapter and the next one deal with the employed population and examine the characteristics of employment in the main job.

Status in employment

Status in employment is meant to classify the employed person according to the type of authority that the worker exercises over the economic unit in which he or she works and the type of economic risk to which the worker is exposed. In line with the present international classification of status in employment (ICSE-93), the 2015 Census distinguishes five categories of status in employment as shown in Figure 13.

Figure 13. Status in employment of employed persons, 2010 and 2015 Censuses



About one third of the employed population consisted of employees in Timor-Leste. The share of employees in total employment has remained essentially unchanged between 2010 Census and 2015 Census. The shares of employers and members of producers' cooperatives were low (less than 1 percent) and also remained essentially unchanged. By contrast, the share of own-account workers already high in 2010, 50.2 percent, has increased significantly to 57.3 percent in 2015. The share of contributing family workers, however, has decreased from 17.7 percent in 2010 to 11.1 percent in 2015.

These results suggest that the apparent growth of employment and decline of the unemployment rate observed between 2010 Census and 2015 Census has been achieved through the growth of self-employment and particularly own-account employment.

Vulnerable employment

Vulnerable employment is defined as the sum of the employment status groups of own-account workers and contributing family workers. They are less likely to have formal work arrangements, and are therefore more likely to lack decent working conditions, adequate social security and 'voice' through effective representation by trade unions and similar organizations (UN 2015).

The census data presented in Figure 13 indicates that vulnerable employment has slightly increased in Timor-Leste from 67.8 percent in 2010 to 68.4 percent in 2015. Data on status of employment by sex show an increase of vulnerable employment among women from 72.2 percent in 2010 to 75.4 percent in 2015, and a slight decline among men from 65.7 percent in 2010 to 63.5 percent in 2015. This

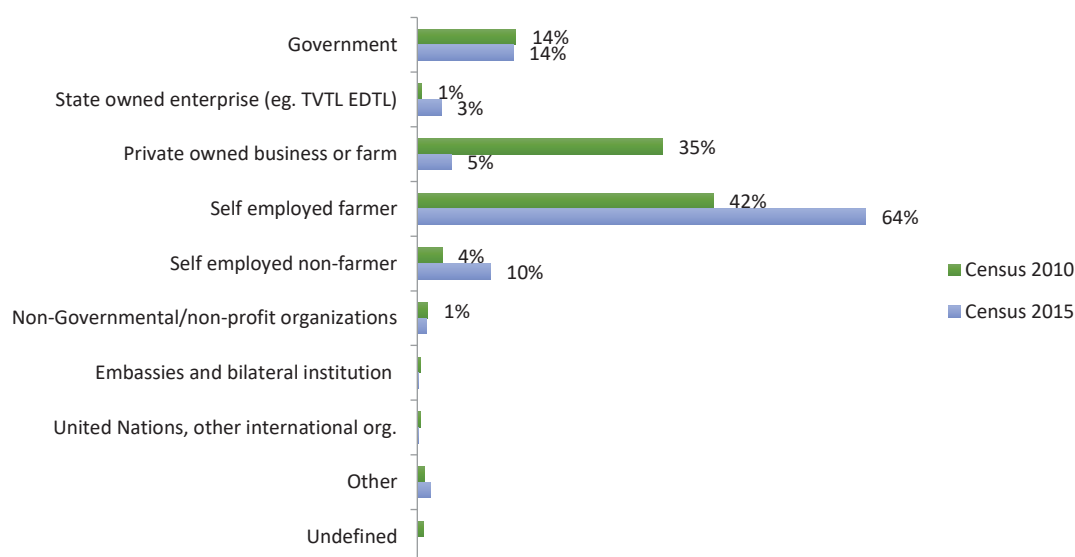
conclusion is in line with results obtained from the analysis of the harmonized data on informal employment obtained from LFS 2010 and LFS 2013 (GDS, 2016).

The data also show that women are subject to vulnerable employment at a significantly higher rate (75.4 percent) than men (68.4 percent), mainly because the percentage of contributing family workers is much higher among women (about 20 percent) than among men (about 6 percent).

Sector of employment

The distribution of the employed population by sector of employment in main job shown in Figure 14 for 2015 reveals that the bulk of employment was in the private sector (79 percent), mostly in the form of self-employment in farms (64 percent). Public sector employment comprised about 17 percent of total employment, mostly in government (14 percent) and a small part in public sector enterprises (3 percent).

Figure 14. Sector of employment of employed persons, 2010 and 2015 Censuses



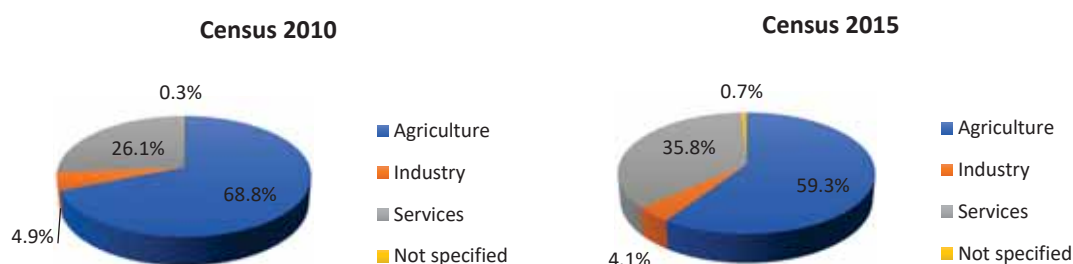
The public-private sector division has remained almost unchanged between 2010 Census and 2015 Census. Public sector employment increased slightly from 15 percent in 2010 to about 17 percent in 2015. The share of private sector employment has, however, remained almost unchanged at 79 percent, although the data reveal a shift from employment in private owned business or farm to self-employed farmer. This apparent shift probably reflects a change in statistical classification rather than a change in institutional arrangement in the economy.

Chapter 9: Industry and occupation

Industry

Industry refers to the branch of economic activity of the establishment in which an employed person worked during the reference period. Figure 15 shows the distribution of employed persons by broad branch of economic activity in the main job. The left panel refers to the data from 2010 Census and the right panel to the data from 2015 Census.

Figure 15. Broad branch of economic activity of employed persons, 2010 and 2015 Censuses

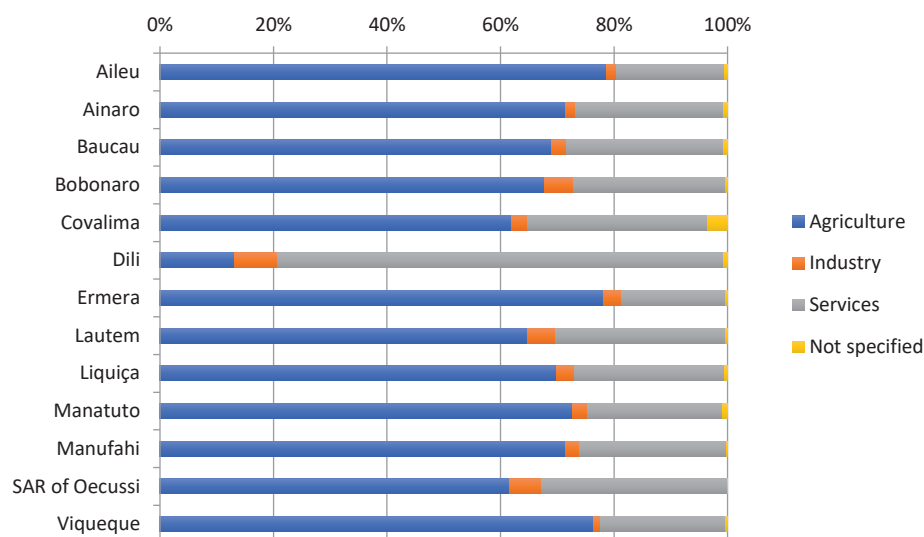


The data shows that there has been a net relative decline of agriculture employment in favor of services during the period. The share of agriculture employment in total employment decreased from 68.8 percent in 2010 to 59.3 percent in 2015. Correspondingly, the share of employment in services increased from 26.1 percent in 2010 to 35.9 percent in 2015. Industrial employment remained almost unchanged at 4.9 percent in 2010 and 4.1 percent in 2015.

Because of the dominance of agriculture and the limited diversity of employment in other branches of economic activity, the comparison of data at detailed categories are not very revealing. Yet, there was a small increase of the share of employed persons in public administration and defense from 8.4 percent in 2010 to 9.6 percent in 2015, and the more significant increase of private households as employers of domestic personnel from 1.3 percent of total employment in 2010 to 7.2 percent in 2015.

Figure 16 shows the variation of the composition of employment by broad branch of economic activity among the municipalities. The results show a striking difference between Dili and the other municipalities. The share of agricultural employment in total employment is about 13.2 percent in Dili as opposed to more than 60 percent in each of the other municipalities.

Figure 16. Composition of employment by broad branch of economic activity, municipalities, 2015 Census



The data also show that the share of employment in services is highest in Dili (78.5 percent) as compared with the corresponding share in the other municipalities ranging from about 18 percent in Ermera to about 33 percent in Oecussi. The share of industrial employment is also highest in Dili (7.5 percent) as compared to other municipalities (ranging from 1.3 percent in Viqueque to 5.5 percent in Oecussi).

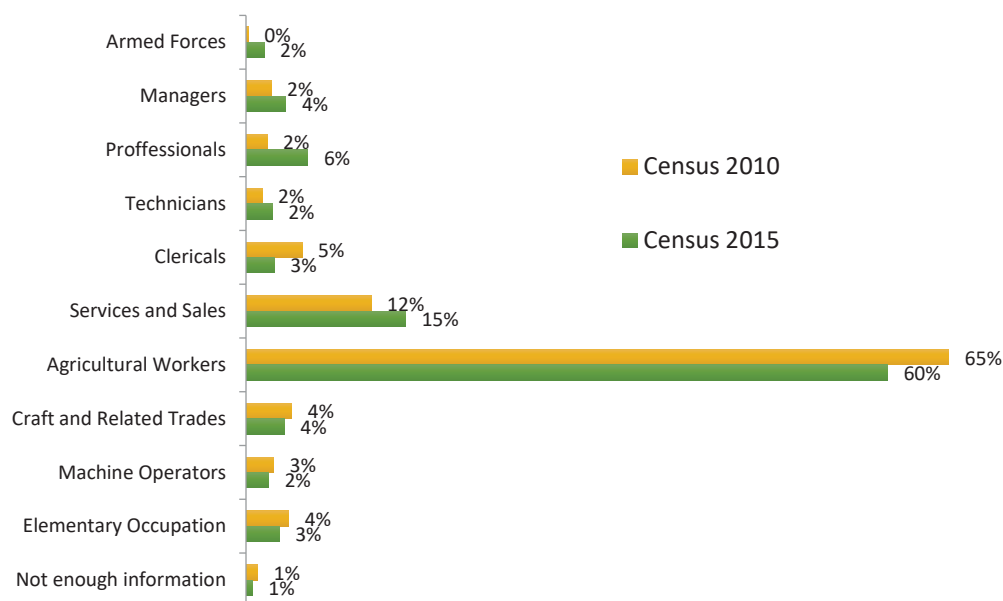
In terms of gender, distributions by branch of economic activity for men and women are generally similar except for agriculture, construction, transport and public administration where the male share exceeds the female share by more than 3 percent and wholesale and retail trade and private households with employed personnel where the female share exceeds the male share by more than 3 percent and 15 percent, respectively.

Occupation

Occupation refers to the tasks and duties performed by an employed person during the reference period irrespective of branch of economic activity of the place of work and the status of employment of the person. Figure 17 shows the change in the composition of the occupations of employed persons at their main job from 2010 Census to 2015 Census.

The data show a net increase of the share of managers, professionals, technicians from 2 percent in 2010 to 4 percent in 2015, and a significant increase in the share of service and sales workers from 12 percent in 2010 to 15 percent in 2015. Correspondingly, the data show a decrease in the share of agriculture workers in total employment from 65 percent in 2010 to 60 percent in 2015. The composition of employment thus remains heavily dominated by agriculture and services.

Figure 17. Composition of occupations of employed persons, 2010 and 2015 Censuses



The share of female workers is lower than the share of male workers for all occupational categories except for services and sales where the percentage of women workers (about 70 percent) is higher than the share of men (about 30 percent). More detailed analysis of female-dominated occupations versus male-dominated occupations is presented in Chapter 10 below.

Table 8 lists the top 12 occupations of employed persons at main job by sex obtained from the 2015 Census data. It is instructive to note that the top twelve occupations concern 296,217 employed persons representing 77.3 percent of total employment. This result indicates that the labour market in 2015 was highly concentrated in a limited number of occupations. The first three occupational categories and the fifth are agriculture-related occupations with 114,409 gardeners, horticultural and nursery growers, 55,499 field crop and vegetable growers, 33,026 tree and shrub crop growers and 21,287 mixed crop workers.

Table 8. Top twelve occupations of employed persons by sex, 2015 Census

Code	Occupation	Total	Male	Female	Female %
-	Total	382,331	225,304	158,027	41.2%
6113	Gardeners, Horticultural and Nursery Growers	114,409	69,808	44,601	39.0%
6111	Field crop and vegetable growers	55,499	33,344	22,155	39.9%
6112	Tree and shrub crop growers	32,026	19,208	12,818	40.0%
5121	Housekeepers and related service	25,871	2,444	23,427	90.6%
6114	Mixed Crop Growers	21,287	13,176	8,111	38.1%
5230	Retail Sales Workers /Street Vendors	13,833	6,856	6,977	50.4%
4190	Other office clerks	8,378	5,689	2,689	32.1%
2431	Primary School Teachers	6,916	4,094	2,822	40.8%
8322	Car Taxi and Light Trucks or Van Drivers	5,648	5,487	161	2.9%
5133	Home-based Social Workers	4,885	435	4,450	91.1%
1120	Higher Government Officials	3,948	2,882	1,066	27.0%
2422	Pre-secondary Education Teacher	3,517	2,097	1,420	40.4%

The other major occupations are all service related occupations including 25,871 housekeepers and related service workers, 13,833 retail sales workers and street vendors, and 8,378 “other office workers”, followed by primary school teachers (6,916), car, taxi and light truck or van drivers (5,648), home-based social workers (4,885), higher government officials (3,948) and pre-secondary education teachers (2,097). No industry-related occupations are found in the top twelve occupations. The first industry related occupation, house builder, is in the eighteenth position with 2,738 workers.

In terms of gender, it can be observed that almost all home-based social workers and housekeepers and related service workers are women, 91.1 and 90.6 percent, respectively. By contrast, virtually all car taxi and light truck and van drivers and a high proportion of higher government officials are men (97.2 and 73 percent, respectively). The other top occupations are more or less evenly distributed among men and women. The share of women in these occupations ranges from about 32.1 percent for “other office clerks” to 50.4 percent for “retail sales workers and street vendors”. These values do not deviate too much from the average share of women workers in total employment (41.2 percent).

Chapter 10: Women and equal opportunities

A fundamental aspect of gender equality is women's equal opportunities and treatment in the labour market. Three particular features are examined here using the 2015 Census data: women in managerial positions, female- and male- dominated occupations and gender occupational segregation. A separate document prepared by UN Women provides a more detailed statistical analysis of women and men at work based on the Timor-Leste Labour force survey conducted in 2013 (UN Women, 2017).

Women in managerial positions

Women are gradually increasing their numbers as managers. A recent global report prepared by the ILO states that women own and manage over 30% of all businesses, ranging from self-employed (or own-account workers), micro and small enterprises to medium and large companies. Occupations in senior and middle management correspond to the ISCO-88 sub-major occupation groups 11 (Chief executives, senior officials and legislators) and 12 (Administrative and commercial managers).

Table 9 present the results based on the 2015 Census data. In total, there were 12,723 persons of both sexes in managerial positions, 10,828 chief executives, senior officials and legislators, and 1,905 administrative and commercial managers. The number of women in managerial positions was 2,910, representing 22.9 percent of the total, men and women combined. This means that Timor-Leste was in 2015 below the world average in terms of women in managerial positions.

Table 9. Men and women in managerial positions, 2015 Census

Code	Occupation	Total	Men	Women
11	Chief executives, senior officials and legislators	10,828	8,387	2,441
12	Administrative and commercial managers	1,905	1,436	469
-	Total	12,733	9,823	2,910
		100.0%	77.1%	22.9%

Female-dominated occupations

For the present purpose, a female dominated occupation is defined as a four-digit occupational category in which more than 82.4 percent of the employed persons are female. The threshold of 82.4 percent corresponds to twice the national average percentage of women among the total employed population (41.2 percent). For the results to be significant, the female-dominated occupations are identified among occupational categories with at least 500 employed persons. The results are listed in Table 10. Accordingly, there are five major female-dominated occupations: Textile, handicraft, leather and related workers and Weaver, knitter and related workers in each of which 97 percent of the employed persons are women; Housekeepers and related service workers, and Home-based social workers with 91 percent female workers in each of two occupational categories; and finally Cooks and chefs with 85 percent female workers.

Table 10. Major female-dominated occupations, 2015 Census

Code	Occupation	Total	Male	Female	Female %
5121	Housekeepers and related service workers	25,871	2,444	23,427	91%
5133	Home-based social workers	4,885	435	4,450	91%
7332	Textile, handicrafts, leather and related workers	1,550	45	1,505	97%
7432	Weaver, knitter and related workers	1,333	38	1,295	97%
5122	Cooks / Chef	1,116	170	946	85%

By contrast, Table 11 presents the major male-dominated occupations defined as four-digit occupational categories in which there are more than 500 employed persons of whom at least 17.6 percent are female workers. The threshold is set at 100% minus the threshold set for the definition of female-dominated occupations. The results show that taxi and light trucks or van drivers, defense and other security forces, house builders and police members are among the major male-dominated occupations. Other male-dominated occupations are carpenters and furniture makers, bricklayers and related workers. It is instructive that there are more male-dominated occupations than female-dominated occupations.

Table 11. Major male-dominated occupations, 2015 Census

Code	Occupation	Total	Male	Female	Female %
8322	Taxi and light trucks or van drivers	5,648	5,487	161	3%
0190	Elements of Defence and other security	2,932	2,744	188	6%
7121	House builders	2,738	2,647	91	3%
0140	Police members	2,703	2,260	443	16%
7124	Carpenter and furniture makers	2,187	2,124	63	3%
7122	Bricklayers and related workers	1,733	1,648	85	5%
1130	Chief of Village (Suco Chefe), Traditional Chiefs	1,713	1,539	174	10%
9313	Construction labourers	1,692	1,585	107	6%
9152	Doorkeeper, watcher and related workers	1,188	1,141	47	4%
8323	Bus, tram, and other related vehicle drivers	1,080	1,062	18	2%
6152	Inland and coastal water, fishery workers	959	928	31	3%
7231	Machinery mechanics	923	887	36	4%
8321	Motorcycle drivers	805	785	20	2%
0110	Land force members	725	639	86	12%
6153	Deep-sea fishery workers	528	499	29	5%

Gender occupational segregation

The overall segregation of occupations in terms of gender may be measured with the occupational segregation index defined by

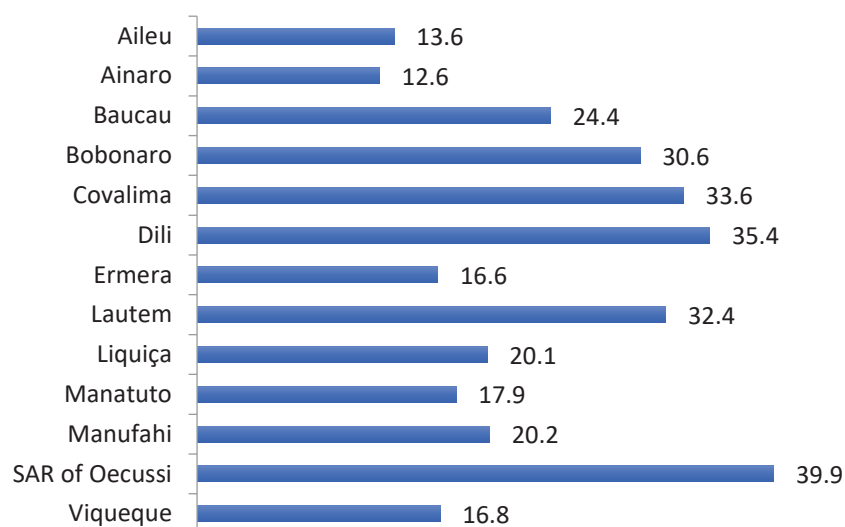
$$D = \frac{1}{2} \sum_i \left| \frac{n_{A_i}}{n_A} - \frac{n_{B_i}}{n_B} \right|$$

where n_{A_i} and n_{B_i} are, respectively, the number of men and women in a given occupation and n_A and n_B are, respectively, the total number of men and women in all occupations. The occupational sex segregation index is one of the ILO decent work indicators (ILO, 2008). It is a commonly used proxy indicator for equality of opportunity in employment and occupation. The index measures the extent to which labour markets are separated into “male” and “female” occupations, e.g., the percentage of female (or male) non-agricultural employment in a female-dominated (or male-dominated) occupation, or to the total non-agricultural employment in a gender-dominated occupation. The value of D ranges from 0 to 1, 0 indicating no segregation and 1 indicating complete segregation. The index may be interpreted as the fraction of persons that need to change occupations to achieve zero segregation.

Its value calculated on the basis of the results of the Timor-Leste 2015 Census is $D=0.23$. It is considerably below the value obtained on the basis of Timor-Leste LFS 2013 which was $D=0.42$. In any case, whether $D=0.23$ or $D=0.42$, occupational segregation in Timor-Leste tends to be lower compared with the situation in other countries, where the value in many cases exceeds 50% (e.g., for USA, $D=0.53$). This may reflect the large concentration of agricultural employment in Timor-Leste, an activity in which male and female occupations tend to be more balanced than in other branches of economic activity.

The index of gender occupational segregation is calculated for each municipality and the results are shown below (Figure 18). It can be observed that the municipalities with the highest index of occupational segregation are Oecussi (39.9 percent), Dili (35.4 percent), Covalima (33.6 percent) and Bobonaro (30.6 percent). The municipalities with the lowest index of occupational segregation are Ainaro (12.6 percent), Aileu (13.6 percent), Ermera (16.6 percent) and Viqueque (17.9 percent).

Figure 18. Occupational segregation index by municipality, 2015 Census



The specific occupations with the highest gender segregation may be examined for each municipality. In Dili, for example, the occupation of housekeepers and related services is highly segregated. About 15 percent of women are in this occupation against about 2 percent among men. The other occupations contributing to the highly segregated occupational structure of Dili are retail sales workers, street vendors in which about 13 percent of women are employed against about 8 percent among men. Still, other highly segregated occupations in Dili are drivers of cars, taxis, light trucks and vans (in which about 6 percent of men are employed against less than 0.5 percent among women); and security guards and other elements of defense and security (in which about 4 percent of men are employed against about 0.5 percent among women).

In Oecussi, the highly segregated occupations include housekeepers and related services as in Dili but also seasonal workers (in which about 39 percent of all men employed are engaged against about 29 percent among women); gardeners, horticultural and nursery growers (engaging about 26 percent of the male employed population against 17 percent among female employed population); and weavers, knitters, and related workers (in which about 4.4 percent of the women are engaged and virtually no men).

Diversity of occupations is one aspect influencing the degree of occupational segregation in a municipality. For example, according to the census data, employment in Dili is relatively diversified with some 302 distinct occupational categories. By contrast, the occupational structure in Ainaro is relatively less diversified with only 206 distinct occupational categories. This aspect partly explains the high occupational segregation in Dili (35.4 percent) as compared with the relatively low occupational segregation in Ainaro (12.6 percent). Another aspect of the occupational structure explaining the rate of occupational segregation in a municipality is the level of concentration of occupations, particularly, in male-or female-dominated occupations.

Chapter 11: Youth employment and unemployment

Timor-Leste is said to have one of the youngest populations in the world (NDS, UNFPA and UNICEF, 2012). According to figures of 2015 Census, the share of young people 15 to 24 years old among the non-institutional population 15 years old and over was 33.8 percent. The share was only slightly higher than the corresponding figure in 2010 (33.6 percent). The impact of this “youth bulge” on the labour market is potentially enormous requiring careful analysis.

Figure 19 shows the share of young people in the labour force and the corresponding share among the unemployed in 2015. While the youth comprise about one-third of the working age population, they make up about 14 percent of the labour force and more than two-third of unemployment.

Figure 19. Share of youth in the labour force and in total unemployment, 2015 Census

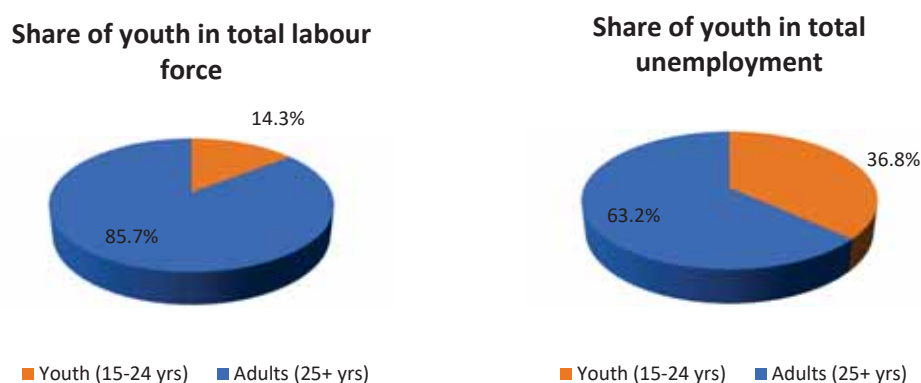


Figure 20 presents the youth unemployment rate by level of educational attainment. It indicates that the higher the level of educational attainment, the higher the risk of unemployment. The rate of unemployment among young people with no or non-formal education is about 7.4 or 9.3 percent, but the rate among young people with secondary education is 18.1 percent and the rate among young people with university education is 20.0 percent.

Figure 20. Youth unemployment rate by level of educational attainment, 2015 Census

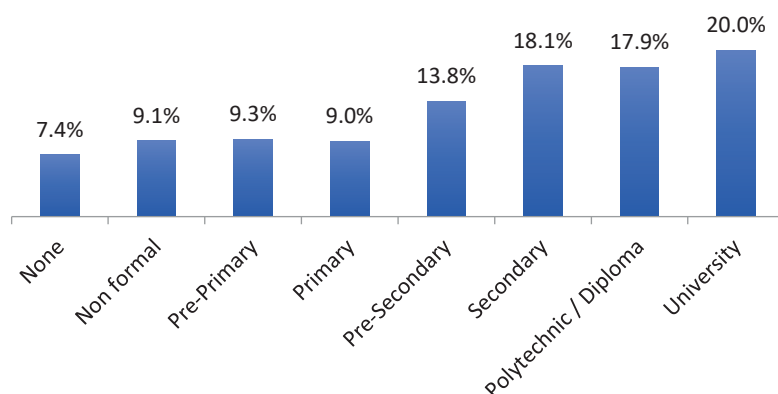
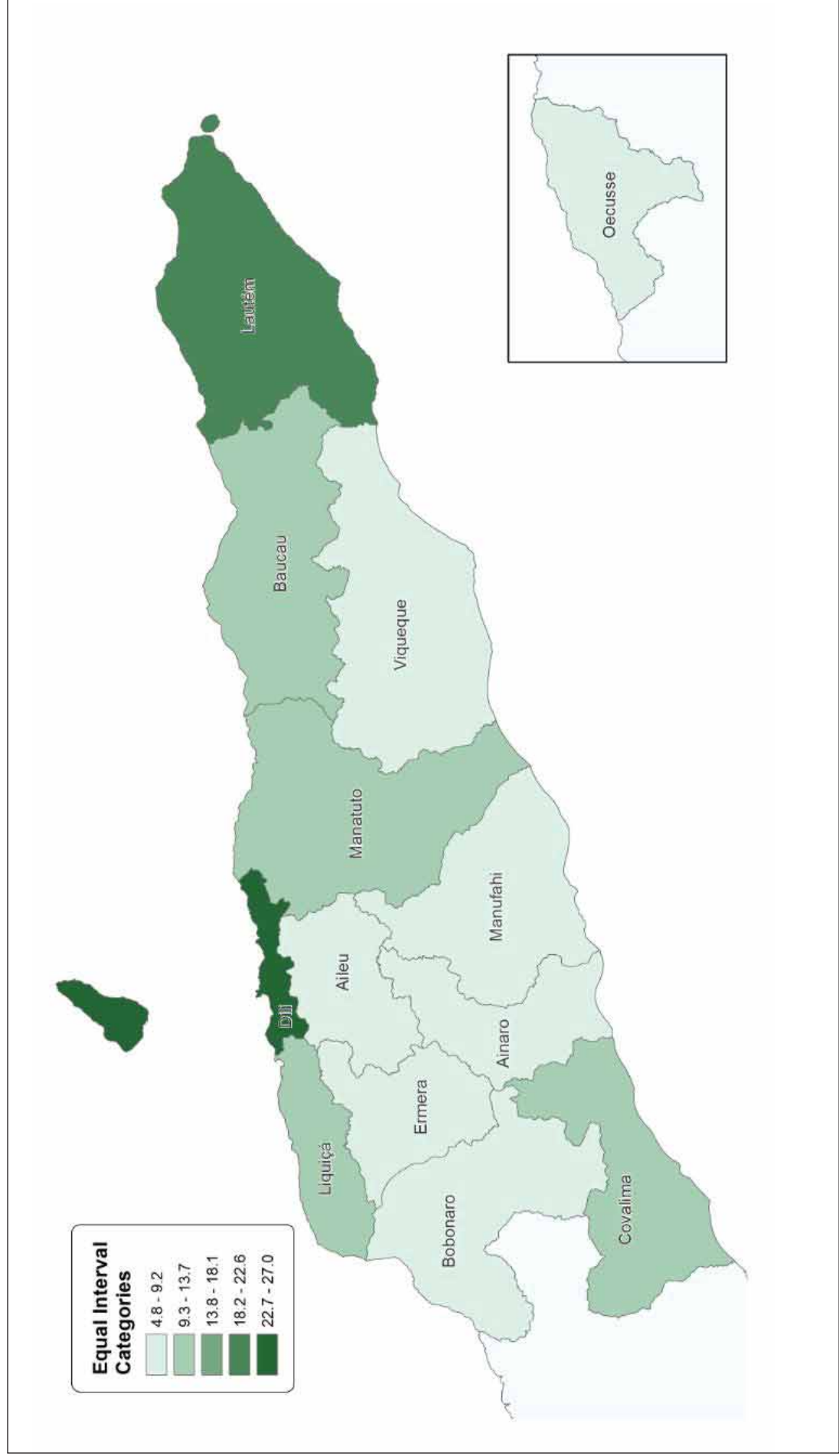


Figure 21 shows the youth unemployment rate by municipality. The highest unemployment rate among the youth is in Dili where the rate is 27 percent. This means more than one quarter of the young people in the labour force is unemployed. This is more than twice the national average for youth (12.3 percent) and more than 5 times the national unemployment rate (4.8 percent). The next highest youth unemployment is in Lautem (18.5 percent), followed by Baucau (12.7 percent). The other municipalities have youth unemployment rates below the national average for youth. The lowest is in Oecussi that has also the lowest rate of unemployment rate among the labour force at large.

Figure 21. Youth unemployment by municipality, 2015 Census



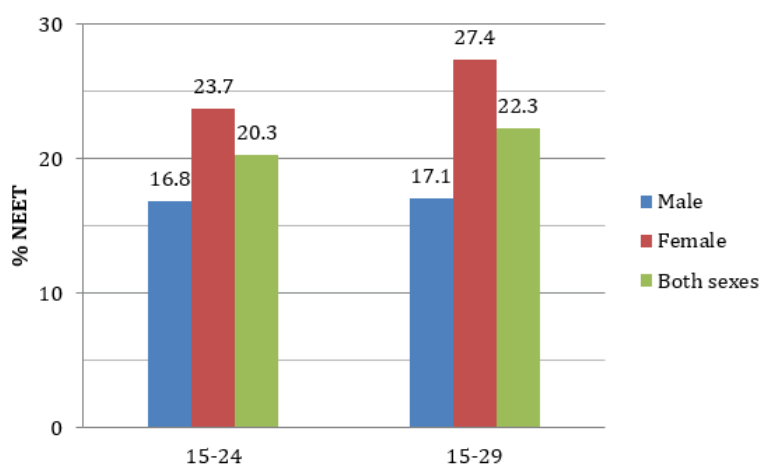
Youth not in employment, not in education or training (NEET)

The NEET indicator measures the percentage of youth who are not in the education system, not working, and not in training. In a sense, they form the category of the youth population missing out on chances to develop their potential adulthood. According to the 2015 Census, the NEET rate for 15-29 year olds was 22.3 percent in Timor-Leste, 17.1 percent for men and 27.4 percent for women. Compared with selected countries in the region, the NEET rate is lower in Timor-Leste (22.3 percent) compared to other countries in the region, in particular, Indonesia (about 30 percent), the Philippines (about 28 percent) and Thailand (about 24 percent) (PRB, 2016).

The NEET indicator is calculated on the basis of a question on school attendance (P29) with four answer categories: 1. Yes, attending school; 2. Yes, attended school before, left school; 3. No, never attended school; and 4. Don't know. Analysis of the raw data indicates that a number of persons who attended school before (category 2) have been erroneously classified as currently attending school (category 1). This means that the NEET indicators reported here underestimate the true values and differ from those calculated on the basis of adjusted data in the companion census report on education (GDS, UNICEF and UNFPA, 2017).

Figure 22 shows the percentages aged 15-24 and 15-29 who are not in employment and not in education or training by sex (NEET indicator). The data show that the NEET indicator is higher among women. This is explained by the fact that many women get married after school and due to family responsibilities do not enter the labour market until later or not all.

Figure 22. Youth not in employment, nor in education or training (NEET), 2015 Census



Top occupations of young persons

The top 12 occupations of young people are listed in Table 12. The top 6 occupations of the young persons 15 to 24 years old were also the top 6 occupations of the employed population at large. The next two (Car taxi and light truck or van drivers, ISOC-88 code 8322 and Home-based social workers, ISCO-88 code 5133) are also among the top 12 occupations of the population at large. However, the next occupation (Street vendors and mobile sellers, including foods, ISCO-88 code 9111) is not among the top 12 occupations of the employed population at large and appears to be particular to youth.

Table 12. Top twelve occupations of young people, 2015 Census

Code	Occupation ISCO-88	Number of workers
-	Total	50,581
6113	Gardeners, horticultural and nursery growers	16,015
6111	Field crop and vegetable growers	8,020
5121	Housekeepers and related service	5,102
6112	Tree and shrub crop growers	4,827
6114	Mixed crop growers	2,997
5230	Retail Sales Workers /Street Vendors	1,960
8322	Car Taxi and Light Trucks or Van Drivers	967
5133	Home-based Social Workers	698
9111	Street Vendors and Mobile Sellers (including foods)	540
5220	Salesperson and Demonstrators	493
4190	Other office clerks	435
9999	Other (not classified elsewhere)	287

It is instructive to also examine the top occupations of young people with university education as shown in Table 13. It includes Higher government officials (code 1120), Secondary education teachers (code 2421), Statistical and financial clerks (code 4122), but also in a greater number of gardeners, horticultural and nursery growers (code 6113), Housekeepers and related services (code 5121) and Retail sales workers/street vendors (code 5230).

Table 13. Top twelve occupations of young people with university education, 2015 Census

Code	Occupation ISCO-88	Number of workers
-	Total	2,014
6113	Gardeners, horticultural and nursery growers	208
4190	Other office clerks	163
5121	Housekeepers and related service	140
5230	Retail Sales Workers /Street Vendors	102
6111	Field crop and vegetable growers	88
3911	Administrative and Related Associate Professionals	86
1120	Higher Government Officials	66
5132	Institution Social Workers	59
4122	Statistical and Financial Clerks	54
2421	Secondary Education Teachers	48
1142	Labour Organizations and Other Economic Organizations	42
6112	Tree and shrub crop growers	38

Skill mismatch

A measure of disparity between occupation and educational attainment may be obtained by calculating a simple skill mismatch indicator as shown in Table 14. Some 1432 young people with university education or polytechnic or diploma are engaged in clerical or other occupations with lower educational requirement. Also, some 1071 young people with pre-secondary or secondary education are engaged in elementary occupations. In total, there are 2,503 young people whose educational attainment was above the educational requirement of their job. The shaded area in the table represents skill mismatch. It indicates that about 7 percent of the youth employed population has educational attainment above the educational requirement of their jobs.

Table 14. Youth employment by occupation and level of educational attainment, 2015 Census

Occupation	ISCO-88	Total	Not Reported	Non-formal	Pre-Primary	Primary	Pre-Secondary	Secondary	Polytech/ Diploma	University
Total		50,079	14,492	260	1,080	11,768	9,026	11,265	246	1,942
Armed Forces	0	502	20	3	6	42	38	316	5	72
Managers	1	958	84	6	14	108	87	453	13	193
Professionals	2	832	39	5	6	47	23	383	41	288
Technicians	3	726	42	4	4	62	49	344	18	203
Clericals	4	684	29	1	2	27	21	340	9	255
Services, Sales	5	9,277	1,851	46	168	1,864	1,945	2,932	46	425
Agricultural	6	32,740	11,458	157	815	8,488	5,952	5,387	91	392
Craft Trades	7	1,474	400	14	15	346	199	420	14	66
Machine Operators	8	1,388	245	7	21	393	319	366	4	33
Elementary Occupations	9	2,000	344	20	35	433	431	640	10	87

The data also show that 4.8% of those educated to pre-secondary education were in elementary occupations compared to only 3.8 percent of those educated to primary education, pointing to the limited job opportunities available for young people in Timor-Leste.

Chapter 12: Working children

The international standards concerning statistics of child labour define a *child* as “all persons in the age group from 5 to 17 years, where age is measured as the number of completed years at the child’s last birthday” (ILO 2008, para. 9). Three concepts for statistical measurement are defined:

- *Children in employment* are “those engaged in any activity falling within the production boundary of the System of National Accounts for at least one hour during the reference period.”
- *Child labour* include all children who were “engaged in one or more of the following categories of activities:” (a) worst forms of child labour; (b) employment below the minimum age; and (c) hazardous unpaid household services, as specified in the Resolution.
- *Hazardous work by children* is the worst form of child labour covering “the engagement of children in activities of a hazardous nature (designated industries and occupations) or work under hazardous conditions, for example, long hours of work in tasks and duties which by themselves may or may not be of a hazardous nature for children.”

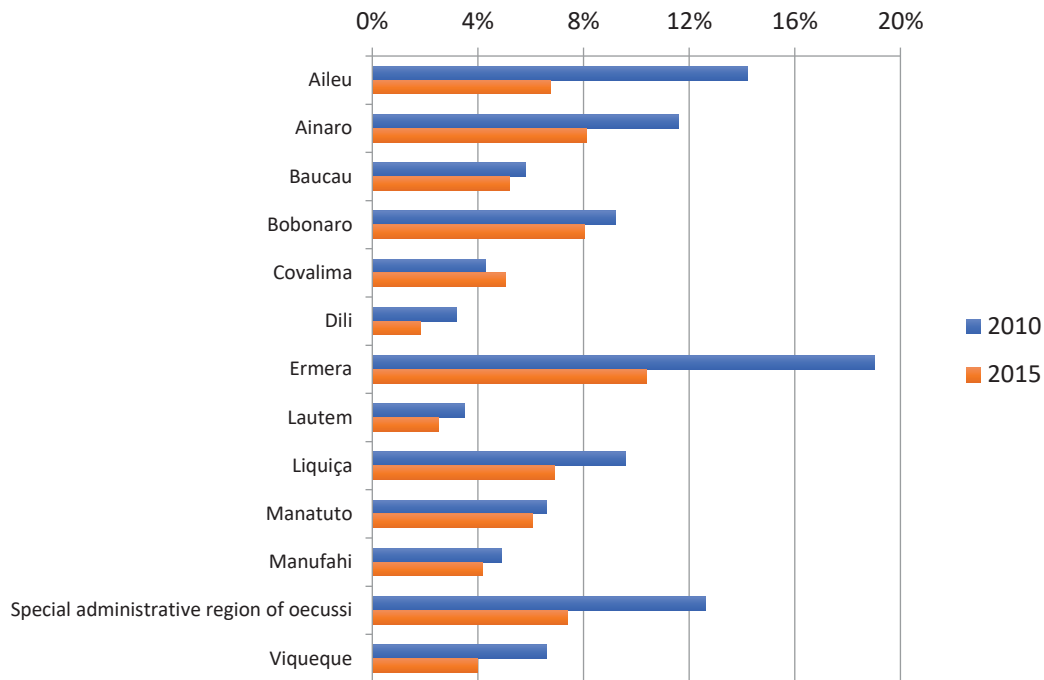
An attempt is made here to measure the working children 10 to 17 years old and the hazardous work component of child labour using the data from the 2015 Census.

Working children

There were 13,409 children in employment according to the data of 2015 Census, representing 5.5 percent of the children population 10 to 17 years old, 6.0 percent among males and 5.1 percent among females. The percentage of working children declined from 8.3 percent in 2010 to 5.5 percent in 2015, and remains significantly below the world average (13.8 percent for age group 5 to 17 years) and the regional average for Asia and the Pacific (22.1 percent for age group 5 to 17 years) (ILO, 2017).

Figure 23 shows the share of working children in total child population by municipality for 2010 and 2015. It can be observed that the decline in the rate of working children has been uniform across all municipalities except in Covalima where the rate has slightly increased (4.3 percent in 2010 and 5.0 percent in 2015), perhaps, due to the new development project on airport and road construction in Suai that inadvertently may have attracted some children 10-17 years to work.

Figure 23. Working children relative to child population 10-17 years by municipality, 2010 and 2015 Censuses



Ermera, Ailieu, Ainaro, Bobonaro and Oecussi remain the municipalities with the highest rates of working children. It is instructive to note that Ermera is also the municipality with the highest percentage of children 10-17 years not attending school (21.4 percent versus the national average 14.5 percent). Bobonaro and Oecussi are also the municipalities with high percentages of children not attending school, 17.3 percent and 17.0 percent, respectively). In general, the correlation between school non-attendance and children in employment among municipalities is 0.83, a significantly high value.

Table 15 estimates the number of children 10 to 17 years old engaged in hazardous work and derives from it the number of children in child labour based on the international standards concerning statistics of child labour. The census estimates are significantly below the results obtained from the Child Labour Survey 2016.

Table 15: Children in hazardous work and child labour from different sources

Source	Indicator	Number of children
2015 Census	Total number of working children 10-17 years old	13,409
	Working children 10-11 years old, all considered as in hazardous work according to the international standards	1,949
	Children 12-17 years old working in designated hazardous industries (mining and construction)	107
	Children 12-17 years old working in designated hazardous occupations (ISCO-88 codes 313, 323-323, 516, 614-615, 711-713, 721-724, 731-732, 811-816, 821-823, 825-829, 832-834, 911-912, 915-931, and 933).	476
	Total child labour excluding children working long hours, 14 hours or more per week for children 12 to 14 years old and 43 hours or more per week for children 15 to 17 years old	2,532
2016 Child Labour Survey	Total number of working children (5-17 years)	34,576
	Children in child labour (5-17 years)	20,216
	Children in hazardous work (5-17 years)	5,993

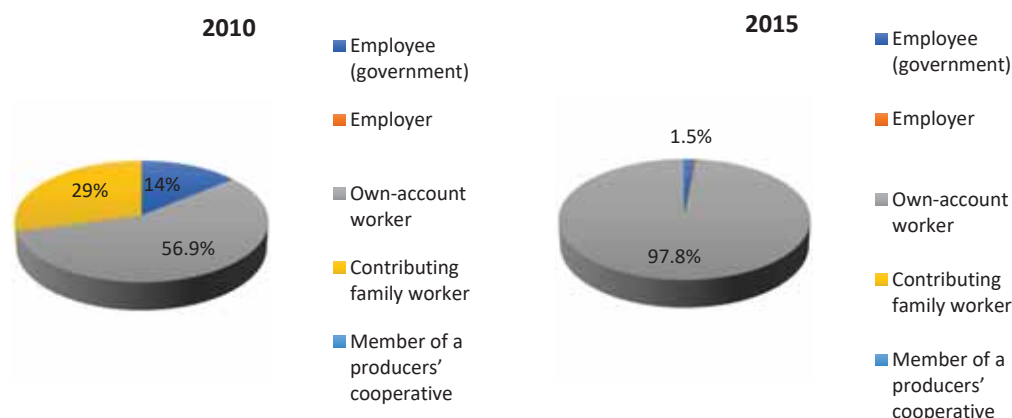
School attendance of working children

The census results show that school attendance of working children has increased among both boys and girls and for all age groups. In 2015, there were 4,375 children 10-17 years old combining work and school, representing 32.6 percent of the total number of working children. Among boys, 28 percent were combining work and school in 2010, but increased to almost one-third in 2015 (32 percent). Similarly, the percentage of girls combining school and work, about 30 percent in 2010, increased to 33 percent in 2015.

Employment characteristics of working children

Figure 24 compares the status in employment of working children 10 to 17 years old from 2010 to 2015. The results indicate a net decline of paid employees among working children from 14 percent in 2010 to about 1.5 percent in 2015. The bulk of working children remain own-account workers or contributing family workers: 86 percent in 2010 and 98 percent in 2015. It should be mentioned that the data clearly show that there has been a change in the coding procedure of this item from 2010 Census to 2015 Census.

Figure 24. Status in employment of working children 10-17 years old, 2010 and 2015 Censuses



Finally, Table 15 shows the occupations in which at least 100 children are working. Except for four occupations, all are agriculture-related occupations. The exceptions are housekeeping followed by retail sales, street vendors, and drivers of car, taxi, light truck or van. The proportion of children working in these occupations is essentially the same (around 14%) for all age groups.

Table 16. Top occupations of working children 10-17 years old, 2015 Census

Occupation	ISCO code	Age group			
		Total	10-11	12-14	15-17
Total		13,409	1,949	3,672	7,788
Gardeners, horticultural and nursery growers	6113	5,262	733	1,470	3,059
Field crop and vegetable growers	6111	2,778	439	788	1,551
Tree and shrub crop growers	6112	1,617	222	416	979
Housekeepers and related service	5121	1,378	207	382	789
Mixed Crop Growers	6114	946	167	279	500
Retail Sales Workers /Street Vendors	5230	407	60	110	237
Street Vendors and Mobile Sellers	9111	132	10	27	95
Car Taxi and Light Trucks or Van Drivers	8322	131	4	28	99
Agriculture and Livestock Workers	6130	109	24	40	45
Livestock Workers and related	6129	101	22	28	51

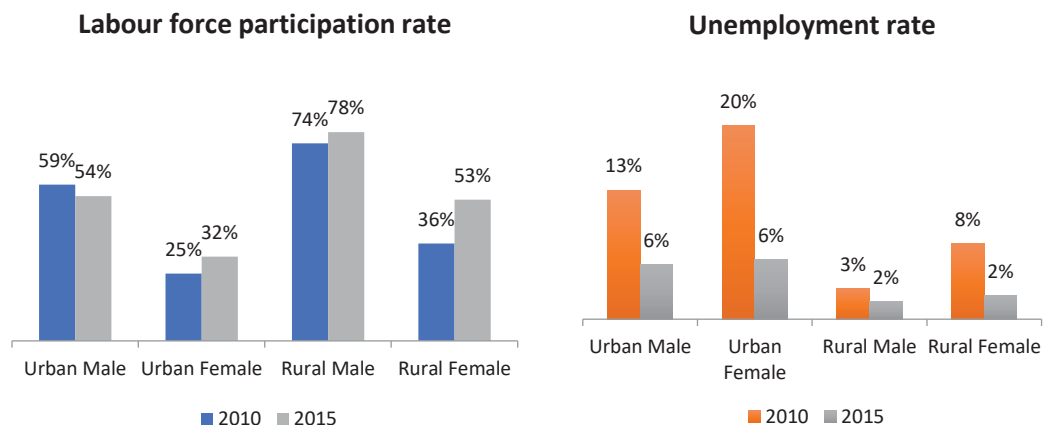
Chapter 13: Elderly workers

The number of persons aged 65 years or older increased from 50,078 according to 2010 Census to 68,488 according to 2015 Census, representing an annual growth rate of about 6.5 percent, more than twice the growth rate of the population at large. Relative to the size of the total population, the share of elderly persons increased from 4.8 percent in 2010 to 5.8 percent in 2015. This shift of the population towards older ages reflects a declining fertility rate and rising life expectancy, a worldwide phenomenon also observed in Timor-Leste.

The growth rate of elderly people in the labour force in Timor-Leste has been even higher at almost 10 percent per year between 2010 and 2015. It was still higher among women (more than 15 percent) and even more among women in rural areas (16 percent). This shows that the aging process of the population has also been accompanied by an extraordinary increase in older people's participation in the labour force and particularly of older women.

The following figure shows, in the left panel, the change in the labour force participation rate of the elderly population. The rate has increased by 17 percentage points for older women living in rural areas from 36 percent in 2010 to 53 percent in 2015. The change has been somewhat less drastic for older men living in rural areas (from 25 percent in 2010 to 32 percent in 2015) and for older women in urban areas (74 percent in 2010 to 78 percent in 2015). For older men living in urban areas, there has been a slight drop in the labour force participation rate from 59 percent in 2010 to 54 percent in 2015, perhaps due to the increasing number of elderly men having the possibility of retirement in types of jobs mostly exercised in urban areas.

Figure 25. Labour force participation rate and unemployment rate of persons 65 years and over, 2015 Census



The right panel shows the change in the unemployment rate of elderly persons. It shows a general decline for all categories with the most pronounced decrease for older women in urban areas where the female unemployment rate dropped from 20 percent in 2010 to 6 percent in 2015. The general drop of the elderly unemployment rate follows a similar pattern observed for the population at large, put in doubt in the analysis of unemployment in section 6 due to the possible overestimation of unemployment in 2010 or underestimation in 2015.

As shown in Figure 26, the ratio of elderly workers to the elderly population (65+ years) has increased in all municipalities, with the highest increase recorded for Ainaro (from 49.5 percent in 2010 to 72.4 percent in 2015) and Manufahi (from 52.6 percent in 2010 to 68.7 percent in 2015). The lowest increases were in Aileu (72.3 percent in 2010 to 73.7 percent in 2015) and Dili (33.0 percent in 2010 to 33.7 percent in 2015). Dili remains the municipality with the lowest employment-to-population ratio among the elderly (65 years). Dili is the most urbanized municipality of the country with the bulk of the

working age population employed in government or as employees in the formal sector. Many benefit from social security and retirement funds and therefore need not continue working at old ages, unlike the elderly population in other municipalities.

Figure 26. Employment-to-population ratio of elderly persons 65+years by municipality, 2010 and 2015 Censuses

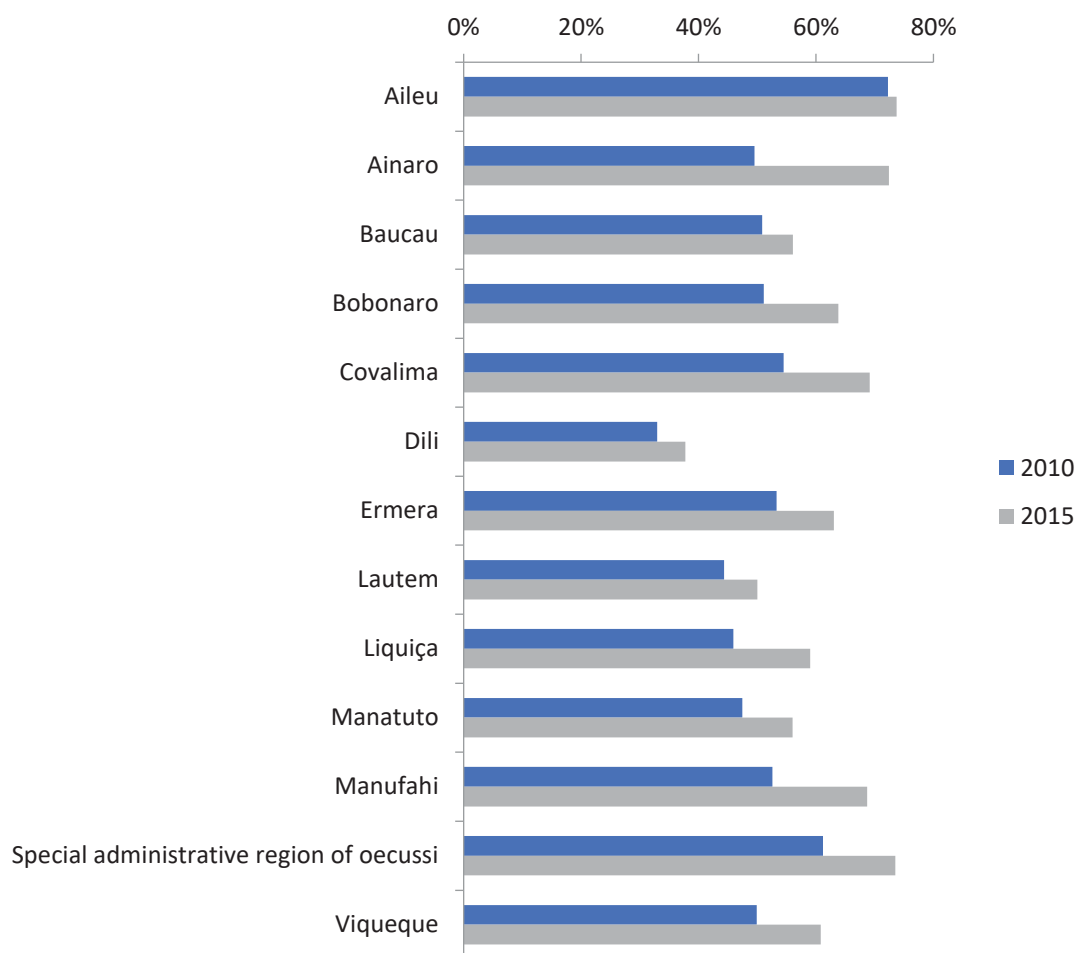


Table 16 lists the top 12 occupations performed by elderly workers according to the 2015 Census results. Comparing the list with the corresponding list of top occupations of the employed population in Timor-Leste (Table 8), it can be noted that the top 6 occupations of the elderly are also the top 6 occupations of the employed population at large. The differences are observed among the next level of frequencies, in particular, Textile Handicrafts Leather and Related Works (ISCO-88 code 7332) and Weaver Knitter and Related Works (ISCO-88 code 7432). These occupations are among the top 12 occupations of the elderly but not of the working age population at large.

Table 17. Top 12 occupations of elderly workers 65+ years old, 2015 Census

Code	Occupation (ISCO-88)	Number
-	Total	41,637
6113	Gardeners, horticultural and nursery growers	18,021
6111	Field crop and vegetable growers	8,812
6112	Tree and shrub crop growers	4,728
6114	Mixed Crop Growers	3,390
5121	Housekeepers and related service	2,119
5230	Retail Sales Workers /Street Vendors	559
5133	Home-based Social Workers	394
7332	Textile Handicrafts Leather and Related Works	255
6130	Agriculture and Livestock Workers	251
6129	Livestock Workers and related	203
9111	Street Vendors and Mobile Sellers (including foods)	172
7432	Weaver Knitter and Related Works	155

A similar result emerges when the data are analyzed by branch of economic activity. Table 17 lists the top 12 branches of economic activity of the elderly workers. The top 6 branches of economic activity of the elderly are identical with the top 6 branches of the employment population at large (Table 8). The next 2 branches (9111 and 5221) are also among the top 12 branches of economic activity of the employed population at large. But as in the case of occupations, the industry “Preparation and Spinning of Textile Fibers and Weaving of Textiles” (ISIC Rev 4 code 1711) is one of the top 12 occupations of the elderly but not of the population at large.

Table 18. Top 12 branches of economic activity of elderly workers 65+ years old, 2015 Census

Code	Branch of economic activity (ISIC Rev 4)	Number
-	Total	41,637
0111	Growing of Cereals	31,191
9500	Private Household with Employed Person	2,301
0112	Growing of Leguminous Crops	2,066
0113	Growing of Vegetables and Fruits	1,579
7511	General (overall) government (public service) activities	497
5211	Retail sale in non-specialized stores with Food Beverage and Tobacco	455
9111	Activities of Business and Entrepreneur Organization	351
5221	Retail Sale of Food Commodities of Agriculture Products	310
1711	Preparation and Spinning of Textile Fibers and Weaving of Textiles	237
0121	Breeding and Livestock Resources (Animal Husbandry)	230
0130	Growing of Crops combined with farming of animals (Mixed Farming)	176
9306	Household and Personal Goods Repair services	132

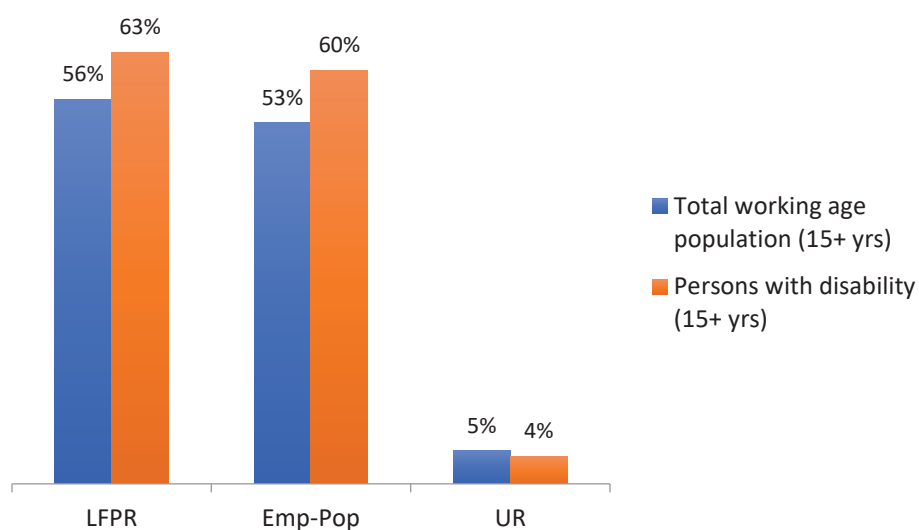
Chapter 14: Workers with disabilities

In line with some elements of the recommendations of the UN Washington Group on Disability Statistics, a person with disability was defined as any individual who responded to have “a lot of difficulty” or “cannot do at all” to one or more of the following conditions: “walking”, “seeing”, “hearing” and “intellectual/mental condition”. It should be mentioned that the census questionnaire was not formulated exactly as recommended and did not include the two other recommended conditions: “remembering or concentrating” and “self-care such as washing all over or dressing.” The results show that there were 36,062 persons with disability among the working age population 15 years old and over, representing a prevalence rate of 5.9 percent and a decline from 7.2 percent in 2010.

The disability with the highest prevalence rate was “seeing” (3.9 percent) followed by “walking” (2.5 percent) and “hearing” (2.2 percent). On average a disabled person had 1.75 forms of disability. The cause of disabilities was present from birth for about 22 percent of the working age population. For the bulk of the working age population, the cause of disability was old age (about 45 percent).

For the present purpose, a worker with disability is defined as a person with disability who is in the labour force, currently employed or unemployed. Figure 27 compares the main labour market indicators on persons with disabilities 15 years old and over and the corresponding indicator for the working age population at large.

Figure 27. Main labour force indicators: Persons with a disability (15+ years) compared with the working age population, 2015 Census



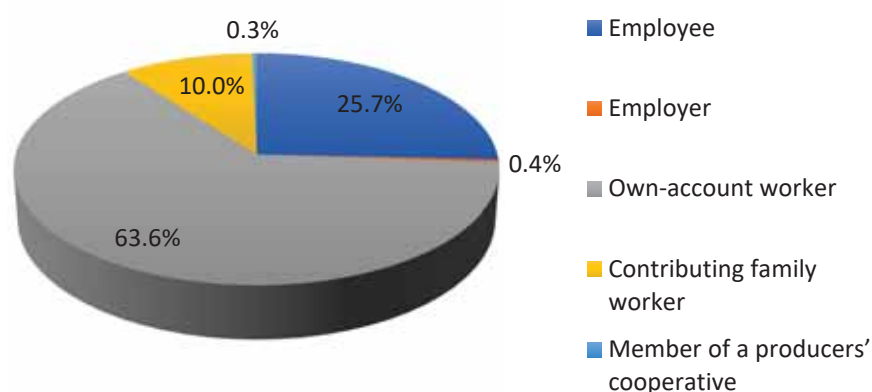
Note: LFPR = Labour force participation rate; Emp-Pop = Employment-to-population ratio; and UR = Unemployment rate

It is surprising to find that the labour force participation rate and the employment-to-population ratio of persons with disabilities are higher than the corresponding values for the overall working age population at large. The data also show that the unemployment rate among persons with disabilities is about the same or even slightly lower than the working age population at large. A similar pattern was observed in 2010: The labour force participation of persons with disabilities was 56.5 percent against 54.6 percent for the working age population at large; the employment-to-population ratio of persons with disabilities was 51.9 percent against 49.4 percent among the total working age population; and the unemployment rate of persons with disabilities was 8.0 percent against 9.8 percent among the overall working age population.

More than 80 percent of workers with disabilities were older people 40 years old and over. In all age groups, the majority were men. Figure 28 shows that most workers with disabilities were own-account

workers (63.6 percent). Only about 25.7 percent of workers with disabilities were employees, i.e. working for pay for others. The share of employees among workers with disabilities was almost constant across all age groups. The percentage among men (29 percent), however, was significantly higher than the percentage among women (19 percent). The share of employees among workers with disabilities was 19.0 percent in 2010, thus showing an increase.

Figure 28. Status of employment of workers with disabilities, 2015 Census



It is instructive to note the particularities of the range of jobs performed by employees with disabilities. Table 18 lists the top 12 occupations of employees with disabilities and gives the detail by type of disability. Teachers appear in five of the top 12 occupations of employees with disabilities, including 401 primary school teachers, 164 pre-secondary education teachers, 157 secondary education teachers, 58 other teachers and 34 university, higher education teachers or lecturers.

Table 19. Top twelve occupations performed by employees with disabilities by type of disability, 2015 Census

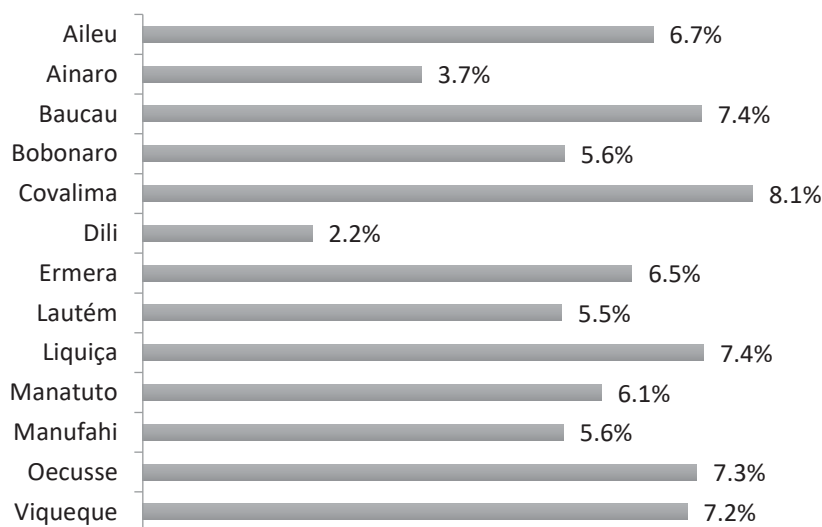
Occupation	ISCO-88 Code	Total	Walking	Seeing	Hearing	Intellectual/mental
Total	-	1,825	374	1,083	195	173
Primary School Teachers	3,231	401	67	251	37	46
Pre-secondary Education Teacher	3,152	164	32	108	15	9
Secondary Education Teachers	5,131	157	32	100	12	13
Other office clerks	3,413	144	38	90	11	5
Chief of Village (Suco Chefe), Traditional Chiefs	6,112	104	24	66	8	6
Higher Government Officials	6,111	96	18	61	8	9
Gardeners, Horticultural and Nursery Growers	2,121	77	20	27	19	11
Other teachers	2,145	58	13	37	5	3
Administrative, Related Associate Professionals	3,116	51	8	32	6	5
Police Members	9,311	47	10	25	7	5
Elements of Defense and other security	9,332	36	7	21	4	4
University, Higher Education Teacher/Lecturer	3,212	34	5	25	4	0

Most other top occupations were public-sector types of jobs such as chief of village (104 persons), government official (96), administrative professional (51), police staff (47), member of defense or other

security forces (36). The only private-sector types of job among the top occupations of employees with disabilities were gardeners, horticultural and nursery growers (77) and other office clerks (144).

Figure 29 shows the range of variation of the relative number of workers with disabilities in different municipalities. The municipality with the lowest number of workers with disabilities relative to total employment is Dili (2.2 percent) followed by Ainaro (3.7 percent). The municipality with the highest number of workers with disabilities relative to total employment is Covalima (8.1 percent) followed by Bobonaro and Liquiça (7.4 percent) and Oecusse and Viqueque (about 7.2-7.3 percent). The percentage in the other municipalities ranges around 5 and 6 percent.

Figure 29. Percentage of employed persons with disabilities by municipality, 2015 Census



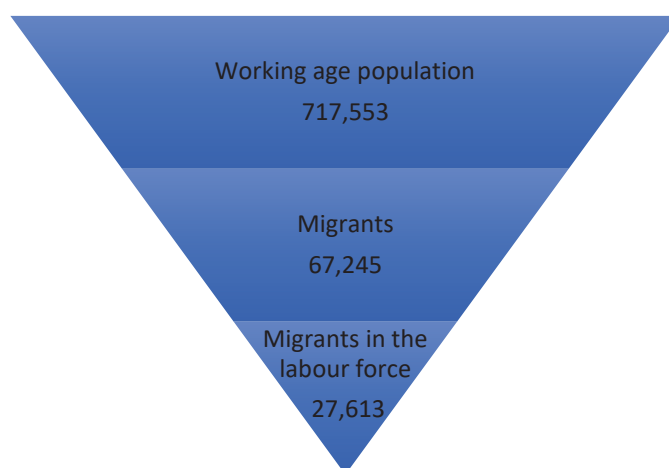
The question arises as the reason for such a low percentage of workers with disabilities in total employment in Dili. It could be due to a proportionally low number of persons with disabilities in that municipality or a limited effort to hire workers with disabilities in Dili.

The census data on workers with disabilities should be interpreted with care. Due to the sensitivity of the topic, census responses may have been subject to particularly high measurement errors. For example, in an attempt to minimize the impact of disability on normal life, respondents may have over-reported the economic activity of disabled persons in the household leading to an abnormally high labour force participation rate. Also, they may have under-reported the search for work of the disabled persons in the household leading to a lower than expected unemployment rate.

Chapter 15: Migrants in the labour force

According to the results of the 2015 Census shown in Figure 30 below, the stock of the migrant population 15 years old and over at the time of the census was 67,245 persons, representing about 9.4 percent of the working age population. Among them, an estimated 27,613 were in the labour force.

Figure 30. Migrants in the labour force, 2015 Census



For the present purpose, the concept of recent migrants is used. It is a flow rather than a stock and provides a clearer measure of the pressure on the labour market. It is also in line with the concept of migration used for population projections in Timor-Leste. A recent migrant is defined to be any current resident, member of a private household in Timor-Leste who has changed his or her municipality or country of usual residence in the last five years.

A migrant in the labour force is defined to be a migrant in the sense described above who was in the labour force of the country of current residence, i.e., currently employed or not employed, looking and available for employment. The migrant population includes the internal migrants and the international migrants. Similarly, the migrant population in the labour force includes the internal migrants and the international migrants in the labour force. The internal migrants and internal migrants in the labour force were those who have moved from one municipality to another during the last five years, and the international migrants and international migrants in the labour force were those who have moved from outside the country to Timor-Leste in the last five years.

Another definition of recent migrant may be based on change of Suco of residence during the last 5 years, instead of municipality. This broader definition was found to be unsuitable for labour market analysis as it would capture many young persons who changed the Suco of residence for reason of schooling and education. Still another definition of internal and international migrants may be based on a long reference period such as lifetime according to which any person who ever changed his or her usual Suco, municipality or country of usual residence would be considered a migrant. International migrants may also be defined in terms of citizenship (non-citizens) or place of birth (foreign born).

The bulk of the working age migrants were internal migrants (64,506). The international migrants were about 2,739. There were about the same number men (49.7 percent) and women (50.3 percent) among internal migrants of working age. The percentage of men was however higher (55.0 percent) than women (45.0 percent) among international migrants of working age.

Table 19 shows the distribution of internal migrants in the labour force from the municipality of prior residence to the municipality of current residence. The diagonal elements of the table show that about 43 percent of the internal migrants in the labour force remained in the same municipality of residence. The majority or about 57 percent of the internal migrants however moved from one municipality to

another. From the off-diagonal elements of the table, it can be observed that the migration corridor with the largest movement was from Bacau to Dili (1,713 migrants), followed by the movement from Bobonaro to Dili (1,377) and Ermera and Viqueque to Dili (1,133 and 1,029, respectively). In fact, the analysis of the table shows that all municipalities except Dili were net exporters of migrant workers. Dili was the only municipality receiving more migrant workers than sending.

Table 20. Cross-classification of internal migrants in the labour force by municipality of current residence and municipality of last residence, 2015 Census

Municipality of current residence	Municipality of last residence												
	Aileu	Ainaro	Bacau	Bobonaro	Covalima	Dili	Ermera	Lautem	Liquiça	Manatuto	Manufahi	Oecussi	Viqueque
Aileu	285	55	18	11	11	110	58	6	16	17	20	12	18
Ainaro	17	200	8	24	15	23	17	4	4	1	63	3	5
Bacau	17	20	1281	23	16	112	28	60	19	41	13	35	150
Bobonaro	15	14	21	932	30	100	67	1	41	6	12	10	14
Covalima	7	33	22	148	910	57	11	9	8	12	21	17	11
Dili	406	716	1,713	1,377	523	2,440	1,113	937	438	423	434	560	1,029
Ermera	22	27	22	52	9	42	770	6	67	11	7	21	7
Lautem	3	7	40	5	5	38	8	413	5	2	0	5	13
Liquiça	28	14	27	83	22	92	95	8	754	9	11	41	17
Manatuto	15	18	47	17	10	51	17	6	11	384	16	7	29
Manufahi	13	114	20	18	21	52	24	6	10	21	441	10	25
Oecussi	5	3	20	17	5	74	12	4	7	12	2	837	27
Viqueque	9	6	45	12	4	33	4	13	4	7	12	6	517

For example, it can be calculated by summing all elements of the first row of Table 19 except the first that 352 persons in the labour force now residing in Aileu have migrated from another municipality. At the same time, some 557 persons in the labour force (sum of all elements of the first column of the table except the first) have migrated out of Aileu during the same period. Thus, Aileu has been a net exporter of labour force during the five-year period ($205=557-352$). Similar calculations may be carried out for all other rows and columns of the table. The results will show that except for Dili all other municipalities were net exporters of labour force during the five-year period from 2010 to 2015. It can be verified that Dili imported 9669 migrants in the labour force while exporting only 784.

In terms of international migration (Figure 31), most migrant workers were coming from Indonesia (61.3 percent), followed by China (16.3 percent) and to a lesser degree from the Philippines (5.2 percent), Portugal (3.4 percent), Australia (2.8 percent) and Vietnam (1.0 percent). The bulk of international adult migration is related to employment or business (55.5 percent). In the case of internal migration, however, the main reason for migration of the working age population is education (37.9 percent) followed by marriage or family relationship (37.4 percent). Employment or business comes only at the third position (16.6 percent).

Figure 31. International migrants in the labour force by country of last residence, 2015 Census

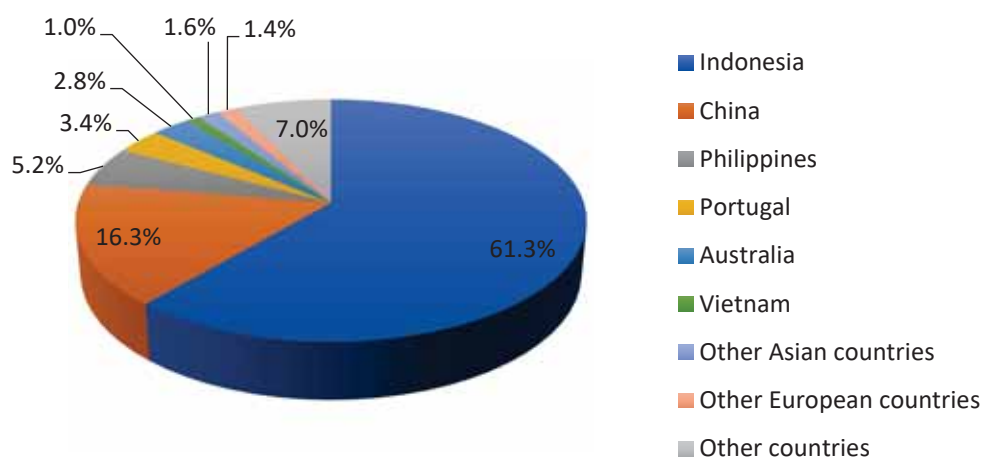
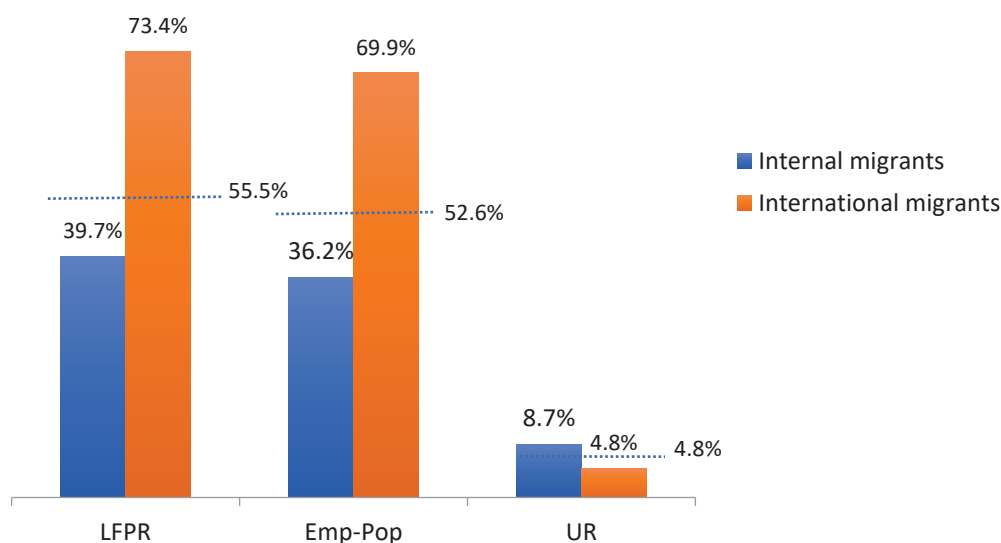


Figure 32 shows that the labour force participation rate of international migrants was significantly higher (73.4 percent) than the overall labour force participation rate (55.5 percent). Similarly, the employment-to-population ratio of international migrants (69.9 percent) was higher than the overall employment-to-population ratio of the country (52.6 percent). It can also be observed that the unemployment rate of international migrants (4.8 percent) was essentially the same as the general population (4.8 percent).

In the case of internal migrants, however, both the labour force participation rate and the employment-to-population ratio (39.7 percent and 36.2 percent, respectively) were lower than the corresponding rate or ratio for the general population (55.5 percent and 52.6 percent) as represented by the dotted line in Figure 32. By contrast, the unemployment rate of internal migrants (8.7 percent) was almost double the national unemployment rate (4.8 percent). These results are in line with observation made earlier that the main reasons for migration of the recent internal migrants is education and marriage or family relationship and employment and business in the third place.

Figure 32. Labour force status of internal and international migrants, 2015 Census

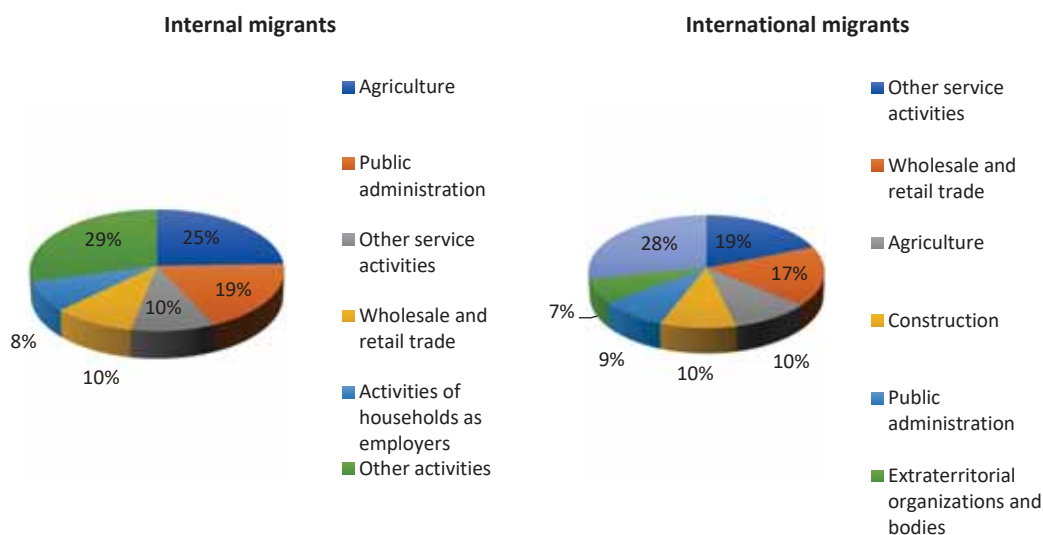


Notes: LFPR = Labour force participation rate; Emp-Pop = Employment-to-population ratio; and UR = Unemployment rate. Dotted lines correspond to corresponding national rates or ratio.

The pattern of employment of migrant workers in terms of branch of economic activity is shown below (Figure 33) for internal and international migrants, respectively. The branch of economic activity with

the highest number of internal migrants was agriculture (25 percent), followed by public administration (19 percent), and other services and trade, each about 10 percent. The share of activities of households as employers was 8 percent. Compared with the national share of persons engaged in households as employers (7 percent), this result shows that a relatively higher proportion of domestic workers were migrants many of whom were employed in agriculture prior to migration.

Figure 33. Employed migrants by branch of economic activity, 2015 Census



Turning to international migration, the data show that the international migrant workers were mostly engaged, in services and trade (19 percent and 17 percent, respectively) followed by agriculture (10 percent), construction (10 percent). Some were also in public administration (9 percent) and extraterritorial organizations and bodies (7 percent).

More detailed analysis of migrants in the labour force may be carried out in terms of status in employment, occupation and level of education attainment. For example, the results show that among internal migrant workers 23.9 percent had completed university education or polytechnic or diploma. The percentage was 37.5 percent among international migrant workers, while it was 9.5 percent for the employed population at large. This result suggests that in general migrants in the labour force are more educated than non-migrants, and among migrants in the labour force, international migrants are more educated than internal migrants.

Chapter 16: Conclusions and recommendations

Six major conclusions may be drawn on the structure and evolution of the labour force in Timor-Leste during the five-year period 2010 to 2015. Also, three recommendations may be formulated from the experience gained in analyzing the census results.

Conclusions

The overall participation of the working age population in the labour force has significantly increased, from 54.7 percent in 2010 to 56.1 percent in 2015. Also, the total number of persons employed increased from 341,694 in 2010 to 383,331 in 2015, representing an annual growth rate of about 4.8%, considerably higher than the average annual growth rate of the working age population 15 years old and over (3.2 percent).

The quality of the labour force as measured by educational attainment has also improved. The percentage of the labour force in the core age group 15 to 64 years old with university education increased from about 5.2 percent in 2010 to 9.2 percent in 2015, but they were also the group with the highest unemployment rate.

The overall employment growth has however been achieved through the growth of self-employment, particularly own-account employment, and employment in services. The share of own-account workers in total employment increased from 50.2 percent in 2010 to 57.3 percent in 2015, while the share of employees in total employment has remained essentially unchanged at about 31.1 percent in 2010 and 30.6 percent in 2015. The share of employment in services increased from 26.1 percent in 2010 to 35.9 percent in 2015, while industrial employment remained almost unchanged at 4.9 percent in 2010 and 4.1 percent in 2015. Correspondingly, the share of agriculture employment in total employment decreased from 68.8 percent in 2010 to 59.3 percent in 2015.

The youth population (15-24 years old) continued to bear the highest risk of unemployment. The youth unemployment rate (12.3 percent) was more than double than the national average (4.8 percent). The unemployment rate of the educated youth with university education was even higher at 20.0 percent. Some 77,900 young persons were not in employment, nor in education or training (NEET), representing about 20.3 percent of the total youth population. Among those in employment, about 7 percent were engaged in occupations with skill requirement below their educational attainment.

Women gained a clear advance in the labour force during the last five years. While, the female labour force participation rate (35.8 percent) remained substantially lower than the corresponding male rate (71.1 percent), the gender gap has significantly narrowed across all age groups between 2010 and 2015. Women in managerial positions, however, continue to be a minority (2,910 women against 8,387 men) and gender segregation among female- and male- dominated occupations subsists, particularly, housekeepers and related service workers, and home-based social workers of whom 91 percent were women.

In terms of geographical distribution, an interesting aspect of the census results is the case of Dili. The data show that Dili was the only municipality having more incoming (9,669) than outgoing (784) migrants in the labour force during the last five years. Yet, Dili was also the municipality with the lowest labour force participation rate (45.3 percent against the national rate of 56.1 percent) and the highest unemployment rate (10.6 percent against the national rate of 4.8 percent).

Recommendations

The 2015 Census questionnaire was designed with a number of questions that address several labour force characteristics in a single question. For example, census question P30 attempts in fact to measure four distinct labour force concepts, namely, employment, status in employment, unemployment and

reason for being outside the labour force. Such procedure increases the risk of measurement errors and misclassifications. In the example given above, some retired persons who were working or seeking work during the reference period may be erroneously recorded as category 10 (Pensioner, retired, elderly person) and therefore as not currently in the labour force.

The 2015 Census questionnaire was designed in line with the international standards on statistics of the economically active population, employment, unemployment and underemployment adopted by the 13th International Conference of Labour Statisticians (1982). It is recommended that the next census questionnaire be designed in line with the latest international standards adopted by the 19th International Conference of Labour Statisticians (2013). One implication of the new standards is the distinction between “work” and “employment” and the statistical treatment of own-use producers and in particular subsistence foodstuff producers, not classified as employed under the new standards.

The 2015 Census data file included many blanks and inconsistencies with adverse effects on the tabulation plan and the analysis of the results. For example, there were 119,788 employed persons (15-64 years) with educational attainment recorded as “None”. This number represents more than one third of the employed population in the core age group. There were also a high number of persons who provided inconsistent responses to age and educational attainment, for example, 15 years of age and completed university education. To remove inconsistencies and other reporting errors, it is recommended that a software dedicated for editing census data should be acquired and developed for use in future censuses.

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International
Labour
Organization

Directorate General of Statistics

Caicoli Street, Dili, Timor-Leste

Contact

Telephone: +670 333 9806

Email: dge@mof.gov.tl

Website: www.statistics.gov.tl