



Government of Tonga



# Tonga Labour Force Survey (TLFS 2018) Analytical Report



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## Foreword

The economically active population, or labour force, is the part of a country's human resources that contributes to the production of goods and the provision of services in a country. The economic and social development of a country depends on the number of persons who are economically active, the quality of their work and the regularity of their job. The primary objective of a labour force survey is to provide labour market statistics for development. The findings of the Tonga Labour Force Survey 2018 (TLFS 2018) will enhance monitoring and evaluation of the Tonga Strategic Development Framework (TSDF), Ministerial Strategic Plans, Budget briefs and the Sustainable Development Goals (SDGs) with respect to economic growth and reduced unemployment.

The TLFS 2018 was conducted as a joint exercise between the Tonga Statistics Department and the Ministry of Trade and Economic Development (MTED) and was funded by the Government of Tonga. The survey was more comprehensive in coverage than the TLFS 2003 and followed latest international guidelines from the ILO.

Apart from social and demographic indicators, the report has statistics, among others, on the working age population (WAP), labour force, employment and characteristics thereof, subsistence production, informal employment, unemployment and characteristics thereof, earnings from employment, and working hours.

The significance of labour market statistics and indicators is substantial, as their availability improves planning processes in various aspects including employment creation, skills gap identification, and training programmes, as well as in determining the supply and demand of labour. The labour market statistics herein are derived on the basis of the 2013 labour force framework adopted at the 19th International Conference of Labour Statisticians (ICLS) that provided new guidelines for measuring and compiling work, employment and labour underutilization statistics.

The TLFS 2018 was carried out with the assistance and efforts of many people. The Hon Minister of Finance approved funding from the government to conduct this survey. Stakeholders offered guidance on the implementation of the Survey, including Mr Edgar Cocker Former CEO Ministry of Labour and Economic Development, and Dr Viliami Fifita Government Statistics Department, Ms Kolotia Fotu and staff from the Labour Division, Ministry of Labour and Economic Development.

The department acknowledges the valuable contribution made by the ILO and is particularly grateful to Mr Tite Habiyakare, Mr Yves Perardel, Mr Christian Viegelahn, Mr Tejeshwi Bhattarai, Mr Phu Huynh and Mr Peter Buwembo for their assistance and guidance. I also extend my sincere thanks to the technical assistance from SPC Mr Bertrand Buffiere, Mr Michael Sharp and Mr Winston Fainga'anuku for finalizing the survey data, producing tabulation and the statistical tables and contributing to this report.

I would like to acknowledge the work of the staff of the Census and Survey Division of the Statistics Department for coordinating the survey, Mr Winston Fainga'anuku and Ms Lu'isa Veapina Uasike, as well as Mr Sione Lolohea, Ms Lupe Moala Tupou, and Ms Falemasiva Fonua, for compiling the initial report.

Last but not the least, I would like to take this opportunity to extend my sincere gratitude to 2,644 households who rendered their cooperation in providing detailed information during the implementation of the survey; the district and town officers for their support; the hard-working enumerators and supervisors during the fieldwork. Without their full cooperation, the survey would not have been a success.

Malo 'Aupito

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# Acronyms and Abbreviations

Acronym	Description
EPR	Employment to Population Ratio
ICSE 93	International Classification of Status of Employment 1993
IER	Informal Employment Rate
ILO	International Labour Organization
ISCED 97	International Standard Classification of Education 1997
ISCO 08	International Standard Classification of Occupation 2008
ISIC R4	International Standard Industrial Classification Revision 4
LF	Labour Force
LFPR	Labour Force Participation Rate
LFS	Labour Force Survey
MTED	Ministry of Trade and Economic Development
SDGs	Sustainable Development Goals
TSD	Tonga Statistics Department
TSDF	Tonga Strategic Development Framework
WAP	Working Age Population

# Tonga Labour force survey 2018:

## Summary of labour force indicators

Table 1: *Selected Indicators*

Selected Indicators	Tongatapu Tongatapu							Ongo Niua	Total <sup>1</sup>
	Male	Female	Urban	Rural	Vava'u	Ha'apai	'Eua		
Working-age Population, aged 15+	29,527	33,662	16,527	33,024	7,942	2,714	2,109	873	63,189
Labour force	16,589	12,914	7,116	15,098	4,654	1,201	809	625	29,504
<b>By education (% distribution)</b>									
Less than primary	0.3%	-	0.2%	0.2%	0.1%	0.4%	-	-	0.2%
Completed primary	30.1%	24.8%	21.4%	23.3%	41.7%	51.7%	44.3%	39.2%	27.8%
Completed secondary	59.9%	61.8%	58.8%	66.4%	51.0%	45.5%	51.4%	60.8%	60.7%
Tertiary (first stage or completed)	9.7%	13.4%	19.6%	10.2%	7.2%	2.4%	4.3%	-	11.3%
Labour force participation rate (%)	56.2%	38.4%	43.1%	45.7%	58.6%	44.3%	38.4%	71.6%	46.7%
<b>Employment</b>	<b>16,153</b>	<b>12,445</b>	<b>6,871</b>	<b>14,534</b>	<b>4,589</b>	<b>1,196</b>	<b>789</b>	<b>619</b>	<b>28,598</b>
<b>By economic sector (% distribution)</b>									
Agriculture, forestry and fishery	33.8%	1.9%	5.0%	20.8%	32.4%	28.8%	38.2%	28.2%	19.8%
Industry	21.8%	41.4%	22.4%	31.7%	35.2%	32.9%	30.3%	48.3%	30.4%
Services	44.4%	56.7%	72.6%	47.5%	32.4%	38.3%	31.5%	23.6%	49.8%
<b>By employment status (% distribution)</b>									
Employees	58.9%	52.3%	79.0%	54.3%	39.3%	38.0%	29.8%	32.5%	56.0%
Employers	13.8%	19.1%	10.4%	19.0%	20.6%	6.0%	9.8%	5.9%	16.1%
Own-account workers	22.8%	22.4%	7.6%	22.4%	27.9%	50.5%	57.7%	59.1%	22.7%
Contributing family workers	4.5%	6.2%	3.0%	4.4%	12.2%	5.5%	2.7%	2.5%	5.3%
Share of informal employment (%)	79.7%	75.6%	70.9%	74.9%	91.6%	92.5%	88.1%	83.9%	77.9%
<b>Average monthly wages, employees</b>	<b>1,754</b>	<b>1,240</b>							<b>1,539</b>
<b>Labour underutilization</b>									
Time-related underemployment	1,111	633	348	1,065	263	45	6	18	1,745
Unemployment	436	469	245	564	66	5	20	6	905
Potential labour force	1,598	1,931	616	2,172	391	241	83	27	3,530
<b>Labour underutilization rate (%)</b>									
Time-related underemployment rate	6.9%	5.1%	5.1%	7.3%	5.7%	3.8%	0.7%	3.0%	6.1%
Unemployment rate	2.6%	3.6%	3.4%	3.7%	1.4%	0.4%	2.5%	1.0%	3.1%
Potential labour force rate	8.8%	13.0%	8.0%	12.6%	7.7%	16.7%	9.3%	4.1%	10.7%

<sup>1</sup>**Note:** Due to rounding, the totals in the statistical tabulations in this report can be  $\pm 1$  off the total of the items.

# Executive Summary

## Background

This report highlights the results of the Tonga Labour Force Survey 2018 (TLFS), which is the second comprehensive labour force survey conducted in Tonga after the TLFS 2003. The report on the labour force situation in Tonga is intended to inform policy makers and implementers in effective policy-making and planning so that the interests of the working population and human development are reflected in the national priorities. The Tongan labour force consists of persons aged 15 years and above who were either employed (in paid employment, self-employed and unpaid family workers) or unemployed (without work and available for work)

## Population profile and household size

Population and household size are very important in order to fully comprehend the structure of the population. Employed persons normally work to support themselves and their families. Therefore, the size of the population and the household size are important to assess the burden carried by employed persons and the position of households to supply labour in the workforce.

The results from the 2018 TLFS shows that the total population of Tonga was 99,600 persons where 51.6 per cent were women while 48.4 per cent were men. The average household size was 5.3 persons per household, with male-headed households having a higher average number of persons per household (5.4) than female-headed households (4.7).

## Working-age population and labour force

The working-age population, defined as the population aged 15 years and above, consisted of 63,189 persons. 52.3 per cent of the working-age population were located in Tongatapu Rural, 26.2 per cent in Tongatapu Urban, and the remaining 21.5 per cent in other island divisions. The labour force participation rate was 46.7 per cent (with 56.2 per cent for men and 38.4 per cent for women). The labour force participation rate in Tongatapu Rural stood at 45.7 per cent, compared to 43.1 per cent in Tongatapu Urban.

Persons who attained tertiary level of education had the highest labour force participation rate, corresponding to 67.9 per cent, followed by those with completed secondary level (48.0 per cent). Lower labour force participation rates were observed among persons with completed primary education (39.7 per cent) and less than primary education (14.9 per cent).

## *Employed population*

The overall number of persons in employment was 28,598, of which 56.5 per cent were men and 43.5 per cent were women. By economic sector, manufacturing accounted for the largest share of employment, corresponding to 20.4 per cent. About 19.8 per cent were employed in agriculture, forestry and fishing, followed by 9.0 per cent in administrative and support service activities and 8.6 per cent in construction. The largest sector of employment for women was manufacturing (40.9 per cent), while the largest sector of employment for men was agriculture, forestry and fishing (33.8 per cent). By occupation, the largest share of the employed population are craft and trade-related workers (27.2 per cent), followed by skilled agricultural, forestry and fishery workers (17.8 per cent).

## *Informal sector and informal employment*

The informal sector accounted for 46.8 per cent of total employment, 52.9 per cent of male employment and 39.0 per cent of female employment. The share of informal sector employment in total employment was highest among workers aged 65 or older (56.6 per cent), followed by young workers aged 15-24 (53.1 per cent), and workers aged 25-64 (45.1 per cent). An analysis of the data by level of educational attainment shows that the highest shares of employment in the informal sector can be observed among workers with completed primary education (91.5 per cent), followed by completed secondary education (77.5 per cent).

The overall informal employment accounted for 77.9 per cent of total employment (79.7 per cent for male and 75.6 per cent for female). According to the findings, informal employment incidence was highest in agriculture, forestry, and fishery (95.7 per cent of the total employment in that sector). About 88.4 per cent of all workers in the industry sector and 64.1 per cent of all workers in services were informally employed persons.

## *Unemployment*

An estimated 905 persons aged 15 or older were unemployed in 2018. The number of unemployed men was 437, compared with 469 unemployed women. The overall unemployment rate stood at 3.1 per cent, while youth unemployment reached 8.9 per cent.

Table 2: *Key Statistics*

<b>Population aged 15 years and over</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Working-age population	29,527	33,662	63,189
Labour force	16,589	12,914	29,504
Employment	16,153	12,445	28,598
Labour force participation rate (%)	56.2%	38.4%	46.7%
Unemployment rate (%)	2.6%	3.6%	3.1%
Composite rate of labour underutilization <sup>2</sup> (%)	17.3%	20.4%	18.7%
Youth unemployment rate, aged 15-24 (%)	5.7%	13.0%	8.9%
Informal employment rate (%)	79.7%	75.6%	77.9%
Average monthly wages, employees	1,754	1,240	1,539
Aged 15-24 not in education, employment or training	29.0%	31.5%	30.3%

<sup>2</sup>Composite rate of labour underutilization = combine rate of Unemployment, time-related underemployment and potential labour force.

# Chapter 1

## Background Information

### 1.1 Introduction

Labour force and the working-age population is a vital part of any society which enables households to generate income as well as contributing to national economic growth. The working-age population constitutes the human capital of the country contributing to economic productivity as well as its potential labour supply.

The aim of the nationwide survey was to provide benchmark data on some characteristics of the labour market. The first Labour Force Survey was conducted in 2003 and the 2018 Labour Force Survey is the second to be undertaken by the Statistics Department.

### 1.2 Objectives

The broad objective of the 2018 TLFS is to obtain comprehensive data on the status of the labour market in Tonga. The specific objectives of the survey include obtaining information on the Working Age Group (WAP), Labour Force Population (LF), Labour Force Participation Rates (LFPR); employed population; employment to population ratios; unemployed rate; hours of work; employment in the informal sector and informal employment; outside the labour force rates; educational attainment; and income from employment.

### 1.3 Contents of the report

This report presents only the key findings of the labour force component.

### 1.4 Concepts and definitions

#### *Working Age Population (WAP)*

Refers to all those persons aged 15 years old and above.

$$WAP (15^{+}\text{years}) = \text{Labour Force (LF)} + \text{Not in Labour Force (NLF)}$$

***Labour Force (LF)***

Refers to the total of employed and unemployed population of the working age population.

$$LF = E \text{ (Employed)} + U \text{ (Unemployed)}$$

***Not in Labour Force (NLF) or Population outside of the labour force***

Refers to the population of the working age who are not part of the labour force. It also refers to the working age population who are neither employed nor unemployed.

***Potential Labour Force (PLF)***

Refers to those of the working age population who, during a short reference period, were neither in employment nor in unemployment, and carried out activities to seek employment but were not currently available for employment (unavailable jobseekers), or did not carry out activities to seek employment but wanted employment and were currently available (available potential jobseekers). It is sometimes referred to as ‘marginal attachment’ to the labour force.

***Employed (E)***

Those of the working population who, during a short reference period, were engaged in any activity to produce goods or provide services for pay or profit for at least one hour. It includes those who had a job or enterprise but were absent from the job or enterprise during the reference period temporarily, such as those who were sick, or on paternity, maternity or annual leave.

***Unemployed (U)***

Those of the working age population who were not in employment, carried out activities to seek employment during a specified period **AND** were currently available to take up employment given an opportunity.

***Time-Related Underemployment (TRU)***

Those in employment who, during a short reference period, wanted to work additional hours, whose working time in all jobs was less than a specified hour’s threshold, and who were available to work additional hours given an opportunity for more work. The threshold used in Tonga is at 40 hours of work per week.

***Labour Underutilization (LU)***

The composite measure of all those who are unemployed, in time-related underemployment or in the potential labour force (marginal attachment).

$$LU = TRU + U + LF$$

### *Status in employment*

The position of the employed person at his/her place of work with regard to its employment relation with the employing economic unit or business, as classified according to the International Classification of Status in Employment of 1993 (ICSE-93), namely:

- **Wage and salaried employee** - A person who works in any economic unit such as the government department, private business enterprises or organizations, including family businesses, and receives regular pay;
- **Employer** - A person who runs a business on his/her own or in partnership and engages at least one paid employee on a continuous basis in operating the business;
- **Own account worker** - A person who runs a business on his/her own or in partnership but does not engage any paid employee on regular basis (self-employed and not employing others);
- **Contributing family worker** - A person who works in his/her family business without receiving any regular pay.

### *Employment by industry*

The kind of economic unit or kind of goods produced by the unit in which the employed person worked during the reference period, classified according to the International Standard Industrial Classification of All Economics Activities (ISIC).

### *Employment by occupation*

The kind of work or group of tasks done during the reference period by the person employed, classified according to the International Standard Classification of Occupations (ISCO).

### *Informal employment*

Refers to the type of employment where the diversified set of economic activities, enterprises, jobs, and workers are not regulated or protected by the government, have no explicit or written contracts of employment, no certain employment benefits (such as social protection coverage, severance pay, paid sick and annual leave) or for which labour regulations are not applied nor enforced.

*Informal employment* comprises all persons with informal jobs, whether in formal or informal sector, or in households, i.e.: own-account workers, employers and members of producers' cooperatives in the informal sector; all contributing family workers (formal and informal sectors); and all employees with informal jobs, not covered by any of the relevant employment benefits. The informal sector is comprised of economic units (business enterprises) that are not covered or not fully covered by formal requirements by law; or informal arrangements in practice.

### *Youth*

Refers to all those aged 15 – 24 years.

***Unemployment Rate (UR)***

Is the proportion of the labour force that is unemployed

$$UR = \frac{\text{Persons Unemployed}}{LF} \times 100\%$$

***Employment to Population Ratio (EPR)***

Is the proportion of the working age population that is employed.

$$EPR = \frac{\text{Persons Employed}}{WAP} \times 100\%$$

***Labour Force Participation Rate (LFPR)***

Is the proportion of the working age population that engages actively in the labour market, either by working or looking and available for work.

$$LFPR = \frac{LF}{WAP} \times 100\%$$

**1.5 Main classifications used in this report**

<b><i>ISCO 2008</i></b>	Is the latest International Standard Classification of Occupation released by the ILO, also known as ISCO-08. It organizes jobs into a clearly defined set of groups of occupations according to the tasks and duties undertaken in the job with the aims of providing the basis for international reporting and to compare and exchange statistical and administrative data about occupations between countries
<b><i>ISIC Revision 4</i></b>	Is the latest version of the International Standard Industrial Classification, released by the UN Statistics Division (UNSD), also known as ISIC Rev.4. It is meant for classifying all economic activities for international comparison.
<b><i>ICSE 1993</i></b>	Is the International Classification of Status in Employment, adopted by the ILO's International Conference of Labour Statisticians in its resolution of the 15 <sup>th</sup> session in October 1993. It is used to classify jobs held by persons at a point in time with respect to the type of employment relationship between the holder and the economic unit in which he or she is employed. It has been recently revised by the 20 <sup>th</sup> ICLS of October 2018.
<b><i>ISCED 2011</i></b>	The International Standard Classification of Education, released by UNESCO, is a standard framework used by countries to compile and report education statistics for international comparability.
<b><i>Urban Area</i></b>	Urban areas or what is called Tongatapu urban, are constituted by the three villages of Nuku'alofa Kolofo'ou, Kolomotu'a and Ma'ufanga.
<b><i>Rural Area</i></b>	Rural area covers all villages except Kolofo'ou, Kolomotu'a and Ma'ufanga villages (Rural areas include Tongatapu Rural and Outer islands).



## Chapter 2

# Survey Methodology

### 2.1 Introduction

Statistical information is important for planning activities, assessing performance, tracing patterns, establishing scientific relationships and policy formulation for socio-economic development of a country. The TLFS 2018 is a nationwide household survey. The survey provides indicators, which are very important in monitoring and assessing the economic growth of a country. The labour force surveys are intended to collect, compile and analyse numerical information on the labour market. This information can also be used to assess the impact of various policies on social and economic activities of the people and consequently identify the disadvantaged groups of the population which will be used by policy makers to design relevant policies that address the labour market issues identified.

### 2.2 Scope and coverage

The main scope is the identification of the labour force, employment, unemployment and other forms of labour underutilization. The questionnaire developed in line with ILO recommendation covers also activities of production for own final use by households. The labour force component covered the adult population aged 15 years and above; all persons of that age were therefore interviewed, and information recorded were collected at household and individual level. The survey is designed to obtain national estimates on many variables, particularly in relation to the economic and non-economic activities of the population aged 15 or older (in the working age population).

The survey covered a sample of 2,644 households from randomly selected census blocks or enumeration areas distributed across five island divisions including Tongatapu, Vava'u, Ha'apai, 'Eua and the Ongo Niua. The analysis and all the tables pertaining to this report were aggregated to the national level.

### 2.3 Planning of the Survey

The implementation of the survey was divided into three major phases of execution. The first phase was the preparatory activities, which includes: development of survey instruments, questionnaire design, pretesting of questionnaire, sampling, and development of Computer Assisted Personal Interviewing (CAPI) based system, pilot surveys, listing of households and training of the field staff. The second phase was the actual data collection and processing and; the third phase involves data cleaning, analysis, report writing, validation and dissemination of the results.

### 2.3.1 Survey Instruments

Survey instruments for TLFS 2018 were comprised of questionnaires, listing forms, instruction manuals for enumerators and supervisors. All these instruments were adopted from ILO standard Questionnaire and Manual prior to the survey fieldwork.

The TLFS 2018 questionnaire was developed based on the ILO Standard Questionnaire, the extensive consultations with data users and other stakeholders such as Labour division, Youth and Disability organization in order to capture and satisfy their respective data needs. This follows by translation of questionnaires into Tongan language for the both interviewer and participants understanding.

### 2.3.2 Labour force module

The Labour Force module consists of household form and individual form. The household form was administered to capture head of the household and roster all the household members, and all household characteristics including assets/goods and so forth. The individual forms assigned to collect the individual or demographic information such as sex, age, education, and so forth.

It is also covering information on employment and labour force including: usual economic activities, current economic activities, main economic activities, hours of work and income from employment, and underemployment and unemployment.

### 2.3.3 Questionnaire

Tonga Labour Force Survey questionnaire comprises of 14 sections, as follows:

- **Section A:** Identification
- **Section B:** Individual characteristics
- **Section C:** Education (age 3+)
- **Section B & C:** Employment identification and Temporary Absence (Age 10+)
- **Section D:** Agriculture work and market destination
- **Section E1:** Main Employment Characteristics
- **Section E2:** Second paid job/ Business activity characteristics
- **Section F:** Income for employment
- **Section G:** Working time
- **Section H:** Job search
- **Section I:** Previous work experience
- **Section J:** Main Activity
- **Section K:** Own use production work
- Food Insecurity Experiences

The survey questionnaire is included in **Appendix**.

## 2.4 Sampling

The 2018 Tonga Labour Force Survey aimed at estimating all the main ILO indicators at the island group level (geographical stratas).

The sampling strategy were based on two stages stratified random survey.

1. Computation of the survey parameters:  
 Total sample size per strata, number of households to interview in each Primary Sampling Unit (PSU = census block) and number of PSUs to select  
 The stratification of the survey is the geographical breakdown by island group (6 stratas - Tongatapu urban, Tongatapu rural, Vava'u, Ha'apai, 'Eua, Ongo Niua)
2. The selection strategy is a 2 stages random survey, i.e. random selection of census blocks and random selection of households within each where:
  - Census blocks are randomly selected in first place, using probability proportional to size
  - 15 households per block are randomly selected using uniform probability
3. The sampling frame used to select PSUs (census blocks) and households is the 2016 Tonga population census.

### 2.4.1 Sample design and size definition

The computation of sample size required the use of:

- Tonga 2015 HIES dataset (labour force section)
- Tonga 2016 population census (distribution of households across the stratas)

The resource variable used to compute the sample size is the labour force participation rate from the 2015 HIES. The use of the 2015 labour force section of the Tonga HIES allows the computation of the design effect of the labour force participation rate within each strata. The design effect and sampling errors of the labour force participation rate estimated from the 2015 HIES in combination with the 2016 household population distribution allow to predict the minimum sample size required (per strata) to get a robust estimate from the 2018 LFS.

The allocation of 2,400 households using the optimal allocation provides the following sampling errors (labour force participation rate), see table 2.1 on the following page.

Table 2.1: *Optimal allocation and sampling error*

	Optimal Allocation Sample Size (hhs)	2018 LFS Sampling error (LF participation)	Final sample size (10% non-response) <sup>1</sup>
1. Tongatapu urban	570	2.2%	630
2. Tongatapu rural	600	3.3%	660
3. Vava'u	440	4.2%	495
4. Ha'apai	430	4.4%	480
5. Eua	280	3.9%	315
6. Niuas	110	4.2%	120
National	2,410	1.67%	2,700

### 2.4.2 Sampling Procedure

<b>Total sample size:</b>	2,700 households
<b>Geographical stratification:</b>	6 island groups
<b>Selection process:</b>	2 stages random survey where census blocks are selected using Probability Proportional to Size (Primary Sampling Unit) in the first place and households are randomly selected within each selected block (15 households per block)
<b>Non response:</b>	a 10% increase of the sample happened in all stratas to account for non-response
<b>Sampling frame:</b>	the household listing from the 2016 population census was used as a sampling frame and the 2015 labour force section of the HIES was used to compute the sample size (using labour force participation rate).

### 2.4.3 Response rates

The following table, Table 2.4, presents the response rates by strata.

Table 2.4: *Response rates by strata*

Strata	Sample size	number of households interviewed	response rate
1. Tongatapu urban	630	613	97.3%
2. Tongatapu rural	660	660	100.0%
3. Vava'u	495	495	100.0%
4. Ha'apai	480	480	100.0%
5. Eua	315	300	95.2%
6. Niuas	120	96	80.0%
NATIONAL	2,700	2,644	97.9%

<sup>1</sup>Note the 10% increase in each strata to account for non-response provides a total sample size of 2,700 households.

### 2.4.4 Weighting Procedures

The weighting process started with the computation of the sampling weight at the household level.

The household weights were computed using the inverse of the factor of the probability of selection of the PSU and the probability of selection of the household within the selected PSU.

Figure 2.1 is the population structure comparison when the LF survey data are extrapolated using this first set of weights.

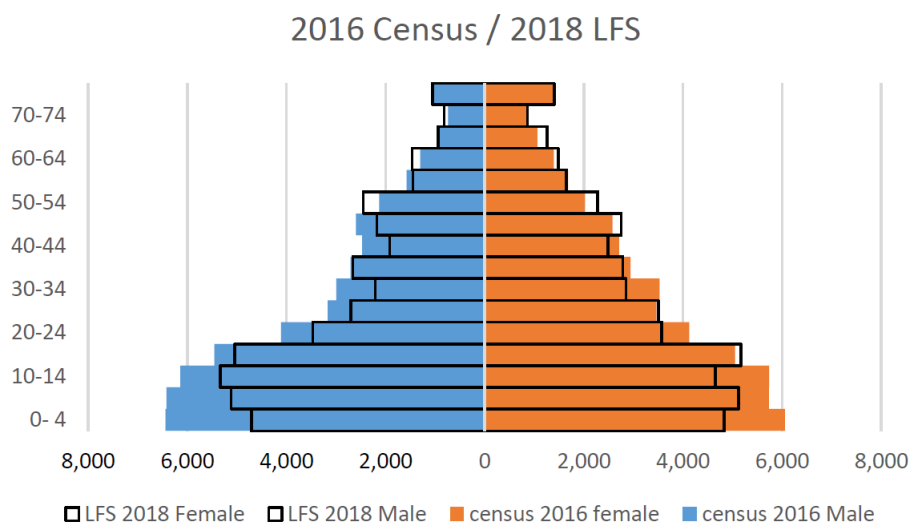


Figure 2.1: Comparison of 2016 Census and 2018 LFS Age Group and Sex Distribution (first weights)

It appears clearly that the population does not match the population structure at the youngest age groups. This is why this first set of household weights was adjusted to match the population age structure (using the Stata command `reweight`), see Figure 2.2.

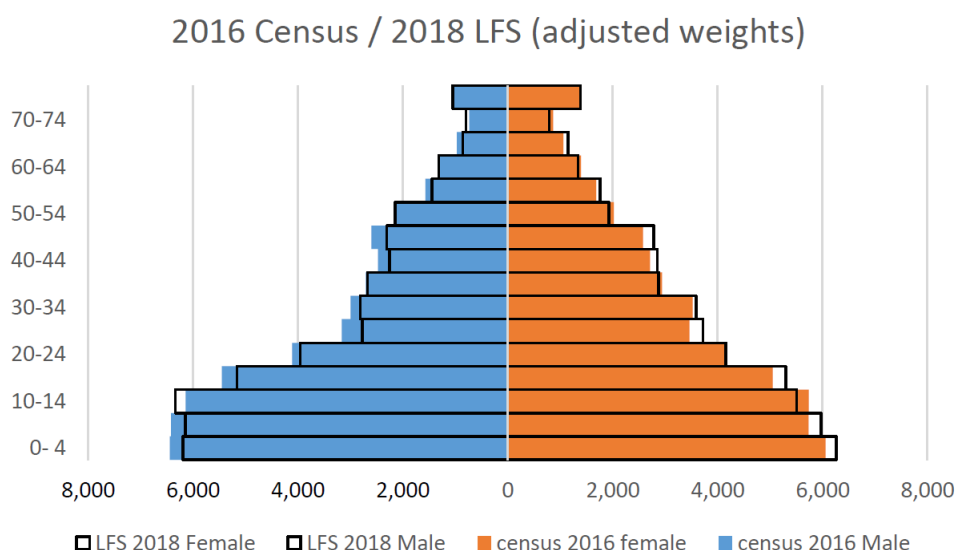


Figure 2.2: Comparison of 2016 Census and 2018 LFS Age Group and Sex Distribution (adjusted weights)

## 2.5 Recruitment of the field staff

The recruitment of field staffs was conducted with an early choice of how many potential recruits. Training of the field staffs on the paper questionnaire was first conducted and was followed by CAPI test. Labour Force Survey protocols, the definition of terms and translation of the questionnaire questions were fully discussed in detail to avoid the possibilities of misinterpretations and as well as to lessen interviewer errors as much as possible. After the training session, an assessment was given to measure their understanding level of the tools by the field staff. After that, the bests were selected while those were dropped were reserved in case someone failed to take part in the survey during the data collection exercise, they can step in.

### 2.5.1 Training of field staff, enumerators and supervisors

To properly conduct the nationwide survey, intensive training programs were arranged for the survey supervisors and enumerators as well as the survey coordinators.

The training was conducted for seven days from 24th May to 1st into two phases: the first phase was the training on the paper questionnaire followed by training on the CAPI version of the questionnaire. As the questionnaire was in English, it was then translated into Tongan so that there will be a common translation of the terminologies by the field staff during the data collection exercise.

The training involved classroom lectures, assessments, mock interviews and a pilot survey to assess understanding of the fieldwork.

### 2.5.2 Pilot Test

Before conducting the actual survey, a pilot test was conducted in two weeks for four census blocks, two blocks from Urban and the other from Tongatapu rural.

The pilot test had the following objectives:

- test the effectiveness and consistency of the questionnaire for appropriateness of the wordings, the skipping instructions and clarity;
- test the enumerators' and interviewers' understanding of the questions;
- obtain feedback from field staff in suggesting what worked well and what could be improved;
- measure the average length of the interview, duration of the listing per enumeration area as well as the average time required to travel from place to place;
- verify the field use of the instructions in the enumerators' manual;
- establish the appropriate operational procedures for the survey;
- and gather insights from the experience and obtain a good idea of the real conditions that could be expected in the actual survey.

The results of the pilot test were used to finalizing questionnaire and decision making in a way to improve the actual survey.

## 2.6 Fieldwork

The data collection was carried on the 5<sup>th</sup> of June and completed on the 6<sup>th</sup> of July 2018. Fieldwork was conducted by 50 enumerators, 12 supervisors and 15 headquarters staff. There were 35 interviewers for Tongatapu, 6 for Vava'u, 4 for Ha'apai and 3 interviewers for 'Eua and only 2 for the Ongo Niua. Fieldwork updated the household listing for each selected census block – and made the household selection – on day one, before contact with the households.

All survey teams in each island were closely monitored and supervised by the headquarters in multiple visits in order to facilitate and provide technical assistance if any issue happened during the field data collection.

## 2.7 Data Processing

Data Processing activities for the TLFS 2018 involved various stages, which include: Data was firstly controlled using Validation build into the CAPI questionnaire with Survey Solutions to check consistency, out of range, errors and others. This enables the interviewer to do the entry from the field at the time of interview and these validation checks alert them if some response is wrong.

The secondary was the real-time checking done by the supervisors and headquarters during fieldwork in order to check consistency within a few questions like the household's income and the individual member's source of income, needs and availability and some other section like transport, education, and health.

Finally, STATA was then used to do the cleaning and editing of the raw data. Most of the edit and imputation did was for the multi-selected question. A hot-deck technique was used for data editing. Tabulation was done according to some tabulation plan provided by ILO.

## 2.8 Data Analysis and Report Writing

Dummy tables were prepared and reviewed and this was followed by the generation of the tables, with the assistance of the SPC and the ILO. After the analysis, the report was prepared.

## 2.9 Dissemination

Dissemination is an important component of any statistical findings. The operation would be of value only if the findings obtained are adequately used to inform policymaking processes and evaluation, this information is largely shared through dissemination. The report can also be obtained from the TSD website: <http://tonga.prism.sp.int/> or hard copy from the office of Tonga Statistics Department.

## Chapter 3

# Demographic characteristics

### 3.1 Introduction

Chapter 3 presents demographic characteristics of the total Tongan population in 2018. The chapter includes information on the number of households by household size, as well as the average household size, by sex of the head of the household and by island division (Table 3.1). It also shows the distribution of the total population by island division, by age and by sex (Table 3.2 on the following page).

Data on the demographic characteristics of a population can help governments in their decision-making with regard to a wide array of policies, including policies related to pensions, health care or education. Such data also help governments and social partners to prepare well for issues related to population growth and the demographic structure of the population.

### 3.2 Household size

In Tonga, there was a total of 18,939 households in 2018, with an average household size of 5.3 persons per household. Most of the households had a household size of 5-6 persons (28.9 per cent), followed by 3-4 persons (27.9 per cent), 7+ persons (27.3 per cent) and 1-2 persons (15.9 per cent). Male headed household had a higher average number of persons per household (5.4) than female headed households (4.7). By island division, Tongatapu had the highest average number of persons in a household (5.7 in Tongatapu Urban and 5.6 in Tongatapu Rural), while Ha'apai had the smallest number (3.6).

Table 3.1: *Household characteristics*

Characteristic	Male head	Female head	Tongatapu Urban	Tongatapu Rural	Vava'u	Ha'apai	'Eua	Ongo Niua	Total
Household size	5.4	4.7	5.7	5.6	4.5	3.6	4.0	4.0	5.3
<i>Average occupants</i>									
1-2	2,018	990	534	1,284	497	373	234	88	3,009
3-4	3,974	1,311	1,041	2,393	986	438	327	100	5,285
5-6	4,073	1,397	1,456	2,648	828	249	190	101	5,470
7+	4,303	873	1,383	3,135	428	72	119	40	5,176



### 3.3 Characteristics of the population

The total Tongan population in 2018 was 99,600 persons. The majority of the population was based in Tongatapu, with 53,162 persons living in Tongatapu Rural (53.4 per cent) and 15,319 persons living in Tongatapu Urban (25.4 per cent). The smallest island division in terms of population is Ongo Niua with 1,326 persons (1.3 per cent). In Vava'u, Ha'apai and 'Eua, there were respectively 12,251 (12.3 per cent), 4,022 (4.0 per cent) and 3,519 (3.5 per cent) persons. There were more women (51.6 per cent of the population) than men (48.4 per cent) in the Tongan population.

Table 3.2: *Total population by age, sex, and regions*

	Male	Female	Tongatapu Urban	Tongatapu Rural	Vava'u	Ha'apai	'Eua	Ongo Niua	Total
<b>Total population</b>	48,195	51,405	25,319	53,162	12,251	4,022	3,519	1,326	99,600
<i>By 5 years age groups</i>									
0-4	6,189	6,263	3,147	6,682	1,542	436	490	153	12,451
5-9	6,144	5,972	2,966	6,648	1,365	517	460	159	12,116
10-14	6,335	5,509	2,678	6,808	1,402	356	459	141	11,844
15-19	5,159	5,304	2,588	6,106	1,132	244	277	115	10,463
20-24	3,952	4,159	2,556	4,301	807	235	154	59	8,111
25-29	2,769	3,719	1,925	3,435	672	224	157	75	6,488
30-34	2,808	3,595	1,652	3,307	803	278	245	118	6,403
35-39	2,673	2,876	1,257	3,052	666	307	191	76	5,549
40-44	2,256	2,855	1,285	2,504	735	325	206	56	5,111
45-49	2,303	2,785	1,331	2,451	764	253	236	54	5,088
50-54	2,144	1,935	966	2,067	661	184	121	79	4,079
55-59	1,441	1,762	792	1,624	370	214	154	50	3,203
60-64	1,317	1,344	700	1,275	396	136	114	40	2,661
65-69	859	1,153	531	959	299	122	74	28	2,012
70-74	797	791	299	811	317	69	65	27	1,588
75+	1,048	1,385	646	1,132	321	124	115	95	2,433

#### 3.3.1 Age Structure

The distribution of the Tongan population by age was highly skewed, see Figure 3.1, with more than half of the population aged younger than 25 years. Almost one quarter of the population were children aged younger than 10 years. When splitting up the total population into five-year age intervals, the largest share of the population fell into the age interval of 0-4 years (12,451 people or 12.5 per cent). The population size gradually decreases with increasing age intervals. The age groups 65-69 (2,012 people or 2.0 per cent), 70-74 (1,588 people or 1.6 per cent) and 75+ (2,433 people or 2.4 per cent) included the smallest number of people.

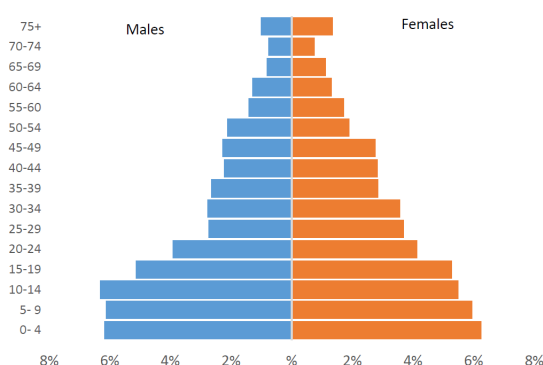


Figure 3.1: *Age group and sex of the total population*

## Chapter 4

# Working-age population and labour force

### 4.1 Introduction

This chapter presents information on the working-age population, which refers to the population aged 15 and above, in line with the ILO definition. The working-age population consists of the labour force and the population outside the labour force. This chapter also includes information on the labour force by age group and by educational attainment, as well as the population outside the labour force.

In 2018, the Tongan working-age population stood at 63,189, corresponding to 63.4 per cent of the total population. More than half of the working-age population (33,024 or 52.3 per cent) was located in Tongatapu Rural, and more than one quarter was located in Tongatapu Urban (16,527 or 26.2 per cent). Furthermore, 53.3 per cent of the working-age population were women and 46.7 per cent were men. In the working-age population, the share of women exceeded the share of men hence by a larger margin than in the total population.

### 4.2 Labour force

The labour force is composed of the employed and the unemployed population, aged 15 years and above. In 2018, the Tongan labour force stood at 29,504 persons where 56.2 percent were men and 43.8 percent were women (Table 4.1 on the following page). The majority of the labour force was located in Tongatapu Rural (51.2 per cent), followed by Tongatapu Urban (24.1 per cent). The island Vava'u accounted for 15.8 per cent of the labour force and less than 5 per cent of the labour force were from Ha'apai, 'Eua and the Ongo Niua. Figure 4.1 on page 19 shows the Labour Force by island division.

#### Labour force by educational attainment

The majority of the labour force, corresponding to 17,918 persons (60.7 percent), completed secondary education. The labour force further includes 8,198 persons (27.8 per cent) with completed primary education and 3,341 persons (11.3 per cent) who started or completed tertiary education. Only an estimated 47 workers (0.2 per cent) in the labour force have less than primary education. There are more women than men in the labour force that have started or completed tertiary education. In contrast, there are more men than women with completed primary or secondary education.

Table 4.1: *Working-age population characteristics and labour force*

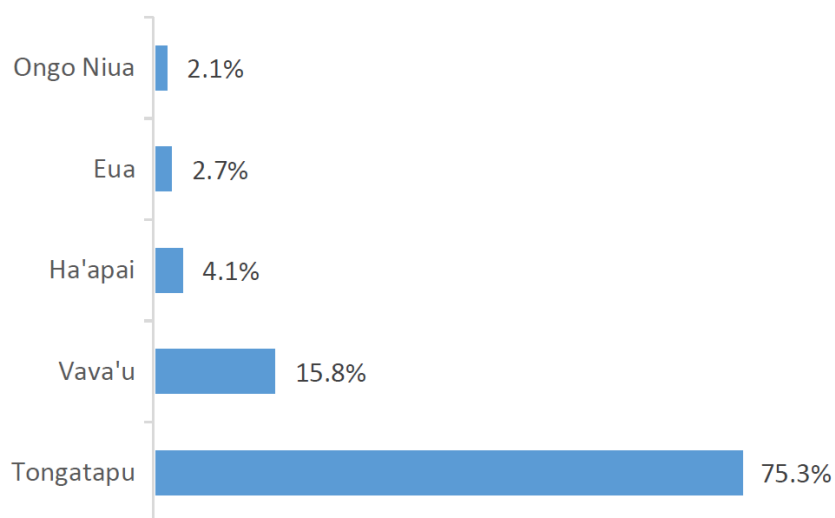
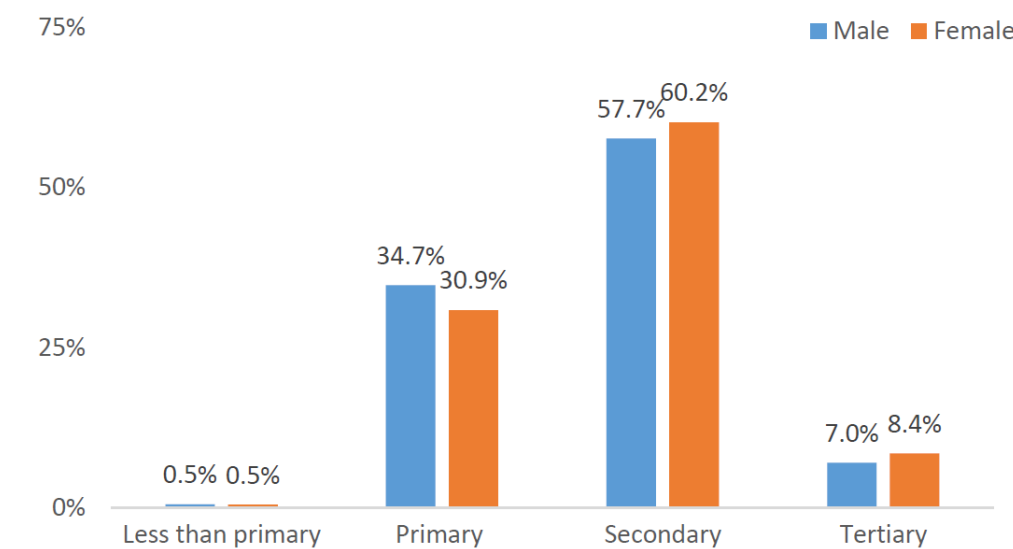
	Male	Female	Tongatapu Urban	Tongatapu Rural	Vava'u	Ha'apai	'Eua	Ongo Niua	Total
<b>Working-age Population (aged 15+)</b>	29,527	33,662	16,527	33,024	7,942	2,714	2,109	873	63,189
<b>By educational attainment</b>									
Less than primary	162	154	117	112	57	15	7	7	316
Completed primary	10,259	10,392	4,636	9,625	3,420	1,587	1,030	353	20,651
Completed secondary	17,033	20,271	9,715	20,982	4,022	1,067	1,006	513	37,304
Tertiary	2,074	2,844	2,060	2,306	442	45	65	-	4,918
<b>Labour force</b>	16,589	12,914	7,116	15,098	4,654	1,201	809	625	29,504
<b>By age group</b>									
15-24	2,556	1,980	1,260	2,418	626	105	52	75	4,535
25-64	13,120	10,471	5,622	12,017	3,723	1,029	714	486	23,591
65+	913	464	234	662	306	67	43	64	1,377
<b>By educational attainment</b>									
Less than primary	47	-	15	23	5	4	-	-	47
Completed primary	4,991	3,206	1,521	3,511	1,941	621	358	245	8,198
Completed secondary	9,940	7,979	4,184	10,019	2,372	547	416	380	17,918
Tertiary	1,611	1,729	1,396	1,545	336	29	35	-	3,341
<b>Outside labour force</b>	12,938	20,747	9,411	17,926	3,288	1,513	1,300	248	33,685
<b>Labour force participation rate (%)</b>	56.2%	38.4%	43.1%	45.7%	58.6%	44.3%	38.4%	71.6%	46.7%
<b>By age group</b>									
15-24	28.1%	20.9%	24.5%	23.2%	32.3%	21.8%	12.0%	43.0%	24.4%
25-64	74.1%	50.2%	56.7%	61.0%	73.5%	53.6%	50.2%	88.6%	61.1%
65+	33.8%	13.9%	15.9%	22.8%	32.7%	21.3%	17.0%	42.8%	22.8%
<b>Labour force</b>									
Less than primary	29.1%	0.0%	12.9%	20.3%	8.5%	29.3%	0.0%	0.0%	14.9%
Completed primary	48.7%	30.9%	32.8%	36.5%	56.8%	39.1%	34.7%	69.4%	39.7%
Completed secondary	58.4%	39.4%	43.1%	47.8%	59.0%	51.2%	41.3%	74.2%	48.0%
Tertiary	77.7%	60.8%	67.8%	67.0%	75.9%	64.9%	54.0%	-	67.9%

### 4.3 Labour force participation rate

In 2018, the Tongan labour force participation rate stood at 46.7 per cent. Men have a higher labour force participation rate (56.2 per cent) than women (38.4 per cent), which holds for the age groups 15-24, 25-64 and 65+. By island division, Ongo Niua had the highest labour force participation rate (71.6 per cent). Tongatapu Urban had a lower labour force participation rate (43.1 per cent) than Tongatapu Rural (45.7 per cent). The labour force participation rate is higher for higher degrees of educational attainment. Those with tertiary education have the highest labour force participation rate (77.7 per cent).

### 4.4 The population outside the labour force

The population outside the labour force is defined as people who are neither in employment nor in unemployment, including students, old age and those engaged in unpaid domestic duties. In 2018, 33,685 persons were outside the labour force in Tonga, including 61.6 per cent men and 38.4 per cent women. More than half of the population outside the labour force was located in Tongatapu Rural (53.2 percent), compared with about a quarter (27.9 per cent) in Tongatapu Urban.

Figure 4.1: *Labour force by island division*Figure 4.2: *People in the labour force and highest level of education completed*

# Chapter 5

## Employment

### 5.1 Introduction

This chapter presents information on the characteristics of employed persons. The employed population comprises all persons of working-age who were in paid employment or self-employment. It hence also includes those who operates a business whether as an employer or as an own account worker. See Table 5.1 on page 22.

### 5.2 Employed population by age group and by sex

A total of 28,598 persons were in employment in 2018 of which 16,153 (56.5 percent) were men and 12,445 (43.5 percent) were women (Table 5.1 on page 22). More than half of the population in employment (50.8 per cent) was located in Tongatapu Rural, and almost one quarter (24.0 per cent) was located in Tongatapu Rural. The remaining quarter was located in other island divisions. Out of the 28,598 persons that were in employment, 4,131 persons (14.4 per cent) were youth aged between 15 and 24 (Figure 5.1).

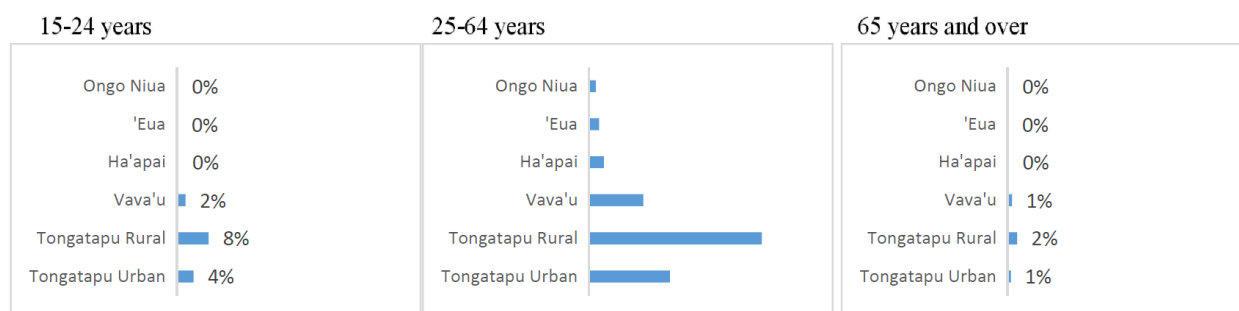


Figure 5.1: *Employed population by region, age group and sex (% of total employed)*

### 5.3 Employment by industry

The distribution of the population in employment by industry (based on ISIC Rev. 4) and sex, shows that the largest industry in terms of employment was the manufacturing sector (20.4 per cent), followed by agriculture, forestry and fishing (19.8 per cent). Other large sectors in terms of employment were administrative and support service activities (9.0 per cent) and construction (8.6 per cent). The largest sector of employment for women

<sup>1</sup>Note: "Data from some individual cells or categories should be used with caution due possible sampling errors (fewer sample cases)."

was manufacturing (40.9 per cent), while the largest sector of employment for men was agriculture, forestry and fishing (33.8 per cent).

## 5.4 Status of employment

Employees make up over half (56.0 percent) of the employed population, followed by own-account workers (22.7 per cent), employers (16.1 per cent) and contributing family workers (5.3 per cent). Both the majority of men and women are employees (58.9 and 52.3 per cent, respectively). In Tongatapu and Vava'u the majority of workers are employees, while in Ha'apai, 'Eua and Ongo Niua most workers are own-account workers.

## 5.5 Employment by occupation

The largest occupational group within the employed population are craft and related trades workers (27.2 per cent), followed by skilled agricultural, forestry and fishery workers (17.8 per cent). Other occupations that are well-represented in the Tongan workforce are professionals (14.2 per cent) and services and sales workers (13.3 per cent). The most common occupation among women is craft and related trades workers (40.5 per cent); it is skilled agricultural, forestry and fishery among men (30.0 per cent). In Tongatapu Urban, the largest occupational group is service and sales workers (19.4 per cent); it is craft and related trades workers (28.5 per cent) in Tongatapu Rural.

## 5.6 Employment to population ratio (EPR)

Tonga's EPR for the age group of 25-64 years stood at 59.8% in 2018. The corresponding EPR was higher among men (72.4 per cent) than women (49.2 per cent). The EPR of persons in the age group 65+ was 22.8 per cent; the EPR of persons in the age group 15-24 was 22.2 per cent. Also in these two age groups, the EPR of men was higher than the EPR of women.

Table 5.1: *Employment indicators*

	Male	Female	Tongatapu Urban	Tongatapu Rural	Vava'u	Ha'apai	'Eua	Ongo Niua	Total
<b>Employment, aged 15+</b>	16,153	12,445	6,871	14,534	4,589	1,196	789	619	28,598
<b>By age group<sup>1</sup></b>									
15-24	2,409	1,721	1,144	2,169	593	105	45	75	4,131
25-64	12,831	10,260	5,493	11,703	3,689	1,024	701	480	23,091
65+	913	464	234	662	306	67	43	64	1,377
<b>By economic sector (% distribution)</b>									
A Agriculture, forestry and fishing	33.8	1.9	5.0	20.8	32.4	28.8	38.2	28.2	19.8
B Mining and quarrying	0.5	-	0.1	0.5	0.1	-	-	-	0.3
C Manufacturing	4.4	40.9	11.5	19.9	29.7	29.8	28.6	35.7	20.4
D Electricity, gas, steam and air conditioning supply	1.4	0.2	0.7	1	0.6	0.7	0.3	0.9	0.8
E Water supply; sewerage, waste management and remediation activities	0.5	-	0.3	0.2	0.5	0.3	-	-	0.3
F Construction	15.0	0.3	9.9	10.1	4.3	2.1	1.3	11.7	8.6
G Wholesale and retail trade; repair of motor vehicles and motorcycles	7.2	9.3	11.3	8.1	5.4	4.4	4.2	3.4	8.1
H Transportation and storage	4.5	1.2	5.0	3.0	1.3	2.4	0.6	-	3
I Accommodation and food service activities	1.5	4.1	5.0	2.0	2.5	1.2	-	-	2.6
J Information and communication	2.0	1.3	2.7	1.5	1.0	1.2	0.8	0.8	1.7
K Financial and insurance activities	2.1	4.6	6.0	2.7	1.4	2.1	1.1	1.2	3.2
L Real estate activities	-	0.0	0.1	-	-	-	-	-	0.0
M Professional, scientific and technical activities	3.0	3.6	6.3	3.1	0.4	1.6	0.7	1.0	3.2
N Administrative and support service activities	7.3	11.1	16.1	7.0	6.5	5.5	7.7	1.1	9.0
O Public administration and defence; compulsory social security	6.7	4.2	5.8	6.7	2.3	5.2	2.7	3.9	5.6
P Education	4.5	10.9	7.6	6.9	7.5	8.2	9.1	8.7	7.3
Q Human health and social work activities	0.8	2.7	2.7	1.3	1.3	2.7	0.3	-	1.6
R Arts, entertainment and recreation	0.5	0.2	0.4	0.5	-	-	-	-	0.4
S Other service activities	4.1	1.5	2.4	3.2	2.5	3.9	4.2	3.5	3.0
T Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	0.4	1.9	1.3	1.4	0.4	-	-	-	1.1
U Activities of extraterritorial organizations and bodies	-	-	-	-	-	-	-	-	-
<b>By status of employment (% distribution)</b>									
Employees	58.9%	52.3%	79.0%	54.3%	39.3%	38.0%	29.8%	32.5%	56.0%
Employers	13.8%	19.1%	10.4%	19.0%	20.6%	6.0%	9.8%	5.9%	16.1%
Own-account workers	22.8%	22.4%	7.6%	22.4%	27.9%	50.5%	57.7%	59.1%	22.7%
Contributing family workers	4.5%	6.2%	3.0%	4.4%	12.2%	5.5%	2.7%	2.5%	5.3%
<b>By occupation (% distribution)</b>									
Managers	4.3%	4.0%	6.4%	3.4%	2.9%	5.3%	4.2%	5.6%	4.2%
Professionals	12.8%	16.2%	18.8%	13.3%	10.5%	16.8%	11.9%	13.0%	14.2%
Technicians and associate professionals	6.3%	5.9%	9.6%	6.1%	3.1%	2.8%	2.2%	1.3%	6.1%
Clerical support workers	2.6%	10.7%	11.6%	4.7%	3.8%	3.9%	4.6%	0.9%	6.1%
Service and sales workers	11.2%	16.0%	19.4%	13.3%	8.7%	5.4%	5.7%	2.9%	13.3%
Skilled agricultural, forestry & fishery workers	30.0%	1.9%	3.8%	18.3%	29.7%	28.2%	38.3%	28.2%	17.8%
Craft and related trades workers	17.0%	40.5%	19.3%	28.5%	31.9%	31.6%	28.1%	39.6%	27.2%
Plant and machine operators and assemblers	5.5%	0.9%	3.8%	3.9%	2.6%	2.4%	1.9%	1.0%	3.5%
Elementary occupations	8.3%	3.8%	5.9%	6.9%	6.4%	3.2%	3.1%	7.6%	6.4%
Armed forces occupations	2.0%	0.2%	1.3%	1.6%	0.3%	0.6%	-	-	1.2%
<b>Employment-to-population ratio, by age group</b>									
15-24	26.4%	18.2%	22.2%	20.8%	30.6%	21.8%	10.4%	43.0%	22.2%
25-64	72.4%	49.2%	55.4%	59.4%	72.8%	53.3%	49.2%	87.5%	59.8%
65+	33.8%	13.9%	15.9%	22.8%	32.7%	21.3%	17.0%	42.8%	22.8%

## Chapter 6

# Informal sector and Informal employment

### 6.1 Introduction

This chapter presents statistics on the informal sector and informal employment. The term “**Informal Economy**” refers to all economic activities by workers and economic units that are – in law or in practice – not covered or insufficiently covered by formal arrangements. This includes workers who are employed in the informal sector and those in informal employment outside the informal sector i.e. formal and household sectors. Informal employment refers to employment where an employee does not receive any annual leave or sick leave benefits or any pension contribution or for which labour regulations are not applied nor enforced. It also includes employment where the form of payment is in kind instead of money.

### 6.2 Employment in the Informal Sector

Out of a total of 28,598 persons in employment, 13,395 were employed in the informal sector (46.8 per cent) (Table 6.1 on the next page). By sex, out of 16,153 men in employment, 8,540 were employed in the informal sector (52.9 per cent); out of 12,445 women in employment, 4,855 were employed in the informal sector (39.0 per cent). The share of workers in the informal sector is hence higher for men than for women. Men account for 63.8 percent of employment in the informal sector, while women constituted the remaining 36.2 percent. By educational attainment, the workers with the highest shares of informal sector employment were those with completed primary education (65.7 per cent). By economic sector, the agriculture, forestry and fishery sector is the sector that has the highest share of employment in the informal sector (79 per cent), compared with industry (54.4 per cent) and services (29.2 per cent). The two largest occupation groups in the informal sector are skilled agricultural, forestry and fishery workers craft and related trades workers (Figure 6.1 on the following page); with mostly men working in the former and women in the latter (Table 6.1 on the next page).



Table 6.1: *Profile of employment in the informal sector*

	Persons			Share of total employment (%)		
	Male	Female	Total	Male	Female	Total
<b>Employment in the informal sector, aged 15+</b>	8,540	4,855	13,395	52.9%	39.0%	46.8%
<i><b>By age group</b></i>						
15-24	1,363	831	2,194	56.6%	48.2%	53.1%
25-64	6,630	3,792	10,422	51.7%	37.0%	45.1%
65+	547	233	780	59.9%	50.1%	56.6%
<i><b>By educational attainment</b></i>						
Less than primary	8	-	8	23.1%	-	23.1%
Completed primary	3,347	1,836	5,183	69.7%	59.5%	65.7%
Completed secondary	4,949	2,840	7,789	50.9%	36.9%	44.7%
Tertiary	235	180	415	14.8%	10.8%	12.8%
<i><b>By economic sector</b></i>						
Agriculture, forestry and fishery	4,279	151	4,431	79.7%	63.5%	79%
Industry	2,003	2,665	4,668	57.8%	52.1%	54.4%
Services	2,095	2,013	4,108	29.7%	28.7%	29.2%
<i><b>By occupation</b></i>						
Managers	187	170	357	26.8%	34.2%	29.9%
Professionals	404	169	573	19.6%	8.4%	14.1%
Technicians and associate professionals	172	157	329	17.0%	21.5%	18.9%
Clerical support workers	69	259	327	16.7%	19.4%	18.8%
Service and sales workers	745	1,012	1,757	41.1%	50.9%	46.2%
Skilled agricultural, forestry and fishery workers	4,028	167	4,195	83%	69%	82.4%
Craft and related trades workers	1,711	2,584	4,295	62.5%	51.3%	55.2%
Plant and machine operators, and assemblers	438	98	536	49.1%	87.2%	53.3%
Elementary occupations	786	239	1,025	58.3%	50.5%	56.3%

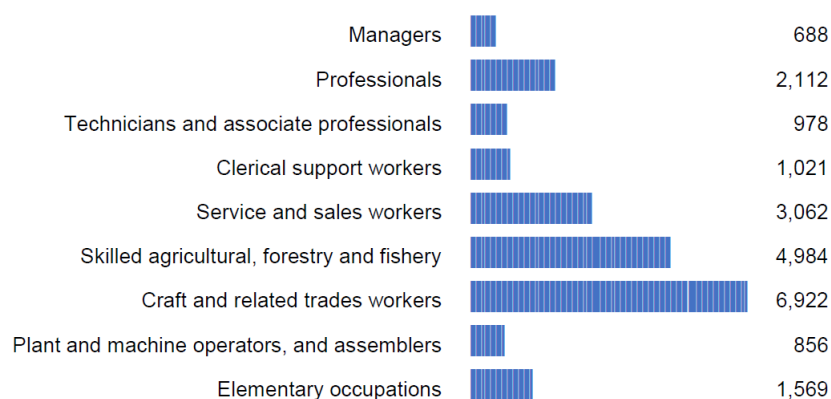
Figure 6.1: *Occupations of Informal Sector*

### 6.3 Informal Employment

Of a total of 28,598 employed persons reported by the survey, 22,276 were informally employed (77.9 per cent) (Table 6.2 on the following page). The informal employment rate was slightly higher for men (79.7 per cent) than for women (75.6 per cent). Moreover, the informal employment rate tends to be higher for persons in employment aged 65+ (85.5 per cent) and 15-24 (80.8 per cent), while it tends to be lower for those aged 25-64 (76.9 per cent). By educational attainment, the informal employment rate is highest among those that have completed primary education, where more than 9 in 10 workers (91.5 per cent) are informally employed. Workers in the agriculture, forestry and fishery sectors are those among which informal employment is most prevalent (95.7 per cent), while informal employment in the services sector is not as significant. However, in terms of occupations, service and sales workers are the third largest occupation group (Figure 6.2 on the next page).

Table 6.2: *Profile of informal employment*

	Persons			Share of total employment (%)		
	Male	Female	Total	Male	Female	Total
Informal Employment, aged 15+	12,866	9,411	22,276	79.7%	75.6%	77.9%
<b>By age group</b>						
15-24	1,944	1,395	3,339	80.7%	81.0%	80.8%
25-64	10,154	7,606	17,760	79.1%	74.1%	76.9%
65+	767	410	1,177	84.0%	88.3%	85.5%
<b>By educational attainment</b>						
Less than primary	23	-	23	66.2%	-	66.2%
Completed primary	4,321	2,894	7,215	90.0%	93.9%	91.5%
Completed secondary	7,775	5,734	13,509	80.0%	74.5%	77.5%
Tertiary	747	782	1,529	46.9%	47.0%	46.9%
<b>By economic sector</b>						
Agriculture, forestry and fishery	5,133	234	5,367	95.6%	98.2%	95.7%
Industry	2,975	4,615	7,590	85.8%	90.2%	88.4%
Services	4,526	4,491	9,017	64.1%	64.1%	64.1%
<b>By occupation</b>						
Managers	369	319	688	52.9%	64.2%	57.6%
Professionals	1,179	934	2,112	57.1%	46.5%	51.8%
Technicians and associate professionals	539	439	978	53.2%	60.0%	56.1%
Clerical support workers	244	777	1,021	59.1%	58.3%	58.5%
Service and sales workers	1,391	1,671	3,062	76.7%	84.0%	80.5%
Skilled agricultural, forestry and fishery workers	4,742	242	4,984	97.7%	100.0%	97.9%
Craft and related trades workers	2,391	4,531	6,922	87.3%	90.0%	89.0%
Plant and machine operators, and assemblers	744	112	856	83.4%	100.0%	85.2%
Elementary occupations	1,190	379	1,569	88.3%	80.2%	86.2%
Armed forces occupations	77	8	85	24.1%	32.0%	24.7%

Figure 6.2: *Occupations of the Informally Employed*

# Chapter 7

## Working Conditions

### 7.1 Introduction

This chapter presents information for selected indicators of working conditions. They include hours of work in terms of average usual and actual hours of work per week and the distribution of hours of work per week by sex. Working conditions are at the core of paid employment, and have a direct impact on workers' welfare. They cover a broad range of aspects including working time. 3,238 or 12 per cent of respondents were not able to specify their hours worked.

### 7.2 Hours of work

Table 7.1: *Average usual and actual hours of work per week*

Hours worked	Male	Female	Tongatapu Urban	Tongatapu Rural	Vava'u	Ha'apai	'Eua	Ongo Niua	Total
Usual hours									
All economic activities	37.3	35.7	40.3	34.8	35.3	30.8	45.7	43.0	36.6
Main economic activity	35.9	35.1	40.1	33.8	33.5	30.5	44.6	35.0	35.6
Secondary economic activity	9.4	8.7	5.8	8.9	8.3	19.9	18.5	16.2	9.2
Actual hours									
All economic activities	36.3	34.3	38.5	34.2	33.4	28.0	47.1	42.9	35.5
Main economic activity	34.9	33.8	38.4	33.2	31.6	27.7	45.7	34.8	34.4
Secondary economic activity	9.2	8.1	3.5	8.4	8.6	19.2	22.9	16.2	8.9

Table 7.2: *Distribution of hours of work per week by sex*

Hours worked	Male	Female	Tongatapu Urban	Tongatapu Rural	Vava'u	Ha'apai	'Eua	Ongo Niua	Total
<i>Usual hours</i>									
Less than 40 hours	4,785	3,978	1,069	5,067	1,643	708	108	168	8,763
40 to 48 hours	7,141	5,302	4,643	5,259	1,800	285	293	163	12,443
More than 48 hours	2,719	1,345	710	2,234	547	47	359	167	4,064
Non response	1,508	1,820	449	1,974	598	156	29	122	3,328
<i>Actual hours</i>									
Less than 40 hours	5,373	4,489	1,557	5,405	1,869	776	91	165	9,863
40 to 48 hours	6,491	4,860	4,145	4,951	1,598	225	263	169	11,350
More than 48 hours	2,781	1,276	719	2,205	524	39	406	164	4,057
Non response	1,508	1,820	449	1,974	598	156	29	122	3,328

### 7.3 Usual hours and Actual hours

For all economic activities, the average usual and actual hours of work per week is respectively 36.6 and 35.5 (Table 7.1 on the preceding page). Men on average work slightly longer hours per week than women (Figure 7.1). Out of 28,598 persons in employment, 12,443 persons usually work between 40 and 48 hours per week (43.5 per cent). Another 8,763 persons in employment usually work less than 40 hours (30.6 per cent). 4,064 persons usually work more than 48 hours (14.2 per cent). The distribution of employment is very similar, when it comes to actual hours worked (Table 7.2 on the preceding page).

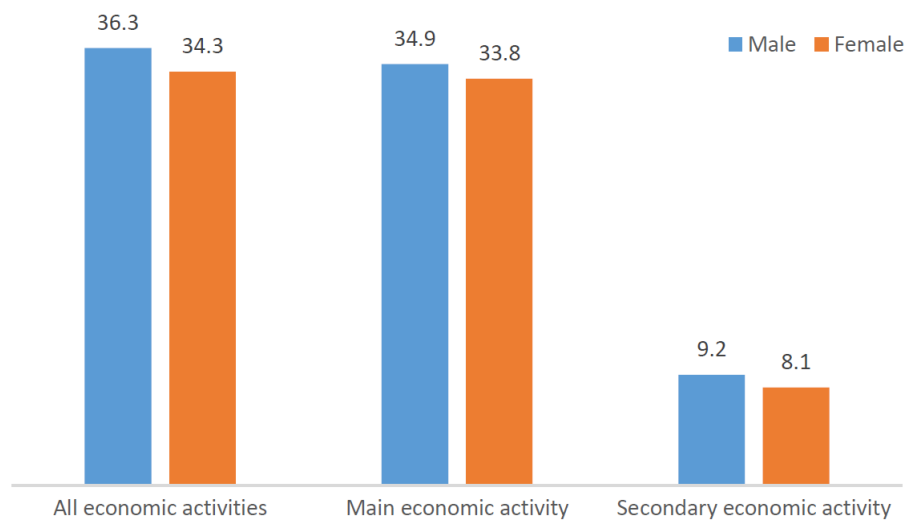


Figure 7.1: *Actual hours of work per week by sex*

# Chapter 8

## Wages and earnings

### 8.1 Introduction

This chapter presents information on wages and earnings from the main job of employees and from the main job of self-employed, by sex, by island division, by economic sector, and by occupation.

Table 8.1: *Average monthly wages and earnings, the main job*

Average monthly wages in main job	Male	Female	Tongatapu Urban	Tongatapu Rural	Vava'u	Ha'apai	'Eua	Ongo Niua	Total
<b>Employees</b>									
<i>By economic sector<sup>1</sup></i>									
Agriculture	1,814	1,358	2,607	1,491	1,488	4,375	1,103	1,235	1,782
Industry	1,669	1,431	1,611	1,806	1,175	1,100	1,757	724	1,642
Services	1,787	1,232	1,856	1,358	1,125	975	1,036	848	1,507
<i>By occupation</i>									
Managers	8,314	2,218	10,500	2,395	1,615	1,245	960	1,002	5,686
Professionals	1,284	1,357	1,320	1,436	1,125	1,058	948	776	1,323
Technicians and associate professionals	1,501	1,341	1,517	1,390	1,480	1,101	790	546	1,429
Clerical support workers	1,317	1,283	1,157	1,623	747	878	930	700	1,292
Service and sales workers	960	906	878	985	905	850	765	2,167	933
Skilled agricultural, forestry and fishery workers	1,393	680	1,796	1,247	929	-	-	433	1,332
Craft and related trades workers	1,455	1,507	1,729	1,342	1,300	966	2,323	1,097	1,461
Plant and machine operators and assemblers	1,315	692	1,590	1,122	999	469	4,873	520	1,266
Elementary occupations	1,941	675	1,407	1,824	1,462	1,660	720	761	1,592
Armed forces occupations	2,316	527	818	2,822	1,210	1,001	-	-	2,185
<b>Self-employed</b>									
<i>By economic sector</i>									
Agriculture	6,889	8,907	5,477	2,233	20,815	3,105	2,333	1,592	6,967
Industry	2,333	2,680	2,268	3,745	1,220	917	1,410	1,463	2,623
Services	9,586	3,767	3,275	4,604	25,625	4,684	629	4,651	6,531
<i>By occupation</i>									
Managers	18,496	3,648	4,613	7,514	70,663	6,790	903	1,083	13,574
Professionals	2,870	834	2,996	2,832	1,191	2,167	-	400	2,681
Technicians and associate professionals	9,835	3,115	5,386	1,776	30,000	-	-	-	7,027
Clerical support workers	2,167	476	2,167	684	253	-	-	-	754
Service and sales workers	10,219	4,159	3,079	5,214	16,310	1,272	427	9,926	6,029
Skilled agricultural, forestry and fishery workers	6,947	7,719	4,199	2,363	20,007	3,098	2,274	1,157	6,982
Craft and related trades workers	2,009	2,672	1,995	3,719	1,194	918	1,370	1,488	2,570
Plant and machine operators and assemblers	3,941	1,521	6,854	2,028	8,150	-	2,529	10,000	3,520
Elementary occupations	2,085	4,620	9,299	2,109	1,453	-	-	-	2,660

<sup>1</sup>Note: "Data from some individual cells or categories should be used with caution due possible sampling errors (fewer sample cases)."

## 8.2 Average monthly wages in the main job of employees

By economic sector, the average monthly wage was highest in the agriculture sector (1,782) in the main job of employees, followed by industry (1,642) and services (1,507) (Table 8.1 on the previous page). By occupation, managers had the highest monthly wage (5,686) (Figure 8.1). Men had higher wages than women in all three economic sectors and all occupations except professionals and craft and related trades workers.

## 8.3 Average monthly income in the main job of self-employed

Average monthly income for the self-employed were considerably larger than the employed (Figure 8.1<sup>2</sup>). By economic sector, the average monthly income was highest in the agriculture sector (6,967) in the main job of self-employed, followed by services (6,531) and industry (2,623). By occupation, persons that are self-employed managers had on average the highest income (13,574). Women had higher average monthly incomes than men in the agriculture and industry sector; the reverse is true for services. Men had higher average monthly incomes than women in all occupations except skilled agricultural, forestry and fishery workers, craft and related trades workers, and elementary occupations.

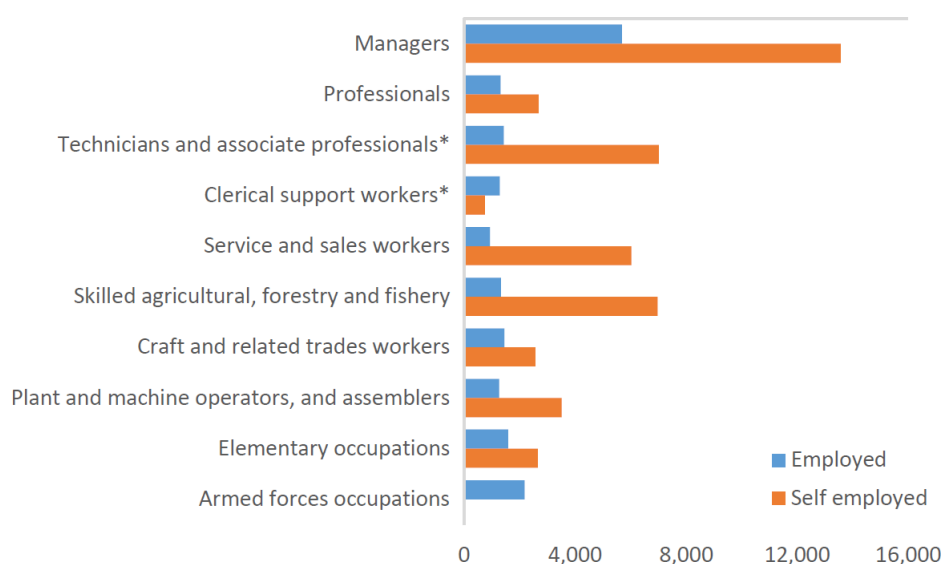


Figure 8.1: *Average monthly income of the employed and the self-employed*

<sup>2\*</sup> Potentially high error in average monthly income of self-employed due to the small number of respondents in these occupations.

# Chapter 9

## Subsistence work

### 9.1 Introduction

This chapter presents information on the demographic characteristics and national distribution of persons involved in own-use production work and subsistence work.

### 9.2 Total own-use production work

From a total working-age population of 63,189, about 52,544 persons (83.2 per cent) reported being engaged in some form of subsistence production, with women accounting for 55.5 percent and men for 44.5 per cent (Table 9.1). More than half of all those engaged in own-use production work (50.9 per cent) were based in Tongatapu Rural.

Table 9.1: *Working-age population and own-use production work*

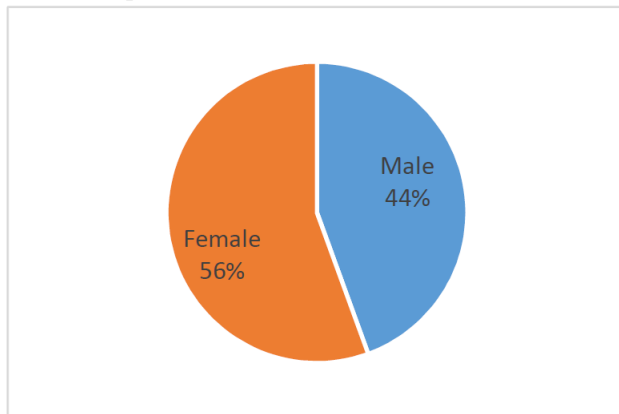
Own-use production work			Tongatapu		Vava'u	Ha'apai	'Eua	Ongo Niua	Total
	Male	Female	Urban	Rural					
<b>Total</b>	23,362	29,182	13,837	26,741	6,927	2,496	1,747	797	52,544
<i>By age group</i>									
15-24	6,106	6,905	3,874	6,853	1,498	391	250	146	13,011
25-64	15,457	19,753	8,917	17,716	4,838	1,865	1,341	533	35,210
65+	1,799	2,524	1,046	2,172	591	239	157	118	4,323
<i>By education attainment</i>									
Less than primary	82	80	72	66	10	11	-	4	162
Completed primary	8,338	8,910	3,843	7,879	2,903	1,467	847	309	17,248
Completed secondary	13,276	17,856	8,261	16,946	3,618	981	842	484	31,132
Tertiary	1,666	2,336	1,661	1,849	396	38	57	-	4,002
<b>Subsistence food producers</b>									
<b>Total</b>	11,925	4,574	3107	8539	2604	1153	615	481	16,499
<i>By age group</i>									
15-24	1,834	750	473	1,492	386	109	74	51	2,584
25-64	8,975	3,544	2,323	6,384	2,028	938	482	364	12,519
65+	1,116	280	311	663	190	106	59	66	1,396
<i>By education attainment</i>									
Less than primary	50	2	16	23	5	4	-	4	52
Completed primary	4,577	1,236	895	2,503	1,111	763	357	183	5,813
Completed secondary	6,544	2,885	1,779	5,353	1,388	372	243	295	9,429
Tertiary	754	451	416	660	100	14	14	-	1,205

### 9.3 Subsistence food producers

About 16,499 persons are subsistence food producers, corresponding to around one quarter (26.1 per cent) of the working-age population. Most of the subsistence food producers are men (72.3 per cent) as their main roles lie predominantly outside the home in agriculture and fishing.

Within Tongatapu, most of the subsistence food producers are located in Tongatapu Rural. The main explanation for this is that people in the rural area have more access to land for cultivation and raising animals and have unlimited access to fishing grounds.

Own use production



Subsistence food producers

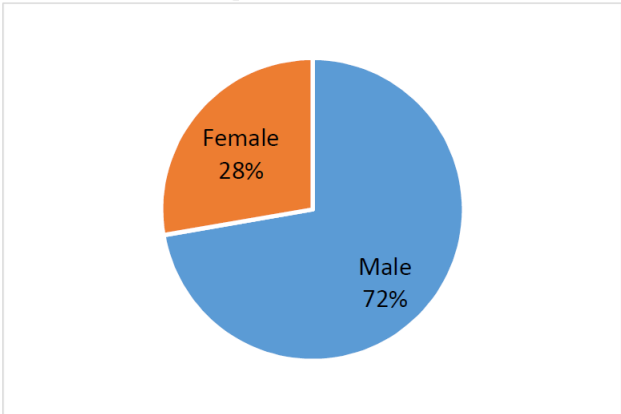


Figure 9.1: *Own use production and subsistence work by sex*



## Chapter 10

# Unemployment and labour underutilization

### 10.1 Introduction

This chapter presents the characteristics of the unemployed population. It further describes unemployment by age and sex, and by island division. The chapter also shows different measures of labour underutilization.

Unemployment refers to those persons within the working-age population who were not in employment, carried out activities to seek employment or to start a business during the ‘*last month or four weeks*’ prior to the actual date of the interview, and were currently available to take up employment or to start a business given a business opportunity ‘*in the past seven days*’ or ‘*within the next two weeks*’. This definition of unemployment follows the ILO definition.

Table 10.1: *Unemployment – number and rate*

Unemployment, aged 15+	Male	Female	Tongatapu		Vava'u	Ha'apai	'Eua	Ongo Niua	Total
			Urban	Rural					
<b>Number</b>	<b>437</b>	<b>469</b>	<b>245</b>	<b>563</b>	<b>66</b>	<b>5</b>	<b>20</b>	<b>6</b>	<b>906</b>
<i>By age group</i>									
15-24	147	258	116	249	32	-	7	-	405
25+	290	211	128	314	33	5	13	6	501
<b>Rate, age 15+ (%)</b>	<b>2.6%</b>	<b>3.6%</b>	<b>3.4%</b>	<b>3.7%</b>	<b>1.4%</b>	<b>0.4%</b>	<b>2.5%</b>	<b>1.0%</b>	<b>3.1%</b>
<i>By age group</i>									
15-24	5.7%	13.0%	9.2%	10.3%	5.2%	-	12.7%	-	8.9%
25+	2.2%	2.0%	2.3%	2.6%	0.9%	0.5%	1.9%	1.2%	2.1%

### 10.2 Unemployed population

In Tonga, about 906 persons were unemployed in 2018, including 469 women (51.8 per cent) and 437 men (48.1 per cent) (Table 10.1). 563 of all the unemployed (62.1 per cent) were located in Tongatapu Rural. There were 405 young unemployed aged 15-24 (44.7 per cent).

### 10.3 Unemployment Rate

The Tongan unemployment rate stood at 3.1 per cent in 2018 (Table 10.2). Women's unemployment rate of 3.6 per cent is one percentage point higher than men's unemployment rate of 2.6 per cent. By island division, the unemployment rate ranged from 3.7 per cent in Tongatapu Rural to only 0.4 per cent in Ha'apai. Among youth (aged 15-24), 8.9 per cent of the labour force was in unemployment, compared with 2.1 per cent for adults (aged 25+).

Table 10.2: *Labour underutilization*

	Male	Female	Tongatapu Urban	Tongatapu Rural	Vava'u	Ha'apai	'Eua	Ongo Niua	Total
Labour underutilization	3,146	3,033	1,208	3,801	720	291	108	51	6,180
Unemployment	436	469	245	564	66	5	20	6	905
Time-related underemployment	1,111	633	348	1,065	263	45	6	18	1,745
Potential labour force	1,598	1,931	616	2,172	391	241	83	27	3,530
LU1: Unemployment rate (%)	2.6%	3.6%	3.4%	3.7%	1.4%	0.4%	2.5%	1.0%	3.1%
LU2: Combined rate of time-related underemployment and unemployment (%)	9.3%	8.5%	8.3%	10.8%	7.1%	4.1%	3.2%	3.9%	9.0%
LU3: Combined rate of unemployment and potential labour force (%)	11.2%	16.2%	11.1%	15.8%	9.1%	17.1%	11.5%	5.1%	13.4%
LU4: Composite measure of labour underutilization (%)	17.3%	20.4%	15.6%	22.0%	14.3%	20.2%	12.2%	7.9%	18.7%

### 10.4 Labour underutilization

About 6,180 persons experienced labour underutilization, which affected men (50.9 per cent) and women (49.1 per cent) almost to the same extent (Table 10.2). Females are more likely to be in the potential labour force and males are more likely to be in employment but wanting to work more hours (Figure 10.1). Most of those that experienced labour underutilization were those in the potential labour force (57.1 per cent). Tongatapu Rural accounted for the highest share of those that experience labour underutilization (61.5 per cent).

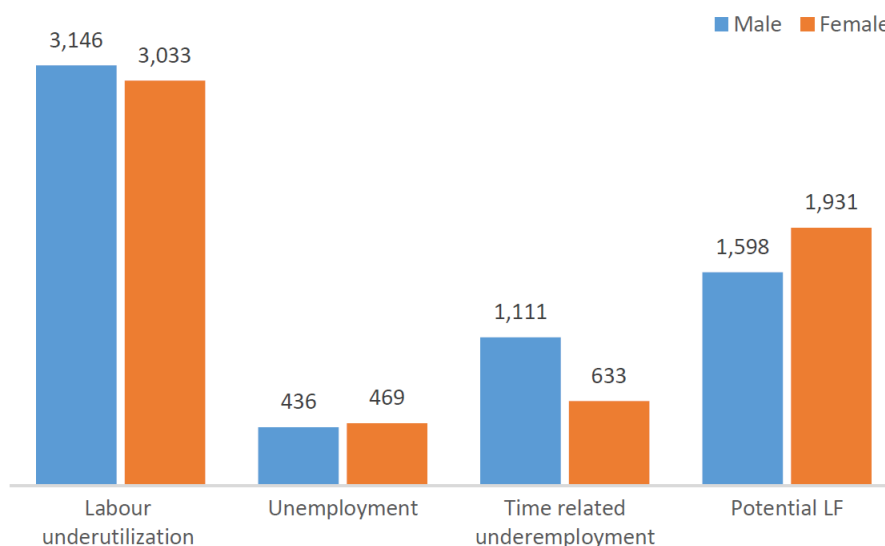


Figure 10.1: *Labour underutilization by sex*

# Chapter 11

## Recommendations

This summary report has provided some insights into the labour force in Tonga, the potential human capital that can be drawn on and the issues for policy makers to address in the areas of:

- **Labour underutilization**, and to a lesser extent **unemployment**, especially in rural Tongatapu and the outer islands;
- **Youth unemployment rates**, which are 4 times more than these of the adult population, with a particular stress on young women;
- **Potential labour force** as a significant component of labour underutilization, need to be explored further for better employment policy formulation;
- **Education and training** to provide ‘work ready’ labour force entrants and increase people’s potential to get employment;
- **High informality**: workers in the informal sector, informal employment (employers and own-account workers with informal sector economic units, contributing family workers, and all those in informal jobs not covered by employment benefits) comprise a significant proportion of the labour force and options for social protection for these workers should be explored.

For the Department of Statistics, the recommendations relate to:

- Implementing the Tonga Strategy for the Development of Statistics, notably the recommendation engage with stakeholders to regularly conduct the labour force survey.
- 2018 TLFS summary report to be widely disseminated at all levels, including national authorities, and communities as the suppliers of the statistical data and information.

A more detailed TLFS report will be formulated with stakeholders identifying their data analysis needs, including policy makers, business people, researchers and planners in decision making, to inform and guide formulating policies and monitoring which will aid in strengthening the economy of Tonga

# Annex

## Annex A.1: Sampling errors for selected statistics

Sampling errors were computed and are presented in the final report.

The sampling error were computed using the survey set package in **Stata**. **THE FINITE POPULATION CORRECTION** was included in the sample design (optional in **svy** set Stata command) as follow:

- Fpc 1: total number of census blocks within the strata (variable **toteas**)
- Fpc 2: total population aged 15+ who lives in the selected EAs.

Here is a list of some LF indicators presented with sampling error:

LF indicator		Stand error	RSE	95% interval	
Labour force population	29,504	659	2.2%	28,203	30,804
Employment - population in employment	28,598	637	2.2%	27,341	29,855
Labor force participation rate (%)	46.7%	0.01	1.7%	45.2%	48.2%
Unemployment rate (%)	3.1%	0.00	13.5%	2.2%	3.9%
Composite rate of labour underutilization (%)	18.7%	0.01	7.3%	16.0%	21.4%
Youth unemployment rate (%)	8.9%	0.02	18.2%	5.7%	12.1%
Informal employment rate (%)	77.9%				
Average monthly wages - employees (TOP)	1,539	185	12.0%	1,174	1,904

## Annex A.2: List of people involved

<b>Headquarters</b>		
Sione Lolohea	‘Ana Moa	Palu Fakava
Winston Fainga’anuku	Samisoni Fotu	Paea Malafu
Lu’isa Uasike	Saane Manuofetoa	Makisi Moala
Faka’anaua Mafile’o	Mesui Vea	
Vaimoana Soakimi	Tutulu Finau	
Lu’isa Kaitapu	Falemasiva Fonua	
<b>Supervisors</b>		
Elenoa Siale	Elenoa Moala	Paea Maile
Ofa Pivili	Mapui Sanft	Cindy Tuipulotu
Elena Pahulu	Ilima Pongi	Hokulani Tupou
Akesa Ahokava	Latu Toki	Nancy Savelio
<b>Interviewers</b>		
Paula Voni	Meleane Mafi	Haieti Pohiva
Sulio Vete	Suliana Havea	Ikani Tonga
Atonio Kama	Fonopulu Latu	‘Akanete Taái
Akosita Paongo	Hina Leka	Kalani Palu
Deborah Manu	Sela Tupou	Melekaufusi Manu
‘Ofaloto Faásisila	Paea Kuliha’apai	Vaolose Mokena
Feíloaki Mafi	Carter Pasikala	Pilimilose Mafi
Penina Finau	‘Ana Fakava	‘Ilaisaane Lutu
Seletute Maási	Sione Tu’ipulotu	Melema’u Tu’itupou
Tevita Fangupo	Salome Kaho	Siosefo Tu’ipulotu
Teu Moala	Timote Afu	Tevita Kioa
Sione ‘Otukolo	Pelatouna Tupou	Meleana Ika
Lonitaise Vuna	Mele Ngaluafe ‘Otukolo	Salote Vulasi Havea
Lemeki Taufu	Elioti Tu’utafaiva	Kalolaine Po’uha
Funaki Fa’auí	Kalala Faka’utoki	Mele Manukeu
Ilami Vaisima		