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TONGA 2021

CENSUS OF POPULATION AND HOUSING

Volume 2: Analytical Report

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NEW ZEALAND
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TONGA 2021

CENSUS OF POPULATION AND HOUSING

VOLUME 2: ANALYTICAL REPORT

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This report was prepared by the staff of TSD – Census Team with the assistance of Dr Michael Levin.

More information

For more information about the Tonga 2021 Census of Population and Housing, or request additional statistical information from the Census not included in this Volume, please contact the TSD:

Tonga Statistics Department

PO Box 149

Nuku'alofa Tonga

Telephone: + 676 23300

+ 676 23303

Email: dept@stats.gov.to <https://tongastats.gov.to>

Preface

The Population and Housing Census (PHC) 2021 was the 9th Census conducted in Tonga since 1956, and the 7th census carried out by the Statistics Department. The Population and Housing Census is the largest statistical exercise that any Statistics office in a country conducted given that it collects information from every individual and household in the country.

The 2021 Tonga Population and Housing Census is the third census undertaken following the 5-year interval census. Information collected from census are critical for development policy and planning efforts by providing us with the opportunity to get an accurate, comprehensive and consistent picture of the country's population. The census date was midnight of the 30th of November 2021, where everyone in Tonga was counted, "leaving no one behind", as the census theme. This is the second census that the Computer Assisted Personal Interview (CAPI) method was used to collect information compared to the use of Paper and Pen Interview (PAPI). The next series of reports using the census dataset includes the districts and village profiles. Additional information will also be made available upon request, on any particular dataset, based on the information collected in the 2021 census.

The Census of Population and Housing 2021 Analytical Report Volume 2 is the second statistical publications of detailed census results based on the Population and Housing Census 2021. The report contains an analysis of Tonga's recent population growth and dynamics, in particular, the level, trends and patterns of fertility, mortality, and migration and their implications on health, education and economic activity. We encourage planners, policy-makers, the businesses, non-governmental organizations and the community at large to make good use of these data for decision making and to formulate relevant policies that would further improve the social and economic developments for Tonga.

This report is made possible by the generous funding from Stats NZ. I would like to extend our sincere appreciation for the financial and technical support provided to Tonga Statistics Department regarding this valuable report. I wish also to thank Dr. Michael Levin who work collaboratively with the Census team in the analysis and writing of this report.

For the continuous improvement of statistical database for the Kingdom, Tonga Statistics D welcome constructive comments and suggestions from users, planners and policy-makers to indicate areas of interests for future report releases.

Faka'apa'apa atu,



Sione Lolohea

Government Statistician



Table of Contents

Preface	3
Table of Contents	4
List of Figures	7
List of Tables	12
GLOSSARY	13
SUMMARY OF MAIN INDICATORS	16
KINGDOM OF TONGA MAP	17
CHAPTER 1: INTRODUCTION.....	18
Geographic setting.....	18
Background to report.....	18
CHAPTER 2: POPULATION STRUCTURE	19
Population size and trend	19
Population distribution	22
Urban–rural	22
Population density	23
Sex ratios	23
Population pyramids	25
Age.....	28
Dependency Ratio	31
Conclusions.....	32
CHAPTER 3: FERTILITY	33
Fertility – Introduction and terms	33
Age at First Birth.....	33
Children ever born and surviving.	33
Children born in previous 12 months.....	40
Own Children Fertility Estimates	44
Total Fertility Rates.....	47
Fertility for characteristics.....	51
Birth Registration.....	53
Children Living with their Biological Mother	56
Conclusion	57
CHAPTER 4: MORTALITY	58
Mortality definitions.....	58
Mortality from Children Ever Born and Still Alive	58
Infant and Child Mortality	61
Life Tables.....	62
Conclusion	65
CHAPTER 5: MIGRATION	66
Internal migration.....	66

Birthplace – Lifetime Migration.....	66
Usual Residence	68
Short term migration.....	68
Point to point migration	72
CHAPTER 6: MARITAL STATUS	76
Marital status.....	76
De facto Marriages and Widows	77
Never married and Age at First Marriage.....	78
CHAPTER 7: RELIGION	81
CHAPTER 8: CITIZENSHIP AND ETHNICITY	84
Citizenship	84
Ethnic origin	84
CHAPTER 9: HEALTH AND DISABILITY	86
Mental illness	86
Non-Communicable Diseases	87
Illness, injury, or other health complaints.....	89
Types of Continuing Illnesses	91
Covid-19.....	92
Disability	95
Conclusion	98
CHAPTER 10: HABITS	99
Smoking	99
Alcohol.....	100
Kava	101
CHAPTER 11: EDUCATION AND LITERACY	102
School enrolment	102
Educational attainment.....	105
Educational qualifications	107
Literacy	108
Conclusions.....	110
CHAPTER 12: COMMUNICATION AND VOTING.....	111
Household internet use	111
Household mobile phone providers	112
Individual internet use.....	113
Individual mobile phone use	115
Voting	119
Conclusion	121
CHAPTER 13: LABOUR MARKET ACTIVITY	122
Introduction.....	122
Employment	123
Labour force participation rate and employment–population ratio.....	125

Employment by work status	127
Employment by industry group.....	127
Employed workers by occupational group	128
Unemployed	129
Youth NEET	130
Not in labour force.....	131
CHAPTER 14: HOUSEHOLD CHARACTERISTICS.....	132
Household size	132
Household composition.....	134
Parental orphanhood	135
Households and families	136
Tenure	138
Private households by structure.....	139
Private households by water source	141
Toilet facilities	142
Private households by main energy source.....	144
Cooking facilities.....	145
Private households by main means of waste disposal	146
Private households and availability of various household items	147
Private households by type of transport.....	151
Conclusion	151
CHAPTER 15: HOUSEHOLD INCOME AND REMITTANCES	152
Main source of household income	152
Salaried workers	153
Remittances.....	154
Temporary Labour Mobility.....	156
CHAPTER 16: CHILD DEPRIVATION AND DISASTERS.....	159
Child deprivation	159
Response to disasters.....	161
CHAPTER 17: WEALTH QUINTILES.....	164
Demography	164
Households and families	167
Marital Status	169
Religion and Health	170
Education and literacy.....	171
Mobile phone and Internet	173
Habits.....	174
Economics.....	175
Fertility	177
CHAPTER 18: Conclusion.....	181

List of Figures

FIGURE 2.1. POPULATION, TONGA: 1901 TO 2021.....	19
FIGURE 2.2. POPULATION CHANGE, TONGA: 1901 TO 2021.....	19
FIGURE 2.3. POPULATION DISTRIBUTION FOR DIVISIONS, TONGA: 1891 TO 2021.....	20
FIGURE 2.4. POPULATION BY DIVISION: 1956 TO 2021.....	21
FIGURE 2.5. CHANGE IN POPULATION BY DIVISION, TONGA: 1956 TO 2021.....	21
FIGURE 2.6. POPULATION BY DIVISION, TONGA: 2021	22
FIGURE 2.7. PERCENT URBAN BY SEX, TONGA: 2011 TO 2021	22
FIGURE 2.8. SEX RATIO, TONGA: 1966 TO 2021	23
FIGURE 2.9. MALES PER 100 FEMALES BY DIVISIONS, TONGA: 2011 TO 2021.....	24
FIGURE 2.10. MALES PER 100 FEMALES BY URBAN/RURAL RESIDENCE, TONGA: 2011 TO 2021	24
FIGURE 2.11. AGE AND SEX DISTRIBUTION, TONGA: 1956 TO 2016	25
FIGURE 2.12 AGE AND SEX DISTRIBUTION OF DIVISIONS.....	26
FIGURE 2.13 AGE AND SEX DISTRIBUTION OF GREATER NUKU'ALOFA: 2021	27
FIGURE 2.14 AGE AND SEX BY URBAN/RURAL RESIDENCE TONGA: 2021	27
FIGURE 2.15. MEDIAN AGE, TONGA: 1996 TO 2021.....	29
FIGURE 2.16 MEDIAN AGE BY GENDER, TONGA: 1966 TO 2021	29
FIGURE 2.17. SEX RATIO BY AGE	30
FIGURE 2.18 MEDIAN AGE BY DIVISION, TONGA: 2016 AND 2021	30
FIGURE 2.19 PERCENT 15 TO 24 YEARS BY DIVISION, TONGA: 2016 & 2021	31
FIGURE 2.20 DEPENDENCY RATIO, TONGA: 1966 TO 2021	31
FIGURE 2.21 DEPENDENCY RATIOS BY DIVISION, TONGA: 2016 AND 2021	32
FIGURE 2.22 DEPENDENCY RATIOS BY DIVISION	32
FIGURE 3.1 AVERAGE CHILDREN EVER BORN BY AGE, FEMALES 35 AND OLDER, TONGA: 2006 TO 2021.....	35
FIGURE 3.2 CHILDREN BORN AND SURVIVING, ALL FEMALES, BY DIVISION: 2021	36
FIGURE 3.3 PERCENT OF LIVING CHILDREN BY PLACE, DIVISIONS: 2021.....	37
FIGURE 3.4 VITAL STATUS AND PLACE OF CHILDREN EVER BORN BY AGE OF MOTHER	38
FIGURE 3.5 CHILDREN STILL ALIVE NOT RESIDING IN HOUSEHOLD BY PLACE AND SEX.....	38
FIGURE 3.6 PERCENT OF LIVING CHILDREN BY PLACE AND AGE OF MOTHER	39
FIGURE 3.7 LIVING CHILDREN BY PLACE AND DIVISION FOR FEMALES 45 TO 49 YEARS: 2021.....	39
FIGURE 3.8 CHILDREN BORN AND SURVIVING TO FEMALES 45 TO 49 YEARS BY DIVISION: 2021	40
FIGURE 3.9 AGE-SPECIFIC FERTILITY RATES FROM REGISTERED BIRTHS AND CENSUS	41
FIGURE 3.10 ADJUSTED ASFRS (SMOOTHED) FOR DIVISIONS	42
FIGURE 3.11 REGISTERED BIRTHS BY YEAR, TONGA: 2013 TO 2020	43
FIGURE 3.12 AGE-SPECIFIC FERTILITY RATES FOR MID 5-YEARS BEFORE THE CENSUS, TONGA: 1966 TO 2021..	44
FIGURE 3.13 AVERAGE PERCENT NON-OWN CHILDREN, TONGA: 1966 TO 2021	45
FIGURE 3.14 PERCENT NON-OWN CHILDREN BY AGE OF CHILD	45
FIGURE 3.15 OWN-CHILDREN PER FEMALE BY AGE OF FEMALE	46
FIGURE 3.16 TOTAL FERTILITY RATES BY YEAR, TONGA: 2007 TO 2021	47
FIGURE 3.17 TOTAL FERTILITY RATES BY RESIDENCE, TONGA: 2008 TO 2020	47
FIGURE 3.18 SMOOTHED TOTAL FERTILITY RATES BY ISLAND, TONGA: 2008 TO 2020	48
FIGURE 3.19 TOTAL FERTILITY RATES, TONGA: 1952 TO 2021	48
FIGURE 3.20 SMOOTHED TOTAL FERTILITY RATES, TONGA: 1953 TO 2020	49
FIGURE 3.21 AGE-SPECIFIC FERTILITY RATES IN MIDDLE 5-YEAR PERIOD BEFORE CENSUS; 1966 TO 2021.....	49
FIGURE 3.22 TOTAL FERTILITY RATES, TONGA: 2007 TO 2021	50
FIGURE 3.23 AGE SPECIFIC FERTILITY RATES, TONGA: 2007 TO 2021	50
FIGURE 3.24 TOTAL FERTILITY RATES BY EDUCATIONAL ATTAINMENT, TONGA: 2008 TO 2020	51
FIGURE 3.25 AGE-SPECIFIC FERTILITY RATES BY EDUCATIONAL ATTAINMENT, TONGA: 2012-2016.....	51
FIGURE 3.26 TOTAL FERTILITY RATES BY LARGEST RELIGIONS, TONGA: 2008 TO 2020.....	52
FIGURE 3.27 2019 MICS & 2019 OWN CHILD ASFR ESTIMATES, TONGA: 2019	52
FIGURE 3.28 AGE-SPECIFIC FERTILITY RATES FROM OWN CHILDREN AND REGISTERED BIRTHS; 2017	53
FIGURE 3.29 PERCENT HAVING A BIRTH CERTIFICATE BY AGE AND SEX.....	54
FIGURE 3.30 PERCENT REGISTERED OF THOSE WITHOUT BIRTH CERTIFICATE BY SEX AND AGE: 2021	55
FIGURE 3.31 PERCENT CHILDREN LESS THAN 5 YEARS WITH NO BIRTH CERTIFICATE BY DIVISION; 2021.....	55
FIGURE 3.32 PERCENT CHILDREN LESS THAN 5 YEARS WITH NO CHILD REGISTRATION BY DIVISION: 2021	56

FIGURE 3.33 PERCENT CHILDREN LIVING WITH BIOLOGICAL MOTHER IN HOUSEHOLD BY AGE OF CHILD	56
FIGURE 3.34 PERCENT CHILDREN LIVING WITH BIOLOGICAL MOTHER BY AGE OF CHILD AND DIVISION	57
FIGURE 4.1 CHILDREN EVER BORN AND SURVIVING BY AGE, TONGA: 2016 AND 2021	59
FIGURE 4.2 CHILDREN EVER BORN AND SURVIVING BY COMPLETED FERTILITY AND AGE: 2016 AND 2021	60
FIGURE 4.3 PERCENT OF CHILDREN SURVIVING BY AGE AND SEX: 2016 AND 2021	60
FIGURE 4.4 AGE-SPECIFIC DEATHS, TONGA: 2018-2020 AVERAGES	63
FIGURE 4.5 AGE-SPECIFIC DEATH RATES BY SEX, TONGA: 2018 TO 2020 AVERAGE	63
FIGURE 5.1 PERCENT LIVING IN SAME DIVISION AS AT BIRTH	67
FIGURE 5.2 PERCENT SAME DIVISION OF USUAL RESIDENCE AND CURRENT RESIDENCE	68
FIGURE 5.3 PERCENT SAME DIVISION IN 2020 AND 2021	69
FIGURE 5.4 PERCENT IN SAME DIVISION IN 2016 AS 2021	70
FIGURE 5.5 PERCENT OF PERSONS IN SAME DIVISION 5 YEARS PRIOR TO CENSUS, TONGA: 2016 AND 2021	71
FIGURE 5.6 REASON MIGRATING FROM 2016 BY CURRENT DIVISION	71
FIGURE 5.7 NUMBER OF MOVES BY AGE	73
FIGURE 5.8 DEPENDENCY RATIO (AGES 5+) BY NUMBER OF MOVES	73
FIGURE 5.9 MEDIAN AGE (AGES 5+) BY SEX AND NUMBER OF MOVES	74
FIGURE 5.10 SEX RATIO (AGES 5+) BY NUMBER OF LIFETIME MOVES	74
FIGURE 6.1 PERCENT MARRIED BY SEX AND AGE	77
FIGURE 6.2 PERCENT IN DE FACTO MARITAL UNIONS BY SEX AND AGE	78
FIGURE 6.2A PERCENT WIDOWED BY AGE AND SEX	78
FIGURE 6.3 PERCENT NEVER MARRIED BY AGE AND SEX	79
FIGURE 6.4 AVERAGE AGE AT FIRST MARRIAGE BY DIVISION AND SEX	79
FIGURE 6.5 AVERAGE AGE AT FIRST MARRIAGE BY MOVES AND SEX	80
FIGURE 6.6 AVERAGE AGE AT FIRST MARRIAGE BY MOVES AND SEX	80
FIGURE 7.1 PERCENTAGE DISTRIBUTION OF LARGEST RELIGIONS, TONGA: 1986 TO 2021	82
FIGURE 7.2 DISTRIBUTION OF LARGEST RELIGIONS BY DIVISION	83
FIGURE 7.3 LARGEST RELIGIONS BY DIVISION	83
FIGURE 8.1 NON-TONGA BORN BY CITIZENSHIP AND DIVISION	84
FIGURE 8.2 PERCENT TONGAN: 1986 TO 2021	85
FIGURE 8.3 PERCENT TONGAN BY GENDER AND RESIDENCE	85
FIGURE 9.1 PERCENT EXPERIENCING MENTAL ILLNESS BY DIVISION	86
FIGURE 9.2 TYPE OF MENTAL ILLNESS BY DIVISION	86
FIGURE 9.3 LARGEST NUMBERS OF NON-COMMUNICABLE DISEASES OR CHRONIC ILLNESS BY GENDER	87
FIGURE 9.4 PERCENT WITH DIABETES BY SEX AND AGE	88
FIGURE 9.5 PERCENT WITH HIGH BLOOD PRESSURE BY AGE AND SEX	88
FIGURE 9.6 PERCENT WITH ILLNESS OR INJURY BY GENDER AND DIVISION	89
FIGURE 9.7 PERCENT WITH ILLNESS OR INJURY IN THE TWO WEEKS BEFORE THE CENSUS BY SEX AND AGE	89
FIGURE 9.8 PLACE THAT ILL OR INJURED SOUGHT CARE	90
FIGURE 9.9 PLACE WHERE CARE SOUGHT FOR INJURY OR SICKNESS BY DIVISION	90
FIGURE 9.10 PERCENT BEING NOT SICK ENOUGH TO SEEK CARE BY DIVISION	91
FIGURE 9.11 POPULATION EXPERIENCING STRESS DUE TO COVID-19 BY GENDER	92
FIGURE 9.12 POPULATION EXPERIENCING SOME STRESS DUE TO COVID-19 BY GENDER AND AGE	92
FIGURE 9.13 POPULATION EXPERIENCING STRESS AND COVID-19 BY DIVISION	93
FIGURE 9.14 COVID DOSES BY AGE	93
FIGURE 9.15 POPULATION WITH COVID-19 VACCINATIONS BY DIVISION	94
FIGURE 9.16 REASONS NOT GETTING COVID-19 VACCINATION BY DIVISION	94
FIGURE 9.17. PERSONS WITH ONLY ONE DISABILITY BY DIVISION,	97
FIGURE 10.1 PERCENT SMOKING BY AGE AND GENDER	99
FIGURE 10.2 PERCENT SMOKING TAPAKA TONGA BY AGE AND GENDER	100
FIGURE 10.3 PERCENT DRINKING ALCOHOL BY AGE AND GENDER	100
FIGURE 10.4 PERCENT NOT DRINKING KAVA BY AGE AND GENDER	101
FIGURE 11.1 CURRENTLY ENROLLED BY SEX AND AGE	102
FIGURE 11.2. PERCENT ENROLLED IN SCHOOL BY 5-YEAR AGE GROUP AND GENDER	103
FIGURE 11.3 PERCENT ENROLLED BY AGES 14 TO 21 AND SEX	103
FIGURE 11.4 PERCENT NOT ENROLLED BY AGE AND SEX	104
FIGURE 11.5 SEX RATIO (GENDER PARITY) BY AGE OF ENROLLED STUDENTS	104
FIGURE 11.6 GENDER PARITY BY SCHOOL ATTENDING LEVEL AND DIVISION (FEMALES PER 100 MALES)	105

FIGURE 11.7 PERCENT 18 YEARS + NOT ATTENDING SCHOOL ATTAINING FORMS 5 TO 7 BY DIVISION AND SEX	106
FIGURE 11.8 PERCENT 18 YEARS + NOT ATTENDING SCHOOL ATTAINING FORMS 5 TO 7 BY AGE AND SEX	107
FIGURE 11.9 CUMULATIVE PERCENTS EDUCATIONAL QUALIFICATIONS BY DIVISION	108
FIGURE 11.10 TONGAN AND ENGLISH LITERACY BY AGE	108
FIGURE 11.11 PERCENT LITERATE IN TONGAN BY AGE AND SEX	109
FIGURE 11.12 LANGUAGES SPOKEN BY DIVISION, TONGAN: 2021	109
FIGURE 11.13 PERCENT LANGUAGES SPOKEN BY AGE	110
FIGURE 12.1 HOUSEHOLD HAS INTERNET ACCESS BY DIVISION.....	111
FIGURE 12.2 PERCENT HAVING MOBILE CELLULAR AS INTERNET TYPE BY DIVISION.....	112
FIGURE 12.3 PERCENT HAVING TCC OR DIGICEL AS INTERNET PROVIDER BY DIVISION	112
FIGURE 12.4 PERCENT WITH ACCESS TO INTERNET BY SEX AND AGE, TONGA: 2016 AND 2021.....	113
FIGURE 12.5 PERCENT ACCESSING INTERNET BY DIVISION, TONGA: 2016 AND 2021	114
FIGURE 12.6 PLACE OF INTERNET ACCESS BY DIVISION	114
FIGURE 12.7 REASONS USING THE INTERNET, TONGA: 2016 AND 2021.....	115
FIGURE 12.8 REASONS FOR USING INTERNET BY DIVISION.....	115
FIGURE 12.9 PERCENT WITH MOBILE PHONE BY DIVISION.....	116
FIGURE 12.10 MOBILE PHONE SERVICE PROVIDER BY DIVISION.....	116
FIGURE 12.11 PERCENT OWNING A MOBILE PHONE BY SEX AND AGE.....	117
FIGURE 12.12 PERCENT HOUSEHOLDS WITH SELECTED COMMUNICATION TOOLS, TONGA: 2016 AND 2021	117
FIGURE 12.13 PERCENT OWNING MOBILE PHONE AND DATA USE BY SEX, TONGA: 2016 AND 2021.....	118
FIGURE 12.14 MAIN PURPOSE OF INTERNET USE ON MOBILE PHONE, TONGA: 2016 AND 2021	118
FIGURE 12.15 PERCENT REGISTERED TO VOTE BY DIVISION	119
FIGURE 12.16 PERCENT REGISTERED TO VOTE BY AGE	119
FIGURE 12.17 REASONS NOT REGISTERED TO VOTE BY DIVISION	120
FIGURE 12.18 PERCENT LIVING IN DIVISION WHERE REGISTERED TO VOTE	120
FIGURE 12.19 PERCENT VOTED IN THE 2021 ELECTION	121
FIGURE 12.20 PERCENT VOTED IN 2021 BY AGE	121
FIGURE 13.1. POPULATION AGED 15 YEARS AND OLDER BY SEX AND LABOUR MARKET ACTIVITY.....	123
FIGURE 13.2. POPULATION AGED 15 YEARS AND OLDER BY URBAN-RURAL RESIDENCE AND LABOUR MARKET ACTIVITY.....	124
FIGURE 13.3: EMPLOYED POPULATION AGED 15 AND OLDER BY AGE AND SEX, TONGA POPULATION AND HOUSING CENSUS: 2021CHART.....	124
FIGURE 13.4. POPULATION 15 YEARS AND OLDER BY LABOUR FORCE PARTICIPATION RATE AND EMPLOYMENT-POPULATION RATIO AND SEX.....	125
FIGURE 13.4A: POPULATION 15 AND OLDER BY AGE, SEX AND LABOUR FORCE	126
FIGURE 13.5: POPULATION AGED 15 AND OLDER BY AGE, SEX AND EMPLOYMENT-POPULATION RATIO.....	126
FIGURE 13.6: EMPLOYMENT BY WORK STATUS AND SEX	127
FIGURE 14.1 PRIVATE HOUSEHOLD SIZE BY DIVISION, TONGA: 2011 TO 2021.....	132
FIGURE 14.2 PERSONS PER PRIVATE HOUSEHOLD, TONGA: 2016 AND 2021	133
FIGURE 14.3 PERCENT (SMOOTHED) MOTHERS ALIVE BY AGE & SEX OF CHILD: 2021.....	135
FIGURE 14.4 PERCENT (SMOOTHED) FATHERS ALIVE BY AGE & SEX OF CHILD: 2021.....	135
FIGURE 14.5 PERCENT PARENT IN HOUSE BY SEX OF PARENT AND AGE OF CHILD: TONGA 2021	135
FIGURE 14.6 HOUSEHOLD TYPE BY DIVISION	136
FIGURE 14.7 DEPENDENCY RATIO BY HOUSEHOLD TYPE, TONGA: 2021	137
FIGURE 14.8. HOUSEHOLD TYPE BY PARENTS IN THE HOUSE, TONGA: 2021	137
FIGURE 14.9 TENURE, TONGA: 1986 TO 2021.....	138
FIGURE 14.10 TENURE BY DIVISION	138
FIGURE 14.11 MAIN MATERIAL OF WALLS, TONGA: 2006 TO 2021.....	139
FIGURE 14.12 MAIN MATERIAL FOR OUTSIDE WALLS BY DIVISION	139
FIGURE 14.13 MAIN MATERIAL OF ROOF BY DIVISION	140
FIGURE 14.14 MAIN MATERIAL OF FLOORS BY DIVISION	140
FIGURE 14.15 MEAN NUMBER OF ROOMS BY DIVISION.....	140
FIGURE 14.16 MAIN SOURCE OF DRINKING WATER BY DIVISION	141
FIGURE 14.17 MAIN SOURCE OF WATER FOR WASHING BY DIVISION.....	142
FIGURE 14.18 TYPE OF TOILET FACILITIES, TONGA: 1986 TO 2021	143
FIGURE 14.19 TYPE OF TOILET FACILITIES BY DIVISION.....	143

FIGURE 14.20 LOCATION OF TOILET BY DIVISION	144
FIGURE 14.21 MAIN SOURCE OF LIGHTING BY DIVISION	144
FIGURE 14.22 MAIN COOKING FUEL, TONGA: 1986 TO 2021	145
FIGURE 14.23 MAIN COOKING FUEL BY DIVISION	145
FIGURE 14.24 COOKING LOCATION BY DIVISION	146
FIGURE 14.25 MEANS OF WASTE DISPOSAL, TONGA: 1996 TO 2021.....	147
FIGURE 14.26 PERCENT WITH PUBLIC COLLECTION OF WASTE BY DIVISION.....	147
FIGURE 14.27 CHANGE IN PERCENT HOUSEHOLDS WITH SELECTED APPLIANCES, TONGA: 2016 AND 2021....	148
FIGURE 14.28 PERCENTAGE OF HOUSEHOLDS WITH DESKTOP OR LAPTOP BY DIVISION.....	149
FIGURE 14.29 PERCENTAGE OF HOUSEHOLDS WITH A REFRIGERATOR BY DIVISION	150
FIGURE 14.30 PERCENTAGE OF HOUSEHOLDS WITH A GENERATOR BY DIVISION	150
FIGURE 14.31 PERCENTAGE OF HOUSEHOLDS WITH BICYCLES BY DIVISION	151
FIGURE 14.32 PERCENTAGE OF HOUSEHOLDS WITH CARS BY DIVISION	151
FIGURE 15.1 PERCENT HOUSEHOLDS WITH REGULAR SALARY WORKERS BY DIVISION	152
FIGURE 15.2. MAIN SOURCE OF INCOME BY DIVISION	152
FIGURE 15.3 MAIN SOURCE OF INCOME BY URBAN/RURAL RESIDENCE	153
FIGURE 15.4 NUMBER OF SALARY WORKERS IN HOUSEHOLDS	153
FIGURE 15.5 HOUSEHOLDS RECEIVING REMITTANCES BY DIVISION.....	154
FIGURE 15.6 HOUSEHOLDS RECEIVING REMITTANCES BY URBAN/RURAL RESIDENCE.....	154
FIGURE 15.7 HOUSEHOLDS BY FREQUENCY OF REMITTANCES AND DIVISION	155
FIGURE 15.8 HOUSEHOLDS BY FREQUENCY RECEIVING REMITTANCES BY URBAN/RURAL RESIDENCE	155
FIGURE 15.9 PERCENT NEVER EMPLOYED IN LABOUR SCHEME BY DIVISION	156
FIGURE 15.10 TEMPORARY LABOUR MOBILITY TO AUSTRALIA AND NEW ZEALAND BY DIVISION.....	156
FIGURE 15.11 PERCENT NOT EMPLOYED IN LABOUR SCHEME SINCE JANUARY 2020 BY DIVISION	157
FIGURE 15.12 TEMPORARY LABOUR MOBILITY TO AUSTRALIA AND NEW ZEALAND SINCE JANUARY 2020 BY DIVISION	157
FIGURE 15.13 ACHIEVED GOALS BY LABOUR SCHEME	158
FIGURE 15.14 PERCENT WITH SOCIAL PROBLEM BECAUSE HH MEMBER IN TEMPORARY LABOUR SCHEME BY DIVISION	158
FIGURE 16.1 PERCENT CHILDREN HAVE 3 MEALS A DAY BY DIVISION	159
FIGURE 16.2 PERCENT CHILDREN PARTICIPATE IN CELEBRATIONS LIKE CHRISTMAS BY DIVISION	159
FIGURE 16.3 PERCENT CHILDREN HAVE DAILY FRUITS AND VEGETABLES BY DIVISION	160
FIGURE 16.4 PERCENT CHILDREN HAVE A PLACE TO STUDY BY DIVISION.....	160
FIGURE 16.5 PERCENT CHILDREN HAVE BOOKS AT HOME BY DIVISION	160
FIGURE 16.6 PERCENT CHILDREN DO NOT HAVE FATTY FOODS IN THEIR DIETS BY DIVISION.....	161
FIGURE 16.7 PERCENT HAVING FOOD FOR THE FAMILY TO SURVIVE FOR 3 DAYS BY DIVISION.....	161
FIGURE 16.8 PERCENT KNOWING THE NEAREST EVACUATION AREA BY DIVISION	162
FIGURE 16.9 PERCENT KNOWING THE DIRECTION TO THE EVACUATION AREA BY DIVISION	162
FIGURE 16.10 PERCENT KNOWING THE TOWN OFFICER AND HIS CONTACT INFORMATION BY DIVISION	162
FIGURE 16.11 PERCENT KNOWING THE EMERGENCY CONTACT NUMBER BY DIVISION	163
FIGURE 17.1 AGE AND SEX DISTRIBUTION OF THE TOTAL POPULATION IN HOUSEHOLDS	164
FIGURE 17.2 AGE AND SEX DISTRIBUTIONS OF THE LOWEST AND HIGHEST QUINTILES	165
FIGURE 17.3 MEDIAN AGE BY QUINTILE, TONGA 2021.....	165
FIGURE 17.4 SEX RATIO BY QUINTILE, TONGA 2021	166
FIGURE 17.5 SEX RATIOS BY AGE FOR QUINTILES 1 AND 5	166
FIGURE 17.6 DEPENDENCY RATIO BY QUINTILE	167
FIGURE 17.7 MEAN AND MEDIAN NUMBER OF PERSONS PER HOUSEHOLD.....	167
FIGURE 17.8 PERCENT 1-PERSON HOUSEHOLDS BY QUINTILE.....	168
FIGURE 17.9 PERCENT 10 OR MORE PERSONS PER HOUSEHOLD BY QUINTILE	168
FIGURE 17.10 PERCENT WIDOWED BY QUINTILE	169
FIGURE 17.11 AVERAGE AGE AT FIRST MARRIAGE BY SEX AND QUINTILE.....	170
FIGURE 17.12. LARGEST RELIGIONS BY QUINTILE	170
FIGURE 17.13 PERCENT WITH DIABETES BY QUINTILE	170
FIGURE 17.14 PERCENT COVID VACCINATED BY QUINTILE	171
FIGURE 17.15 PERCENT WITH DIFFICULTY SEEING BY QUINTILE.....	171
FIGURE 17.16 PERCENT EVER ATTENDED SCHOOL BY QUINTILE	172
FIGURE 17.17 HIGHEST FORM COMPLETED BY QUINTILE	172

FIGURE 17.18 PERCENT LITERATE IN ENGLISH BY QUINTILE	172
FIGURE 17.19 PERCENT WITH A MOBILE PHONE BY QUINTILE	173
FIGURE 17.20 PERCENT WITH ACCESS TO INTERNET BY QUINTILE	173
FIGURE 17.21 PERCENT WITH ACCESS TO INTERNET AT WORK BY QUINTILE.....	174
FIGURE 17.22 PERCENT WHO USE ALCOHOL BY QUINTILE	174
FIGURE 17.23 PERCENT WHO USE KAVA BY QUINTILE.....	174
FIGURE 17.24 PERCENT WHO USE TOBACCO BY QUINTILE	175
FIGURE 17.25 PERCENT WHO USE LOCAL TOBACCO BY QUINTILE	175
FIGURE 17.26 EMPLOYMENT STATUS BY QUINTILE	176
FIGURE 17.27 MEDIAN INCOME BY SEX AND QUINTILE	176
FIGURE 17.28 PERCENT REGISTERED TO VOTE BY QUINTILE	176
FIGURE 17.29 MEAN AGE AT FIRST BIRTH BY QUINTILE.....	177
FIGURE 17.30 CHILDREN EVER BORN BY QUINTILE	177
FIGURE 17.31 CHILDREN EVER BORN TO FEMALES 50 TO 54 BY QUINTILE.....	178
FIGURE 17.32 UNADJUSTED TOTAL FERTILITY RATE BY QUINTILE	178
FIGURE 17.33 HOUSEHOLD TYPE BY QUINTILE.....	179
FIGURE 17.34 FAMILY HOUSEHOLDS BY TYPE AND QUINTILE.....	180
FIGURE 17.35 PERSONS LIVING ALONE BY SEX AND QUINTILE	180

List of Tables

TABLE 2.1. POPULATION OF DIVISIONS AND DISTRICT, TONGA: 2006 TO 2021	20
TABLE 2.2. DENSITY OF THE DIVISIONS, TONGA: 2006 TO 2021	23
TABLE 2.3 BROAD AGE GROUPS BY SEX, TONGA: 2016 AND 2021.....	28
TABLE 2.4. AGE AND SEX DISTRIBUTION, TONGA: 2016 AND 2021.....	28
TABLE 3.1 MEDIAN AGE AT FIRST BIRTH BY DIVISION, TONGA: 1966 TO 2021.....	33
TABLE 3.2 CHILDREN EVER BORN BY SEX PER MOTHER'S AGE, TONGA: 2016 AND 2021.....	34
TABLE 3.3 CHILDREN EVER BORN BY AGE, TONGA: 2006 TO 2021	34
TABLE 3.4 CHILDREN EVER BORN BY AGE OF MOTHER AND DIVISION	35
TABLE 3.5 CHILDREN EVER BORN AND CHILDREN STILL ALIVE BY AGE OF FEMALE.....	36
TABLE 3.6 CHILDREN EVER BORN AND STILL ALIVE BY SEX OF CHILD AND AGE OF MOTHER.....	37
TABLE 3.7 AGE-SPECIFIC AND TOTAL FERTILITY RATES FROM RECORDED BIRTHS	40
TABLE 3.8 ESTIMATED AGE-SPECIFIC AND TOTAL FERTILITY RATES, TONGA: 2016 AND 2021.....	41
TABLE 3.9 UNADJUSTED AND ADJUSTED ASFRS AND TFRS USING PFRATIO FOR DIVISIONS.....	42
TABLE 3.10 REGISTERED BIRTHS BY SEX, TONGA: 2013 TO 2020.....	42
TABLE 3.11A OWN CHILD DERIVED 5-YEAR AGE-SPECIFIC AND TOTAL FERTILITY RATES, TONGA: 1966 TO 2021	46
TABLE 3.11B CHILDBIRTH CERTIFICATE AND REGISTRATION BY AGE.....	53
TABLE 3.12 CHILDBIRTH CERTIFICATE AND REGISTRATION BY AGE FOR MALES	54
TABLE 3.13 CHILDBIRTH CERTIFICATE AND REGISTRATION BY AGE FOR FEMALES.....	54
TABLE 4.1 CHILDREN EVER BORN AND SURVIVING BY AGE OF MOTHER AND SEX OF CHILD	58
TABLE 4.2 CHILDREN EVER BORN AND STILL ALIVE BY SEX OF CHILD AND AGE OF MOTHER.....	59
TABLE 4.3 INDIRECT INDICATORS OF INFANT AND EARLY CHILDHOOD MORTALITY: 2016 AND 2021	61
TABLE 4.4 SUMMARY DEMOGRAPHIC CHARACTERISTICS.....	61
TABLE 4.5 LIFE EXPECTANCY FROM AGE-SPECIFIC DEATH RATES: ABOUT 2021.....	62
TABLE 4.6 FEMALE ABRIDGED LIFE TABLE FROM AGE SPECIFIC DEATHS	64
TABLE 4.7 FEMALE ABRIDGED LIFE TABLE USING THE ESTIMATED CRUDE DEATH RATES.....	64
TABLE 4.8 MALE ABRIDGED LIFE TABLE USING AGE-SPECIFIC DEATH RATES.....	65
TABLE 4.9 MALE ABRIDGED LIFE TABLE USING CRUDE DEATH RATES	65
TABLE 5.1 BIRTHPLACE DIVISION TO CURRENT DIVISION	66
TABLE 5.2 INTERNAL MIGRANTS FROM BIRTHPLACE TO CURRENT DIVISION, TONGA: 2016 AND 2021.....	67
TABLE 5.3 CURRENT DIVISION BY DIVISIONS OF RESIDENCE 1 YEAR BEFORE	68
TABLE 5.4 NET INTERNAL MIGRATION, ONE YEAR BEFORE THE CENSUS, TONGA: 2016 AND 2021.....	69
TABLE 5.5 USUAL DIVISION IN 2016 TO CURRENT DIVISION	70
TABLE 5.5A INTERNAL MIGRANTS FROM 5 YEARS BEFORE CENSUS BY DIVISION, TONGA: 2016 AND 2021.....	71
TABLE 5.6 NUMBER OF MOVES BY DIVISION.....	72
TABLE 5.7 EDUCATIONAL ATTAINMENT LEVEL BY NUMBER OF MOVES.....	75
TABLE 6.1 MARITAL STATUS BY SEX	76
TABLE 6.2 MARITAL STATUS BY AGE.....	76
TABLE 6.3 MARITAL STATUS BY AGE FOR MALES	76
TABLE 6.4 MARITAL STATUS BY AGE FOR FEMALES	77
TABLE 7.1 RELIGIONS, TONGA: 1986 TO 2021.....	81
TABLE 8.1 CITIZENSHIP, TONGA: 2011 TO 2021	84
TABLE 8.2 ETHNICITY BY DIVISION, TONGA: 1986 TO 2021	85
TABLE 9.1 NON-COMMUNICABLE DISEASES BY SEX AND AGE	87
TABLE 9.2 PLACE CARE SOUGHT FOR INJURY OR SICKNESS BY DIVISION.....	90
TABLE 9.3 TYPES OF CONTINUING ILLNESSES BY DIVISION	91
TABLE 9.4 DEMOGRAPHIC CHARACTERISTICS FOR POPULATION WITH SOME DISABILITY.....	95
TABLE 9.5 PERCENT HAVING SOME DISABILITY BY TYPE AND DIVISION	96
TABLE 9.6 PERSONS WITH SINGLE DISABILITIES BY DIVISION	96
TABLE 9.7 DISABILITIES BY TYPE OF DISABILITY.....	97
TABLE 9.8 POPULATION HAVING MODERATE FUNCTIONAL LIMITATIONS BY SEX	98
TABLE 9.9 POPULATION HAVING SEVERE FUNCTIONAL LIMITATIONS BY SEX	98
TABLE 9.10 BEHAVIORAL AND MENTAL ILLNESSES BY DIVISION.....	98
TABLE 10.1 PERCENT WITH VARIOUS HABITS BY SEX AND AGE.....	99
TABLE 11.1 PERCENT ATTENDING SCHOOL BY AGE AND SEX.....	102

TABLE 11.2 REASON FOR NOT ATTENDING SCHOOL BY AGE	105
TABLE 11.3 POPULATION 18 YEARS + AND NOT ENROLLED IN SCHOOL BY LEVEL OF SCHOOL, SEX, AND DIVISION	106
TABLE 11.4 POPULATION 18 YEARS + AND NOT ATTENDING SCHOOL BY LEVEL OF EDUCATION, AGE AND SEX	106
TABLE 11.5 EDUCATIONAL QUALIFICATION FOR POPULATION 18 YEARS + NOT ATTENDING SCHOOL	107
TABLE 11.6 CUMULATIVE PERCENT EDUCATIONAL QUALIFICATION FOR POPULATION 18 YEARS + NOT ATTENDING SCHOOL.....	108
TABLE 12.1 PERCENT USING THE INTERNET BY AGE AND SEX, TONGA: 2016 AND 2021	113
TABLE 13.1. POPULATION AGED 15 YEARS AND OLDER BY SEX, URBAN-RURAL RESIDENCE.....	125
TABLE 13.2. TOTAL EMPLOYMENT BY INDUSTRY GROUP AND SEX	128
TABLE 13.3: NOT ELSEWHERE CLASSIFIED EMPLOYMENT BY ACTIVITY AND SEX, TONGA CENSUS 2021.....	128
TABLE 13.4: TOTAL EMPLOYMENT BY OCCUPATIONAL GROUP FROM 2006 TO 2021, TONGA CENSUS 2006-21	129
TABLE 13.5: TOTAL EMPLOYMENT BY SEX AND OCCUPATIONAL GROUP, TONGA POPULATION AND HOUSING CENSUS 2021.	129
TABLE 13.6: POPULATION AGED 15 + AND UNEMPLOYMENT STATUS ACCORDING TO VARIOUS UNEMPLOYMENT CONCEPTS	130
TABLE 13.7. YOUTH NOT IN EDUCATION, EMPLOYMENT OR TRAINING BY AGE AND SEX	130
TABLE 13.8. POPULATION AGED 15 YEARS AND OLDER NOT IN THE LABOUR FORCE	131
TABLE 14.1 PERSONS PER PRIVATE HOUSEHOLD BY DISTRICT, TONGA: 2011 TO 2021.....	132
TABLE 14.2 HOUSEHOLD SIZE BY DIVISION	133
TABLE 14.3. RELATIONSHIP, TONGA: 2011 TO 2021	134
TABLE 14.4 RELATIONSHIP TO HEAD OF HOUSEHOLD BY SEX, TONGA: 2016 AND 2021.....	134
TABLE 14.5 HOUSEHOLD TYPE BY DIVISION	136
TABLE 14.6 TENURE, TONGA: 1986 TO 2021.....	138
TABLE 14.7 MAIN MATERIAL OF ROOF, TONGA: 2006 TO 2021.....	139
TABLE 14.8 SOURCE OF WATER FOR DRINKING, TONGA: 2006 TO 2021	141
TABLE 14.9 SOURCE OF NON-DRINKING WATER, TONGA: 1986 TO 2021	142
TABLE 14.10 TYPE OF TOILET FACILITIES, TONGA: 1986 TO 2021	143
TABLE 14.11 MAIN FUEL USED FOR COOKING, TONGA: 1986 TO 2021	145
TABLE 14.12 WASTE DISPOSAL, TONGA: 1996 TO 2021.....	146
TABLE 14.13 SELECTED ASSETS, TONGA: 2016 AND 2021	147
TABLE 14.14. HOUSEHOLDS WITH SELECTED APPLIANCES BY DIVISION	149
TABLE 14.15 HOUSEHOLDS WITH SELECTED KITCHEN APPLIANCES BY DIVISION	149
TABLE 14.16 HOUSEHOLDS WITH ENERGY SYSTEMS BY DIVISION	150
TABLE 14.17 HOUSEHOLDS WITH SELECTED VEHICLES BY DIVISION	151
TABLE 17.1 HOUSEHOLD TYPE BY QUINTILE.....	169
TABLE 17.2 INTERNAL MIGRATION BY QUINTILE	179
TABLE 17.3 HOUSEHOLD TYPE BY QUINTILE.....	179

GLOSSARY

Indicator	Definition
Age-dependency ratio	Number of people in the “dependent” age category (population younger than 15 years plus population 60 years and older) per 100 in the “economically productive ages” 15–59 years
Average age at (first) marriage	Approximation of average age at marriage, based on the proportion of population never married (single)
Balance equation	Population growth = births – deaths + net migration
Child mortality rate (4q1)	The probability of dying between age 1 and age 5
Crude birth rate (CBR)	Estimated number of births per 1,000 population
Crude death rate (CDR)	Estimated number of deaths per 1,000 population
Crude net migration rate	Rate of growth minus rate of natural increase
Employment–population ratio	Proportion of employed people in cash work (by a given age and sex), as part of the corresponding total number of people of the same age and sex
Infant mortality rate (IMR)	Number of infant deaths (children younger than one year) per 1,000 births
	Intercensal period Time period between two censuses
Labour force	People employed (work for pay, produce goods for sale or own consumption, and subsistence work) and unemployed (excludes those not seeking or available for employment)
Labour force participation rate	Proportion of people in the labour force (by a given age and sex), as part of the corresponding total number of people of the same age and sex X 100
Life expectancy at birth	Number of years a newborn baby can expect to live on average
Mean age at childbearing	Average age of women when giving birth
Median age	The age at which exactly half the population is older and half is younger
Parity (average)	Average number of children per woman
Rate of growth (%)	Average annual growth rate during 2016 –2021
Rate of natural increase	Crude birth rate (CBR) minus crude death rate (CDR)
Sex ratio	Number of males per 100 females
Teenage fertility rate	Number of births by women aged 15–19 per 1,000
Total fertility rate (TFR)	Average number of children a woman will have over her lifetime, calculated as the sum of age-specific fertility rates for a single year.
Under 5 mortality (q5)	The probability of dying between birth and age 5

Urban population

Total population of Kolofo'ou, Ma'ufanga and Kolomotu'a villages. The rural population is the remainder of Tonga, excluding these three villages.

SUMMARY OF MAIN INDICATORS

Indicator	Total	Males	Females
Total enumerated population (30 November 2021)	100,179	48,749	51,430
Annual rate of population change (%), 2016 to 2021	-0.5%		
Population density (people per km ²)			
Tonga	154		
Tongatapu	286		
Proportion of population living in urban area (%)	21%		
Proportion of population aged under 15 years of age	35%	37%	32%
Proportion of population aged 15 to 24 years (youth aged group)	19%	19%	19%
Proportion of population aged 15 to 59 years (working age population)	56%	54%	57%
Proportion of population aged 60 years and older	9%	9%	10%
Total dependency ratio	80		
Median age (years)	22	19	22
Households			
Number of private households	18,847		
Average household size	5.3		
Proportion of private households receiving a remittance in last 12 months	75%		
Number of institutions (non-private households)	182		
Number of people in institutions (resident and non-resident)	750	486	264
Proportion of private households with piped water supply	89%		
Proportion of private households with access to a flush toilet	89%		
Proportion of private households using electricity as the main source of lighting	94%		
Proportion of private households with access to the internet	34%		
Proportion of private households with access to a mobile phone	97%		
Births and fertility			
Estimated births	2,051		
Crude birth rate (CBR), per 1,000 population	20		
Total fertility rate (TFR), per woman	2.9		
Teenage fertility rate, per 1,000 (SDG 3.7.2)	19		
Mean age at childbearing	30.1		
Average age at first marriage		27.4	25.9
Children under 5 years of age whose birth has been registered (SDG 16.9.1)	98.1%		
Health and Mortality			
Estimated deaths	574	317	257
Crude death rate (CBR), per 1,000 population	5.7	6.5	5
Life expectancy at birth (years)	70.8	68.3	73.6
Infant mortality rate (IMR), per 1,000 live births (SDG 3.2.1)	8	9	8
Under-five mortality rate, per 1,000 live births (SDG 3.2.1)	10	10	12
Disability prevalence (population aged 10 years and over)	4.2%	3.8%	4.6%
Population (10 years+) smoking daily	17%	27%	7%
Population (10 years+) consuming at least one drink of alcohol per week	17.4%	26.8%	8.9%
Education			
School enrolment rate of 6 -15 year olds (% of population of same age)	98%	98%	99%
Proportion of population aged 15 years and over (%) with:			
secondary education	67%	66%	68%
secondary qualification (as highest grade completed)	7%	6%	7%
tertiary education	7%	10%	5%
tertiary qualification (as highest level completed)	8%	10%	6%

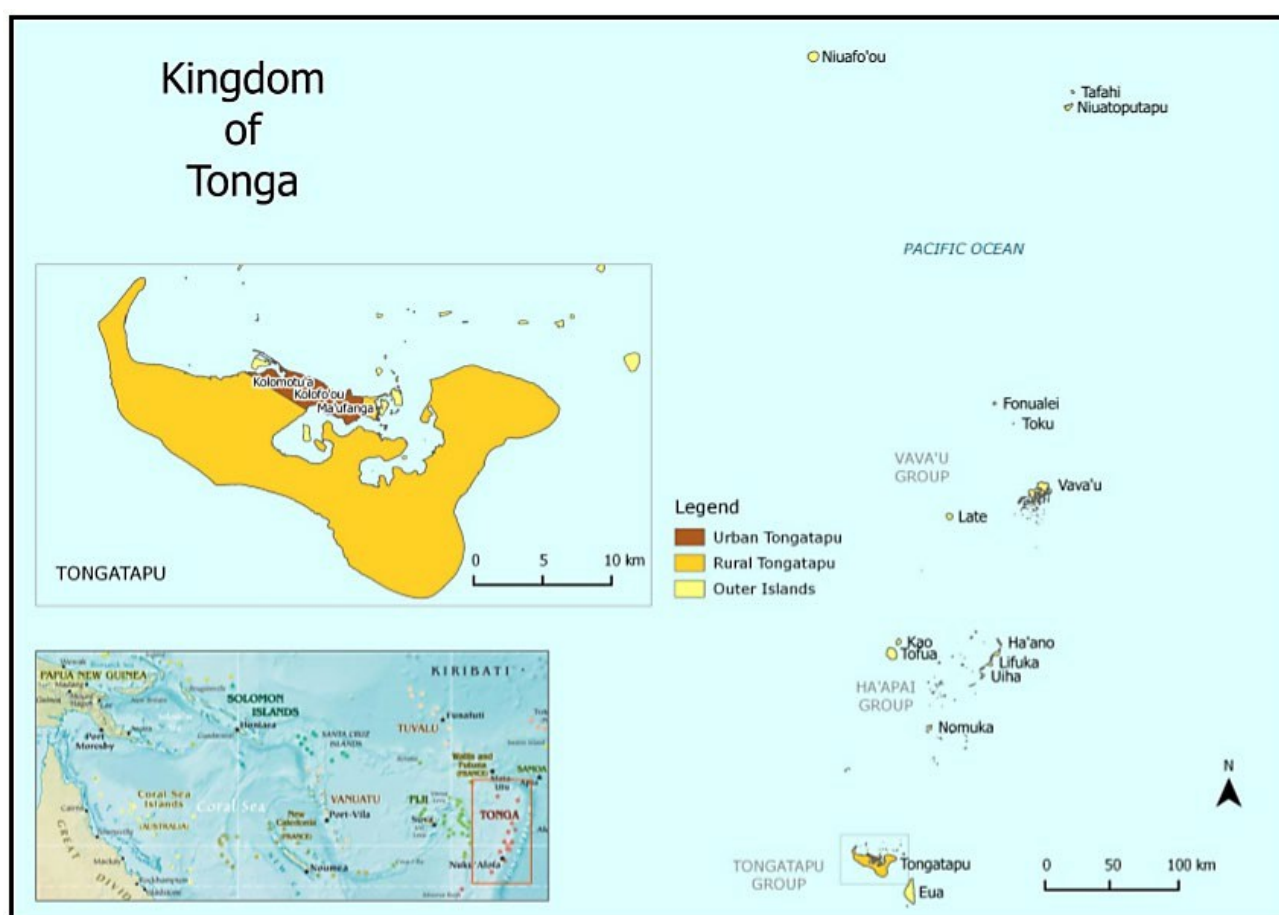
Indicator	Total	Males	Females
Gender parity index, Primary (GPI)	0.9		
Gender parity index, Secondary (GPI)	1.1		
Labour force (population 15+ years)			
Employed population (number)	30,734	16,338	14,396
Paid workers – Employers and Employees (number)	20,941	11,696	9,245
Subsistence workers (number)	4,426	3,247	1,179
Not in the labour force (number)	33,600	13,796	19,804
Employment to population ratio	47.1	53.4	41.5
Unemployment rate (%) 1	3.1%	2.7%	3.5%
Unemployment rate (%) 2	11%	8.7%	13.4%
Unemployment rate (%) 3	14.9%	18.5%	10.6%

¹ People who did not work during the reference week but looked for work and were available and willing to start work.

² People who did not work during the reference week but were available and willing to start work, regardless of looking for work. This is the national definition of unemployment

³ subsistence workers were also included as unemployed.

KINGDOM OF TONGA MAP



CHAPTER 1: INTRODUCTION

This report provides an analysis of the Tonga 2021 census data and, where data are available, presents comparisons with earlier census data. Tonga's first census with electronic data was in 1966, and the 1976, 1986, 1996, 2006, 2011, 2016 and 2021 censuses followed.

Geographic setting

Tonga consists of five administrative island divisions: Tongatapu, Vava'u, Ha'apai, 'Eua, and Ongo Niua. The islands cover an area of 360,000 km² in the South Pacific with a total land area of 749 km². Tonga includes 171 islands, with about 40 permanently inhabited. Nuku'alofa, the capital, is located on the island of Tongatapu and is the most populous division, followed by Vava'u, Ha'apai, 'Eua. Ongo Niua is the most remote division and has the smallest population share. Nuku'alofa is 890 km due south of Apia, Samoa; 750 km southeast of Suva, Fiji; and 2,000 km northeast of Auckland, New Zealand.

Background to report

This report is made possible by the generous donation by the NZ Stats in funding of analysis, writing up and launch of this report. This report is a collaborative effort between the Tonga Statistics Department (TSD) and Michael J. Levin.

The main purposes of this report are to:

- provide an analytical overview of the 2021 census results.
- generate interest among Tongan decision-makers and the public; and
- inform and facilitate sound decision-making by policymakers.

Data users are encouraged to contact TSD for further information.

Tonga Statistics Department

PO Box 149

Nuku'alofa Tonga

Telephone: + 676 23300

Facsimile: + 676 23303

Email: dept@stats.gov.to

CHAPTER 2: POPULATION STRUCTURE

Population size and trend

The population of Tonga, as enumerated on 30 November 2021, was 100,179 people: 48,749 males and 51,430 females. This is a decrease of 472 people in five years – the 2016 population was 100,651.

Tonga's population steadily increased from the first census in 1901 (Figure 2.1). Growth was strongest between the 1930s and 1970s, when at times the population increased by more than 2,000 people per year (Figure 2.2). From the 1970s until the 2011 census, the population increased only very slowly with an annual growth rate of less than 0.4 percent (about 375 people per year). The period 2011 to 2016 was the first time that the population of Tonga declined, and it declined further between 2016 and 2021.

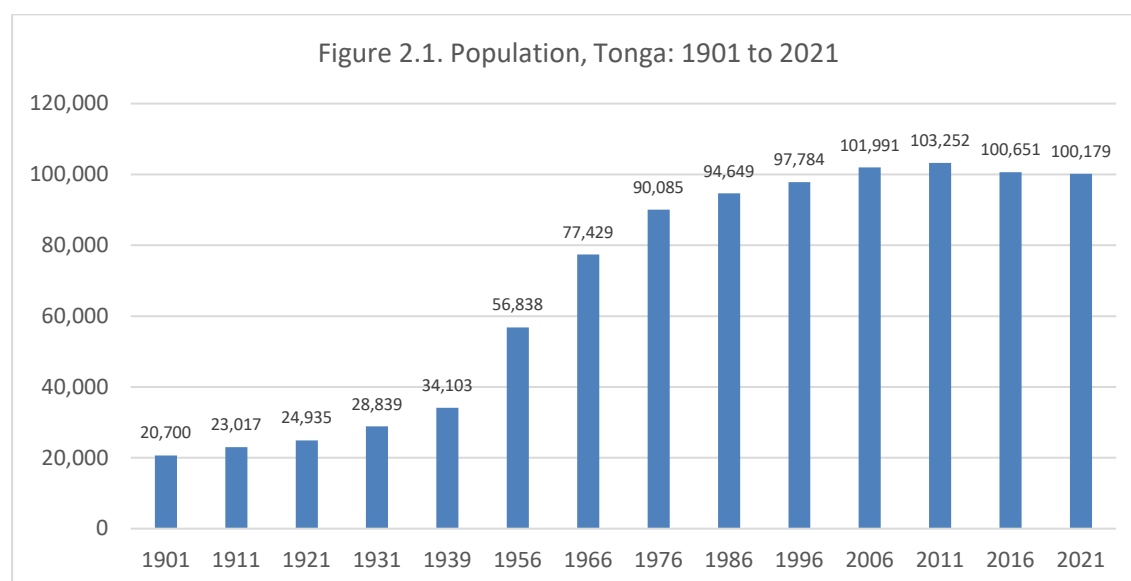
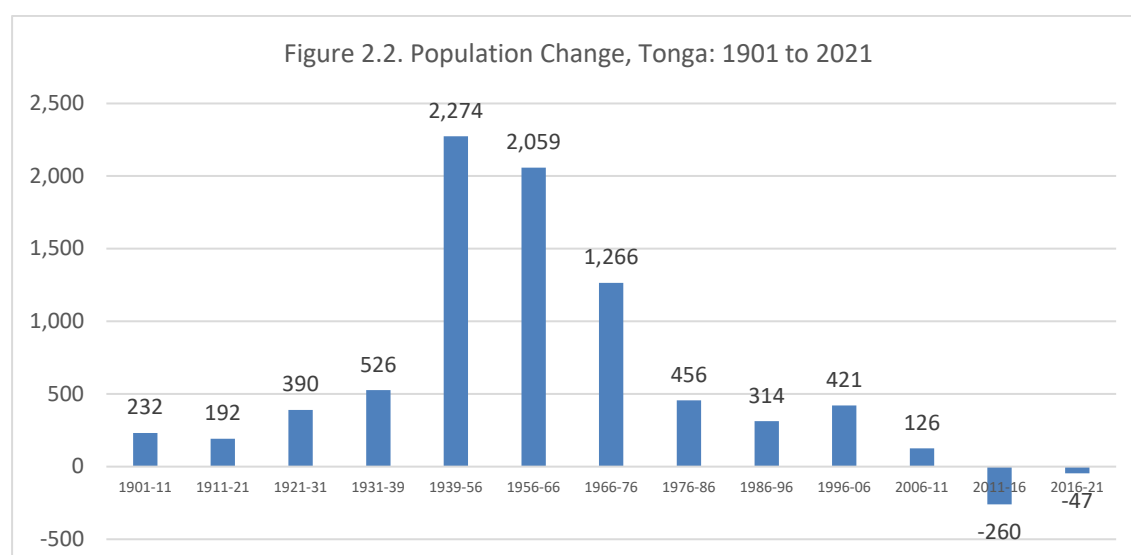


Figure 2.2 shows the change in numbers between censuses. Before the continuing emigration started, the population increased rapidly, by almost 2,300 per year between 1939 and 1956 and 2,100 between 1956 and 1966. After, Emigration started to offset natural increase: births minus deaths.



Population growth has varied extensively by division and district (Table 2.1, Figure 2.3). While Tonga overall had negative growth between the 2016 and 2021 censuses, Tongatapu's population also declined, by about 300 people. The other divisions, except Vava'u experienced negative growth (i.e., population loss) as well. Vava'u increased from 13,738 to 14,182 over the 5-year period, but it had decreased over the previous 3 censuses.

Table 2.1. Population of Divisions and District, Tonga: 2006 to 2021

Division/District	Census total population				Population change					
					Numbers			Percent Change		
	2006	2011	2016	2021	2006-11	2011-16	2016-21	2006-11	2011-16	2016-21
TONGA	101,991	103,252	100,651	100,179	1,261	-2,601	-472	1.2	-2.5	-0.5
Tongatapu	72,045	75,416	74,611	74,320	3,371	-805	-291	4.7	-1.1	-0.4
Kolofo'ou	18,463	18,957	18,064	17,274	494	-893	-790	2.7	-4.8	-4.4
Kolomotu'a	15,848	17,088	17,120	16,868	1,240	32	-252	7.8	0.2	-1.5
Vaini	12,594	12,949	12,999	13,199	355	50	200	2.8	0.4	1.5
Tatakamotonga	6,969	7,233	7,043	7,192	264	-190	149	3.8	-2.7	2.1
Lapaha	7,255	7,380	7,117	7,309	125	-263	192	1.7	-3.6	2.7
Nukunuku	6,820	7,733	8,001	8,177	913	268	176	13.4	3.9	2.2
Kolovai	4,096	4,076	4,267	4,301	-20	191	34	-0.5	4.7	0.8
Vava'u	15,505	14,922	13,738	14,182	-583	-1,184	444	-3.8	-7.6	3.2
Neiafu	5,787	5,774	5,251	5,345	-13	-523	94	-0.2	-9	1.8
Pangaimotu	1,412	1,325	1,242	1,206	-87	-83	-36	-6.2	-5.9	-2.9
Hahake	2,422	2,297	2,021	2,151	-125	-276	130	-5.2	-11.4	6.4
Leimatu'a	2,742	2,436	2,489	2,855	-306	53	366	-11.2	1.9	14.7
Hihifo	2,267	2,105	1,990	1,969	-162	-115	-21	-7.1	-5.1	-1.1
Motu	875	985	745	656	110	-240	-89	12.6	-27.4	-11.9
Ha'apai	7,570	6,616	6,125	5,665	-954	-491	-460	-12.6	-6.5	-7.5
Pangai	2,967	2,410	2,205	2,042	-557	-205	-163	-18.8	-6.9	-7.4
Foa	1,479	1,359	1,392	1,340	-120	33	-52	-8.1	2.2	-3.7
Lulunga	1,075	1,055	923	723	-20	-132	-200	-1.9	-12.3	-21.7
Mu'omu'a	630	609	432	488	-21	-177	56	-3.3	-28.1	13.0
Ha'ano	619	511	478	456	-108	-33	-22	-17.4	-5.3	-4.6
'Uiha	800	672	695	616	-128	23	-79	-16	2.9	-11.4
'Eua	5,206	5,016	4,945	4,864	-190	-71	-81	-3.6	-1.4	-1.6
'Eua Motu'a	2,949	2,852	2,795	2,740	-97	-57	-55	-3.3	-1.9	-2.0
'Eua Fo'ou	2,257	2,164	2,150	2,124	-93	-14	-26	-4.1	-0.6	-1.2
Ongo Niua	1,665	1,282	1,232	1,148	-383	-50	-84	-23	-3	-6.8
Niua Toputapu	1,019	759	739	718	-260	-20	-21	-25.5	-2	-2.8
Niua Fo'ou	646	523	493	430	-123	-30	-63	-19	-4.6	-12.8

Figure 2.3. Population Distribution for Divisions, Tonga: 1891 to 2021

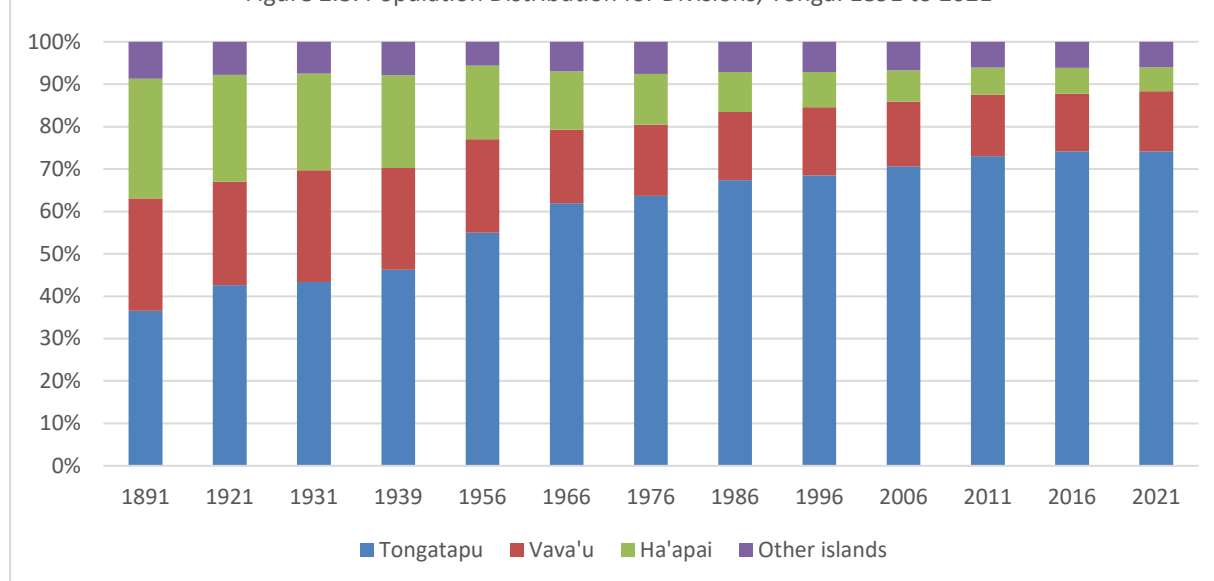


Figure 2.4 shows the total population of Tonga in each census divided into the 5 Divisions. The population increased from less than 60,000 in 1956 to almost 100,000 in 1996, and over 100,000 in 2006, where it stayed in subsequent censuses. Since Tongatapu is so large, it determines the size of the total population in each census.

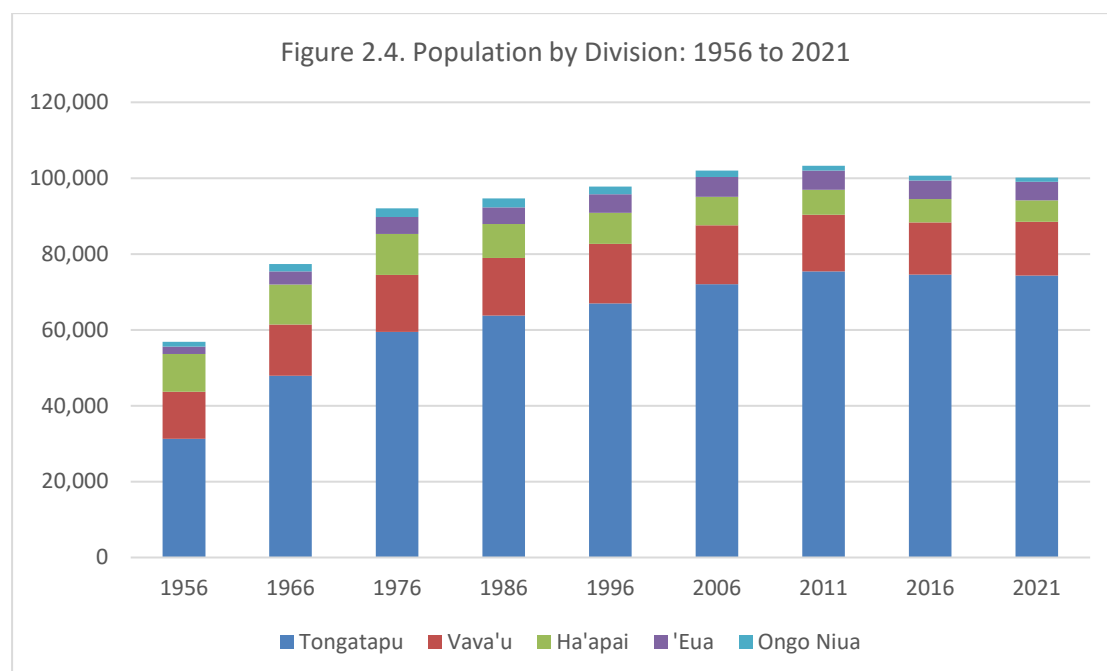
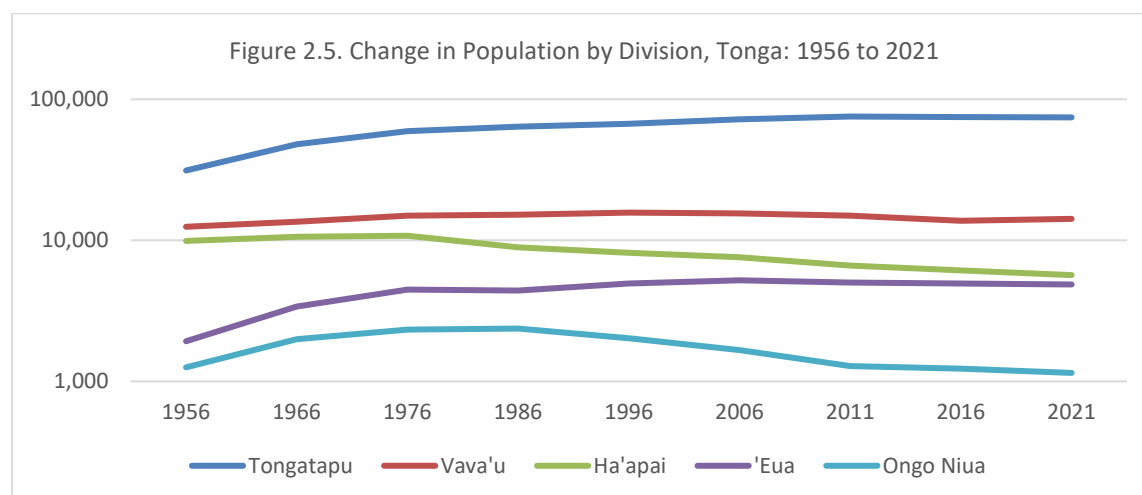


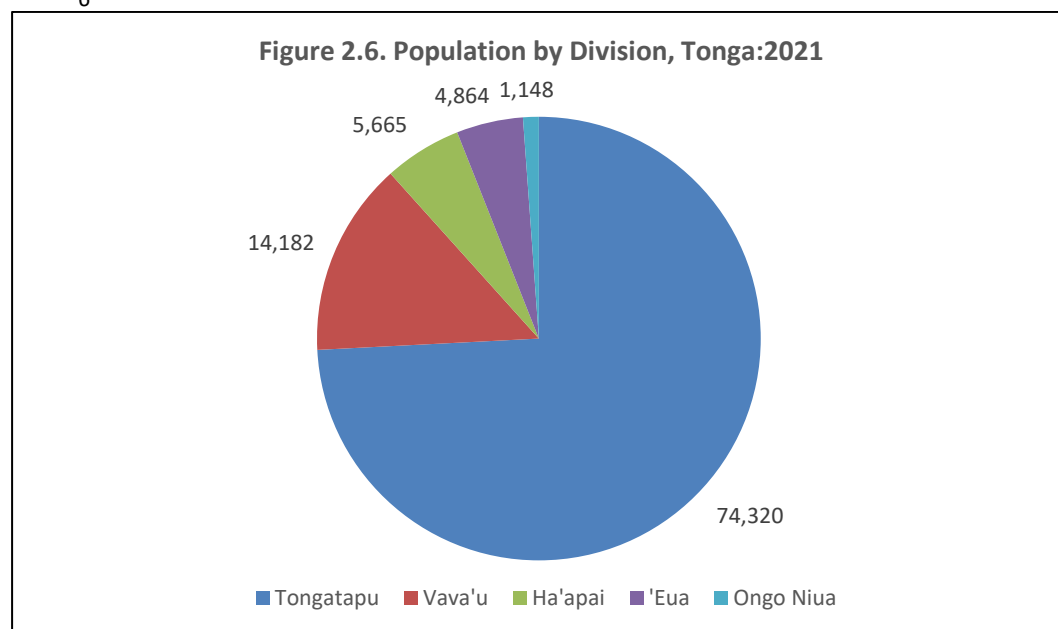
Figure 2.5 shows the change in population in the Divisions over the period from 1956 to 2021. Because Tongatapu is so much larger than the other Divisions, we are using a logarithmic graph to better show the changes. Tongatapu's population stayed highest and continued to rise throughout the period. 'Eua's population also increased throughout the period. Vava'u's population remained about the same throughout the censuses. But Ha'apai and Ongo Niua saw population decreases between 1956 and 2021. Ha'apai's population declined throughout the period, but Ongo Niua's population first increased in the latter part of the last century, and then decreased.



Population distribution

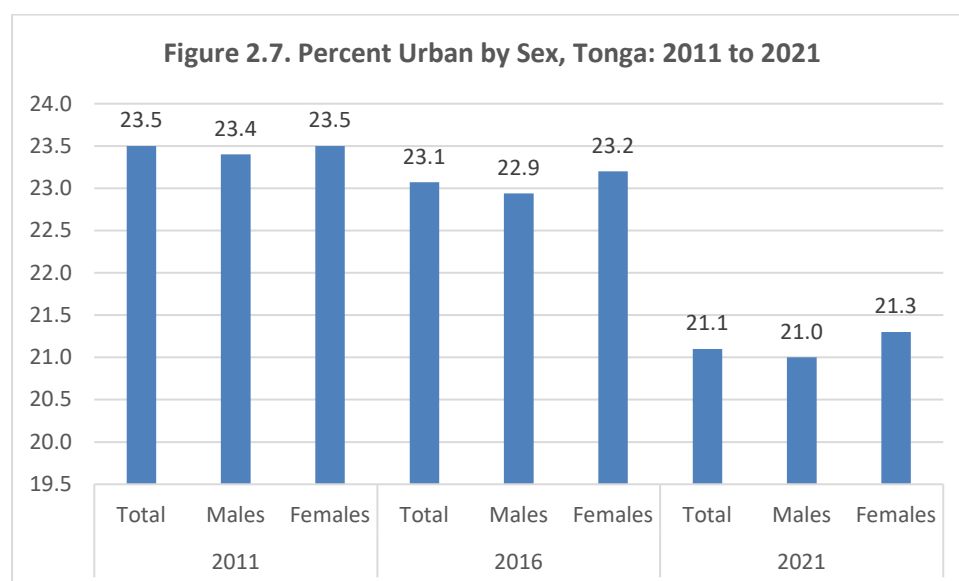
In 2021, 74 percent of Tonga's population lived in Tongatapu, about the same as in 2016, so not continuing the trend of increasing population share living on the main island. The proportion of Tonga's population that lived in Vava'u was 14 percent, Ha'apai 6 percent, 'Eua 5 percent, and Ongo Niua 1 percent (Figure 2.6). These percentages are like those in 2011 and 2016.

6



Urban - rural

About 1 in every 5 persons (21 percent) of Tonga's population lived in the three urban districts of Kolofo'ou, Kolomotu'a, and Ma'ufanga, which together form the township of Nuku'alofa, Tongatapu (Figure 2.7). These three districts made up the urban area of Tonga; the rest of the districts made up the rural area. The urban-rural split in the population has remained stable since 2006, although it decreased about 2 percentage points between 2016 and 2021.



Population density

Tonga's land area is about 650 square kilometers (Table 2.2). Tongatapu's size is largest, at 260 square kilometers, Vava'u is next largest, at 121 square kilometers, followed by Ha'apai at 109, 'Eua at 87 and Ongo Niua at 72. The table shows the populations of the divisions in 2006 through 2021. Dividing the population by the size of the entity provides the density of the population.

Because Tonga's resident population is not changing much, the densities also are not changing much. In 2021, Tonga's density was 154 persons per square kilometer. Tongatapu had the highest density 286 persons per square kilometers, followed by Vava'u at 117, 'Eua at 56, Ha'apai at 52, and Ongo Niua at 16.

According to the 2021 census, Tonga's average population density was 154 people/km², no change from 2016, and a decrease from 157 in 2006 and 159 in 2011 (Table 2.2).

Population density varied widely by division. While there were 286 people/km² in Tongatapu, there were only 16 people per/km² in Ongo Niua. Between 1996 and 2011, the population density in Tongatapu has been steadily increasing, until a little decline in the 2016 and remained the same in the 2021 census. The population density in 'Eua has declined a little in 2021 and the population density in the Ongo Niua has fallen by 2 percent. The largest decline in density has been in Ha'apai (by 4 people/km²).

Table 2.2. Density of the Divisions, Tonga: 2006 to 2021

Division	Land area (km ²)	Population				Density (per km ²)			
		2006	2011	2016	2021	2006	2011	2016	2021
TONGA	650	101,991	103,252	100,651	100,179	156.9	158.8	154.8	154.1
Tongatapu	260	72,045	75,416	74,611	74,320	277.1	290.1	287.0	285.8
Vava'u	121	15,505	14,922	13,738	14,182	128.1	123.3	113.5	117.2
Ha'apai	109	7,570	6,616	6,125	5,665	69.4	60.7	56.2	52.0
'Eua	87	5,206	5,016	4,945	4,864	59.8	57.7	56.8	55.9
Ongo Niua	72	1,665	1,282	1,232	1,148	23.1	17.8	17.1	15.9

Sources: 2006 to 2021 Censuses

Sex ratios

A sex ratio of 100 means equal numbers of males and females in the population. A sex ratio lower than 100 means fewer males than females, and a sex ratio higher than 100 means more males than females. The enumerated 2021 population comprised 48,749 males and 51,430 females. Females out-numbered males by 2,681, resulting in a sex ratio of 95, meaning 95 males per each 100 females. However, sex ratios varied widely by divisions (Figure 2.9).

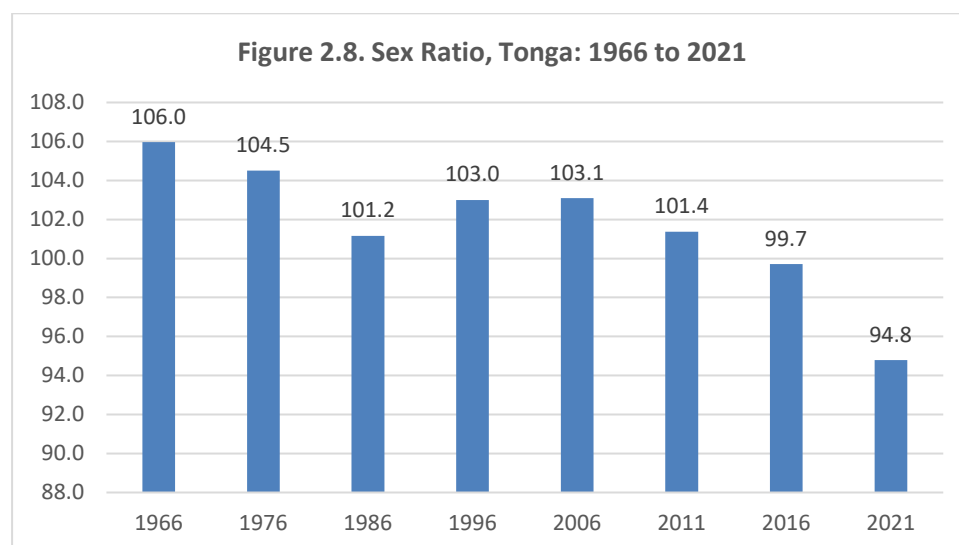


Figure 2.9 shows the sex ratios by division for 2011, 2016, and 2021. For the entire Tonga, Tongatapu, Vava'u, and Ha'apai the sex ratio decreased with each census, meaning that the fewer males than females were living in each area in each census. The sex ratio in 'Eua increased slightly between 2011 and 2016, before decreasing in 2021. Although the changes look striking, the scale is limited. In Ongo Niua, the sex ratio peaked in 2016 at 112, meaning 112 males for each 100 females, before decreasing in 2021 to about even numbers.

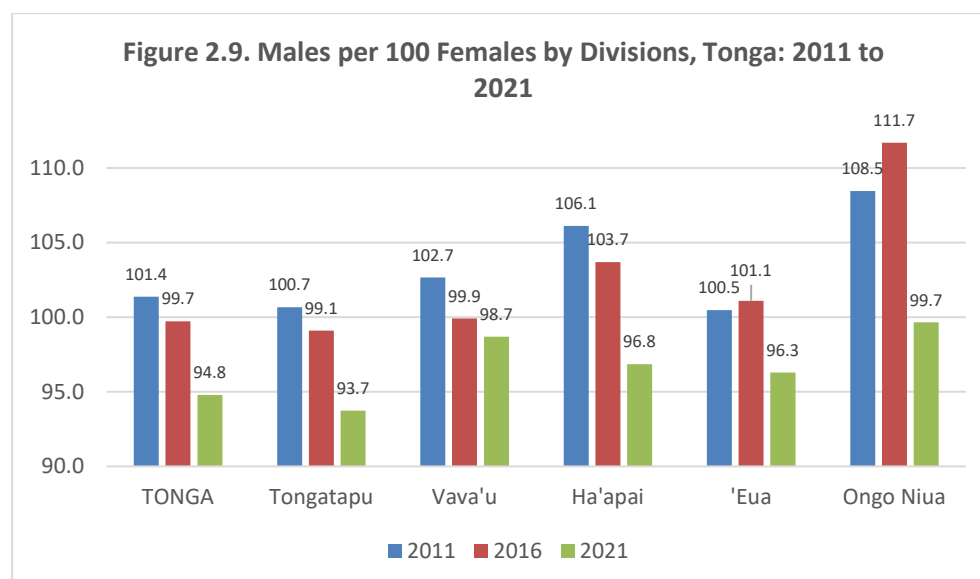
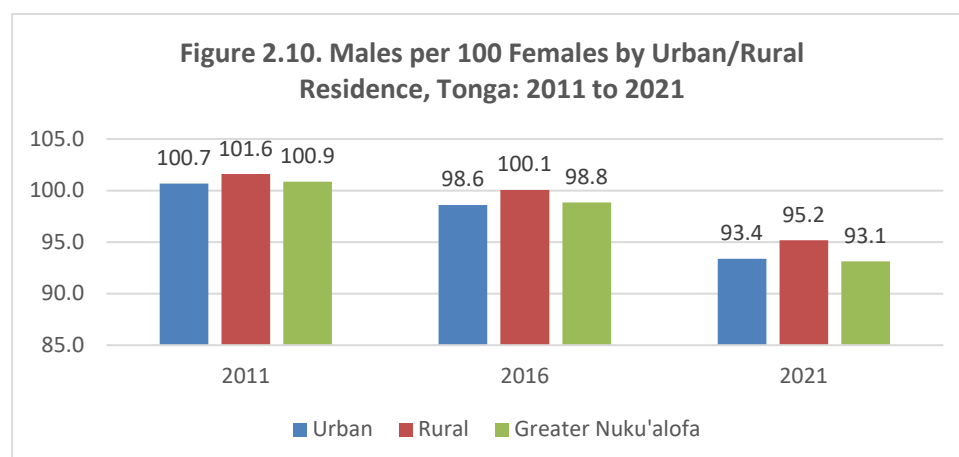


Figure 2.10 shows sex ratio by urban and rural residence for the 2011, 2016 and 2021 censuses. In 2011 the ratio shows about equal numbers of males in rural areas, urban areas, and the urban area of Greater Nuku'alofa. In 2016, the ratio decreased for those in rural areas and Greater Nuku'alofa but remained about the same in rural areas. And, in 2021, each of the areas had more females than males, with the urban areas at about 93 males per 100 females and the rural areas a little higher at 95 males for each 100 females. The figures show that males were outside Tonga for various purposes.



Between the 2016 and 2021 censuses, all sex ratios for Tonga and other island division declined. The decline in the number of males per 100 females was largest in Ongo Niua, from 112 to 98 males per 100 females. Ha'apai also decreased from 104 to 97, Tongatapu from 99 to 94 and Eua from 101 to 96. Males had higher rates of out-migration than females from the outer islands, higher rates of overseas migration among males than females and slower improvements in life expectancy for males than females.

Population pyramids

A population pyramid shows the males and females by age group, starting with the youngest age group at the bottom, and increasing with age towards the top of the pyramid. The number of males appears on the left and the number of females on the right.

Figure 2.11 shows the population pyramids for Tonga's population in the censuses from 1956 through 2016. Tonga's population pyramid has a wide base and narrower bars representing smaller counts as age increases, meaning that larger percentages of people were in the younger age groups. This population structure shows the impact of high fertility rates (i.e., high numbers of births per woman). The structure of the population has not changed very much even with the emigration to New Zealand and the United States in recent years.

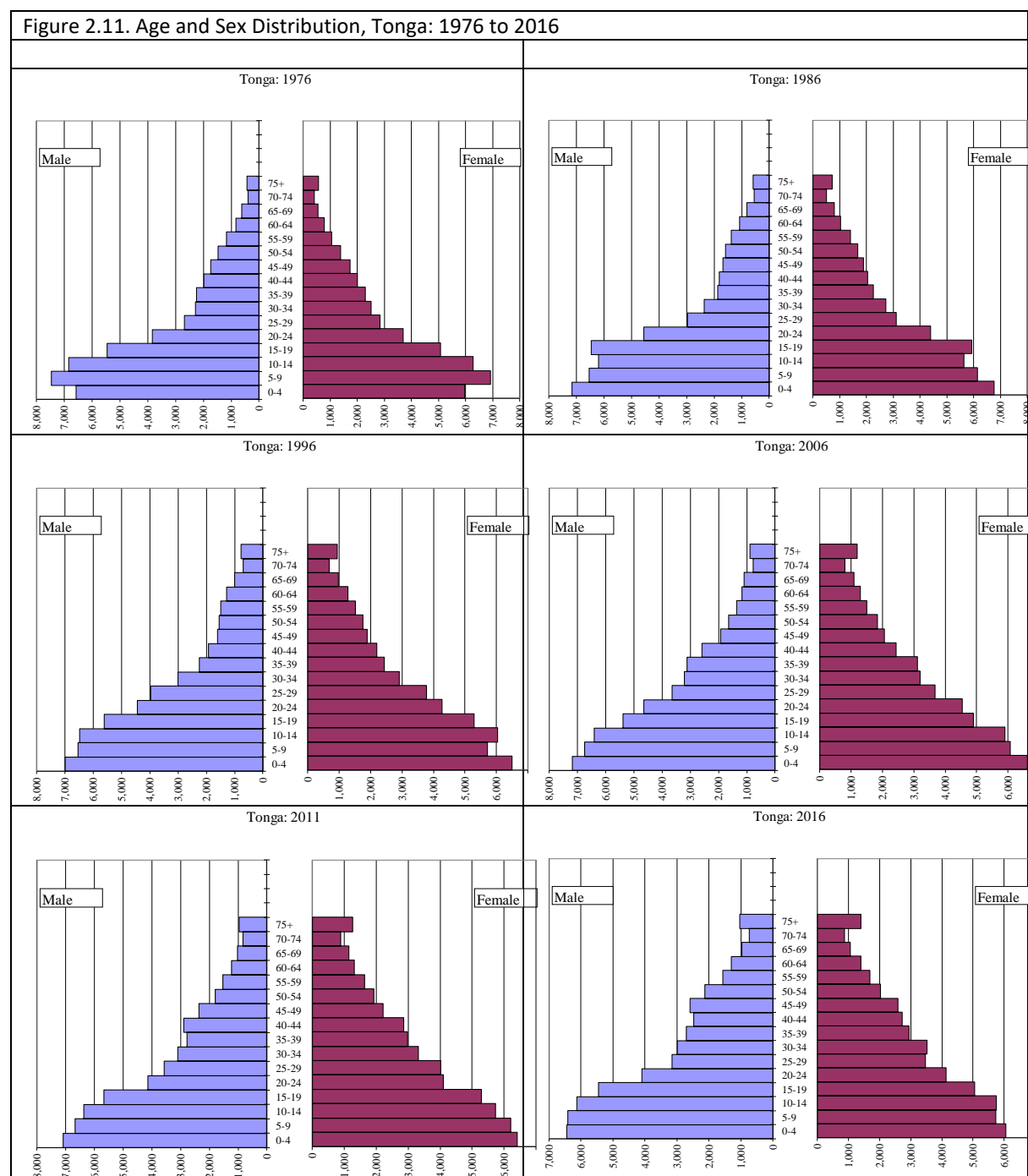


Figure 2.12 shows population pyramids for the divisions based on the 2021 census. Small numbers strongly affect the pyramids in the divisions outside of Tongatapu. But the bar for those 0 to 4 is smaller than the one for the 5- to 9-year-olds in each of the pyramids, showing declining fertility. Because of Tongatapu's population size, the pyramid looks much like the pyramid for the entire country. Vava'u's and Ha'apai's pyramids show strong out-migration and emigration for those in their 20s and 30s, And Ongo Niua shows large numbers of children 5 to 14 present in the islands, with many in the older groups not being present.

Tongatapu's population pyramid is like that of Tonga's total population pyramid. However, the pyramids of Vava'u, Ha'apai, 'Eua and Ongo Niua had a smaller proportion of people aged 20–34 because of out-migration of young people from the outer islands (rural areas) to Tongatapu or overseas.

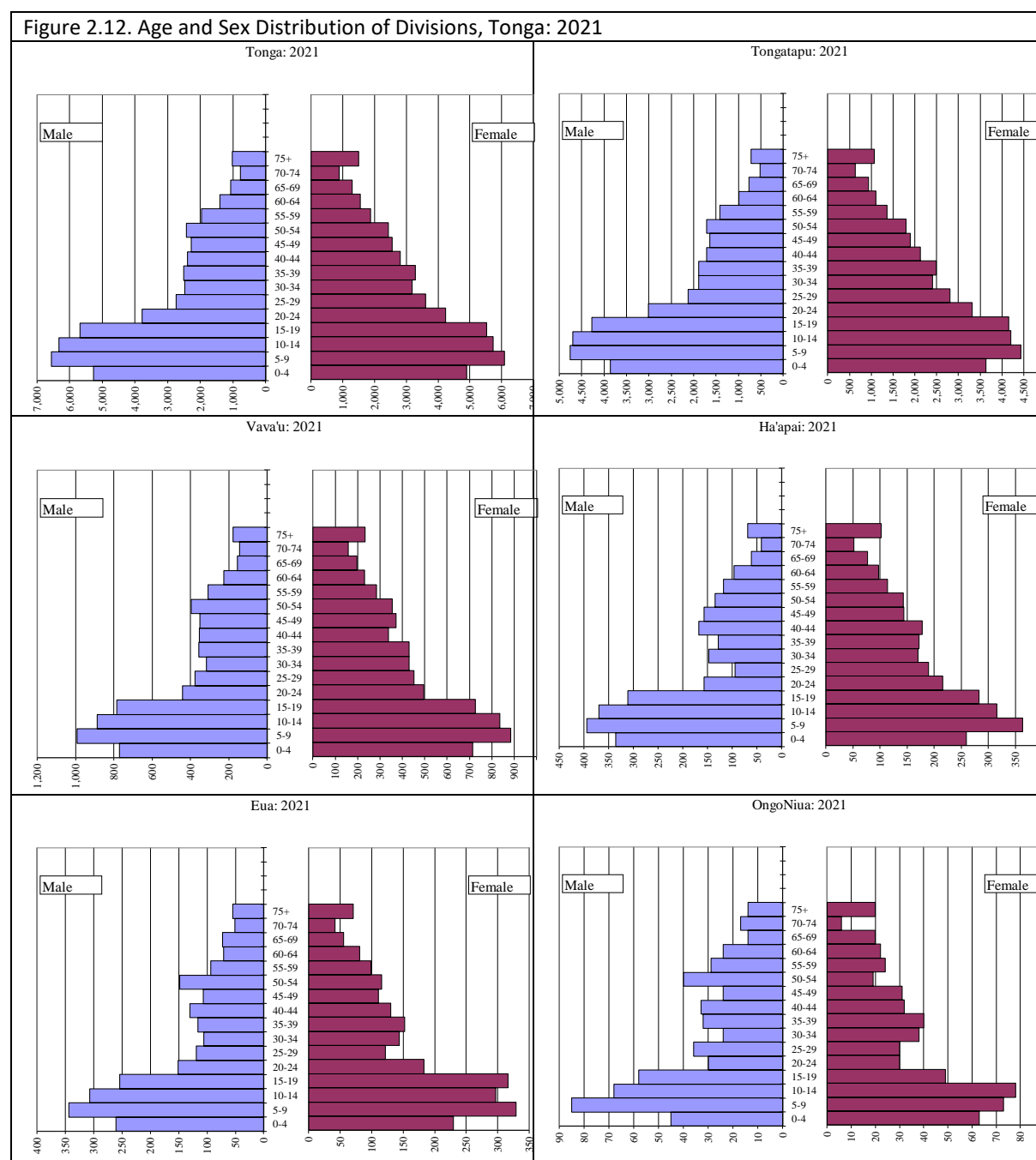


Figure 2.13 shows a population pyramid for Greater Nuku'alofa, the geographic area of most dense population. The pyramid shows decreasing numbers with age, except for the very youngest and most elderly. The bar for those 0 to 4 shows indentation, because of reduced fertility, although some emigrants may have taken young children with them. The top bar for those 75 years and over is slightly larger than the one preceding because we have lumped everyone 75 years and older into that age group. The groups aged 5 to 19 are larger than expected in a traditional pyramid, showing that persons in their 20s were migrating for work or schooling.

Figure 2.13. Age and Sex Distribution of Greater Nuku'alofa: 2021
Greater Nuku'alofa:2021

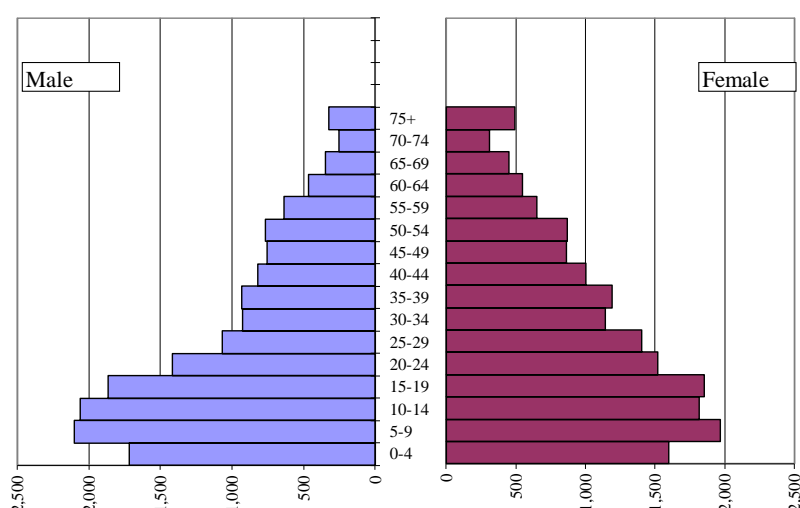
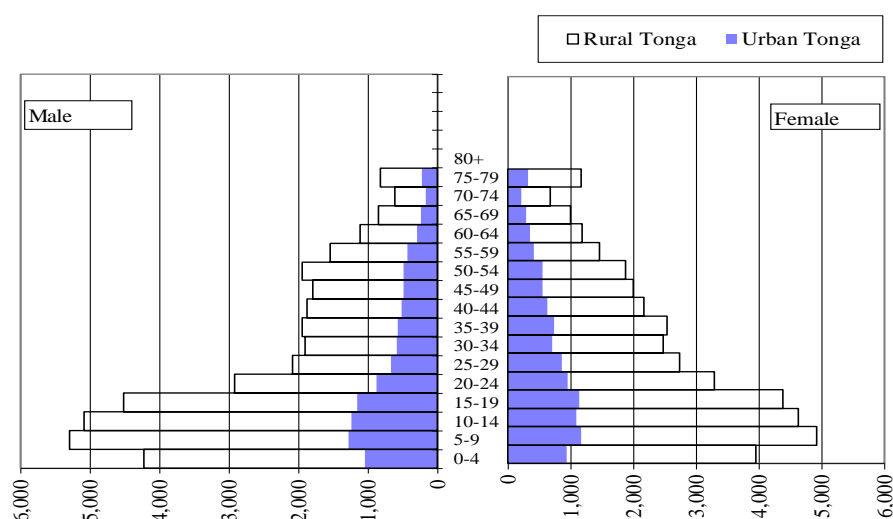


Figure 2.14 shows the population pyramids for urban and rural Tonga residence combined. The darker center is urban Tonga and is tighter because fewer people live in the urban areas than in the rural areas. Both the urban and rural areas show smaller numbers for those 0 to 4 than those 5 to 9, partly because of reduced fertility, but also because of the tendency to move children upward if they are near the next age. So, a mother might report a baby of 11 months old as 1 and someone 4 ½ might be 5. The rural pyramid shows the exodus of both males and females from about age 20 as they go to other countries for schooling and work. But the pyramid looks like a traditional pyramid.

Figure 2.14 Age and Sex by Urban/Rural Residence Tonga: 2021
Urban and Rural Tonga: 2021



The narrowing of the population bar of the 0- to 4-year-olds relative to the population bar of the 5– 9-year-olds in Vava'u, Ha'apai, 'Eua and especially in Ongo Niua. These divisions show declining fertility and out-migration of children of the people aged 20–34 who have left the outer Islands for Tongatapu or overseas.

Age

In 2021, Tonga's population continued to have a youthful age structure, with 35 percent of the population younger than 15 years of age, down from 36 percent in 2016, and only 9 percent older than 60 years as in 2016 (Table 2.3). The percentage distributions did not change very much during the 5 years for the total and for both sexes. We discuss the dependency ratio in the next section, but the distributions show that the ratio only decreased a small amount between 2016 and 2021.

Table 2.3. Broad Age Groups by Sex, Tonga: 2016 and 2021

	Numbers						Percents					
	2016			2021			2016			2021		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
Total	100,610	50,232	50,378	100,179	48,749	51,430	100.0	100.0	100.0	100.0	100.0	100.0
Less than 15	36,534	18,996	17,538	34,873	18,165	16,708	36.3	37.8	34.8	34.8	37.3	32.5
15-29	25,365	12,717	12,648	25,588	12,218	13,370	25.2	25.3	25.1	25.5	25.1	26.0
30-44	17,355	8,171	9,184	16,671	7,403	9,268	17.2	16.3	18.2	16.6	15.2	18.0
45-59	12,585	6,300	6,285	13,547	6,679	6,868	12.5	12.5	12.5	13.5	13.7	13.4
60-74	6,327	3,000	3,327	6,976	3,254	3,722	6.3	6.0	6.6	7.0	6.7	7.2
75+	2,444	1,048	1,396	2,524	1,030	1,494	2.4	2.1	2.8	2.5	2.1	2.9
Dependency ratio	81.9			79.5								

Sources: 2016 and 2021 Tonga Censuses

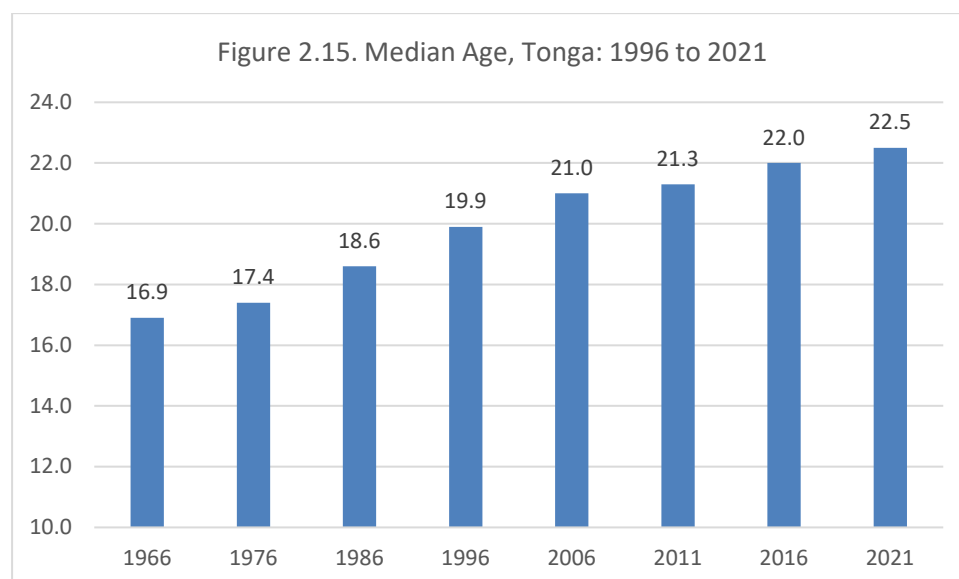
Table 2.4 shows the age and sex distribution by 5-year age groups. The percentage of the population younger than 5 years old did decrease between 2016 and 2021, going from more than 12 percent to about 10 percent (so from about 1 in 8 to 1 in 10). The percentages for males and females also both decreased. But the percentage of the population 75 years and older was about the same in 2021 as 2016 – that percentage did not increase, as would be expected through normal aging; some of this population probably migrated with their younger relatives. As discussed below, the median age of the population (based on the 5-year age groups) increased slightly from 22.0 to 22.5 years, with males slightly declining and females about 1 year older than in 2016.

Table 2.4. Age and Sex Distribution, Tonga: 2016 and 2021

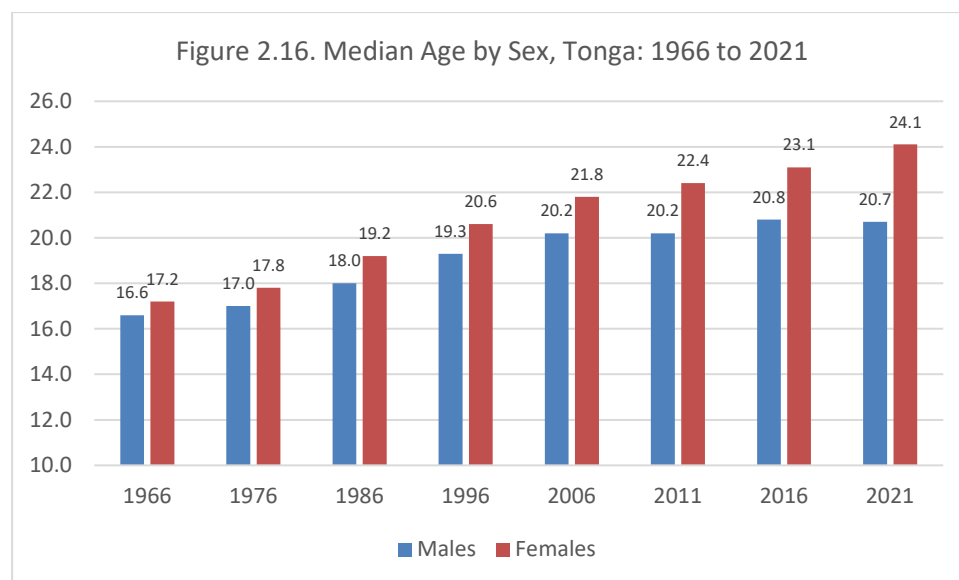
	Numbers						Percents					
	2016			2021			2016			2021		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
Total	100,610	50,232	50,378	100,179	48,749	51,430	100.0	100.0	100.0	100.0	100.0	100.0
0 - 4 years	12,499	6,440	6,059	10,167	5,269	4,898	12.4	12.8	12.0	10.1	10.8	9.5
5 - 9 years	12,153	6,417	5,736	12,654	6,570	6,084	12.1	12.8	11.4	12.6	13.5	11.8
10 - 14 years	11,882	6,139	5,743	12,052	6,326	5,726	11.8	12.2	11.4	12.0	13.0	11.1
15 - 19 years	10,502	5,449	5,053	11,209	5,678	5,531	10.4	10.8	10.0	11.2	11.6	10.8
20 - 24 years	8,234	4,106	4,128	8,030	3,792	4,238	8.2	8.2	8.2	8.0	7.8	8.2
25 - 29 years	6,629	3,162	3,467	6,349	2,748	3,601	6.6	6.3	6.9	6.3	5.6	7.0
30 - 34 years	6,521	2,994	3,527	5,674	2,486	3,188	6.5	6.0	7.0	5.7	5.1	6.2
35 - 39 years	5,645	2,704	2,941	5,799	2,519	3,280	5.6	5.4	5.8	5.8	5.2	6.4
40 - 44 years	5,189	2,473	2,716	5,198	2,398	2,800	5.2	4.9	5.4	5.2	4.9	5.4
45 - 49 years	5,181	2,600	2,581	4,834	2,275	2,559	5.1	5.2	5.1	4.8	4.7	5.0
50 - 54 years	4,150	2,129	2,021	4,866	2,436	2,430	4.1	4.2	4.0	4.9	5.0	4.7
55 - 59 years	3,254	1,571	1,683	3,847	1,968	1,879	3.2	3.1	3.3	3.8	4.0	3.7
60 - 64 years	2,696	1,297	1,399	2,948	1,406	1,542	2.7	2.6	2.8	2.9	2.9	3.0
65 - 69 years	2,030	968	1,062	2,362	1,074	1,288	2.0	1.9	2.1	2.4	2.2	2.5
70 - 74 years	1,601	735	866	1,666	774	892	1.6	1.5	1.7	1.7	1.6	1.7
75+ years	2,444	1,048	1,396	2,524	1,030	1,494	2.4	2.1	2.8	2.5	2.1	2.9
Median Age	22.0	20.8	23.1	22.5	20.7	24.1	...	...	...	...	...	...

Sources: 2016 and 2021 Tonga Censuses

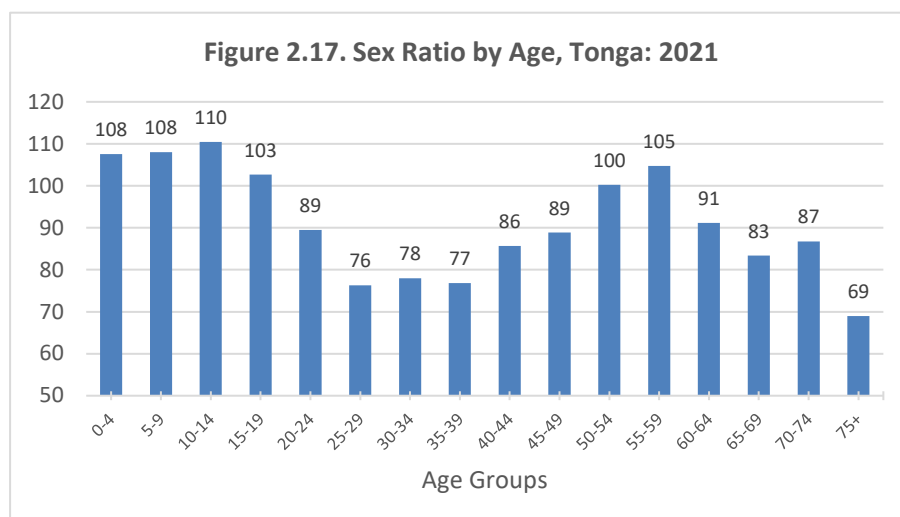
Median Age. Population age structures change over time and so slight difference in median ages exists between the 2016 and 2021 censuses. However, out-migration of young adults causes the median ages to be higher in the divisions of Vava'u, Ha'apai, and 'Eua in 2016 as compared to 2021. But, as Figure 2.15 shows, the median age for the entire population in Tonga, increased from about 16.9 in 1966 to about 22.5 in 2021, and the median increased in each successive census.



And the median age of each sex also increased from census to census (Figure 2.16). Females increased from 17.2 in 1966 to 24.1 in 2021, and the males increased from 16.1 in 1966 to 20.7 in 2021, the latter a slight decrease from 2016. The age difference between the medians was .6 years older for females in 1966. That figure increased to 3.4 years in 2021 because of selective movements of males to other countries to work.



Sex ratios by age showed an irregular pattern. Normally, the sex ratio starts skewed male, which Tonga's does at 108 males per 100 females, and then decreases age group by age group. Tonga's pattern in 2021 was quite different, with the sex ratio peaking at 110 for those 10 to 14 (Figure 2.17). Then the ratio decreased to the high 70s for those 25 to 39 years old. Only about 3 males for every 4 females in 2021 were present in those age groups. The males were out of the country, working in New Zealand or the United States, to send remittances back to their families. The sex ratio increased again to 100 in the 50 to 54 age group, about the same numbers of males as females, and then decreased among the more elderly Tongans, to about 69 males for each 100 females 75 years and older.



The median age of Tonga's population – the age where half the population was older and half was younger – was 21.9 in 2016, and increased to about 22.5 in 2021, an increase of about ½ year (Figure 2.18). The median age increased in all the Divisions, with Ongo Niua remaining the oldest, at almost 25 years. 'Eua had the lowest median age in 2016 at 20.4, and that division also had the lowest in 2021 at 21.4. The median age of Tonga's population remains low, partly because of fertility decline and selective emigration.

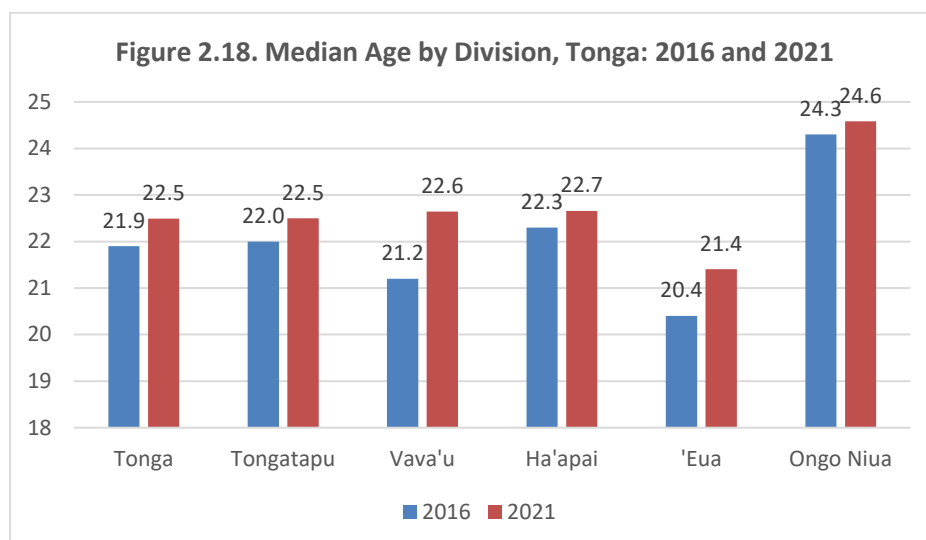
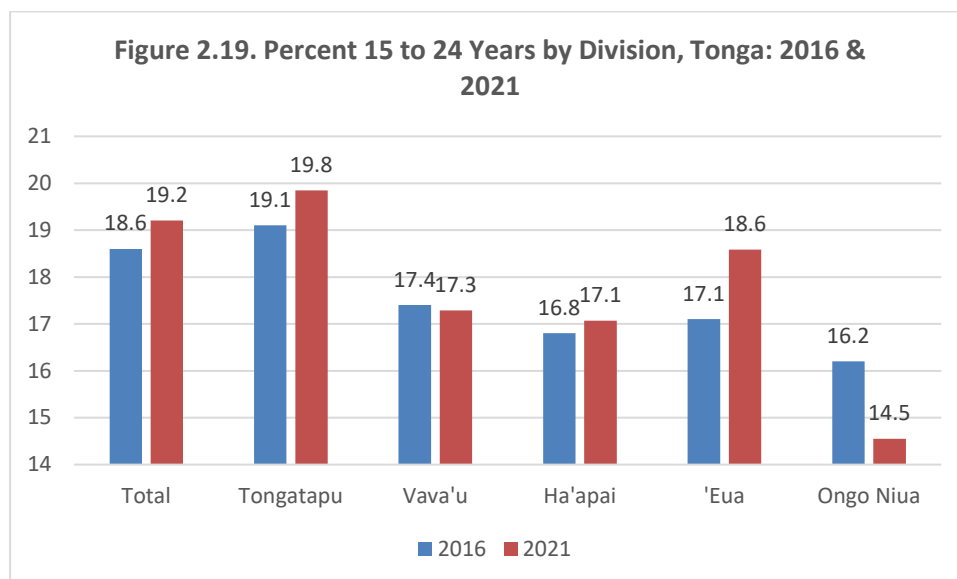


Figure 2.19 shows the percentage of Tonga's Division population of persons 15 to 24, the age group of education attainment finishers and young workers entering the Labour force. The percentage of persons in this category increased from about 18.6 percent in 2016 to about 19.2 percent in 2021, so not a profound change upward. Tongatapu had the highest proportion in 2021, at almost 1 in 5, and Ongo Niua had the lowest proportion at about 1 in 7. 'Eua had about 19 percent in this age group as well.



Dependency Ratio

A common way to describe a population's age structure is via the age dependency ratio, which compares the economically dependent component of a country's population with its productive component. Demographers express the value as the ratio of young people (0–14 years) and old people (60 years and over) to 100 people of working age (15–59 years). A higher dependency ratio means that a larger young and elderly population requires material support from the working age population and a lower dependency ratio means that the working age population has a smaller young and elderly population to support.

Figure 2.20 shows the dependency ratios for Tonga from 1966 to 2021. The dependency ratio decreased from census to census, starting at about 105, that is, 105 youths and elderly to 100 potential workers, to about 80 in 2021. The Youth ratio was extremely high in 1966, at 95, but it decreased continuously over the period to about 62 in 2021, a decrease of about 50 percent. However, as Tonga's population has aged, so has its elderly dependence; that part of the dependency ratio increased from about 10 in 1966 and 1976 to 17 in 2021.

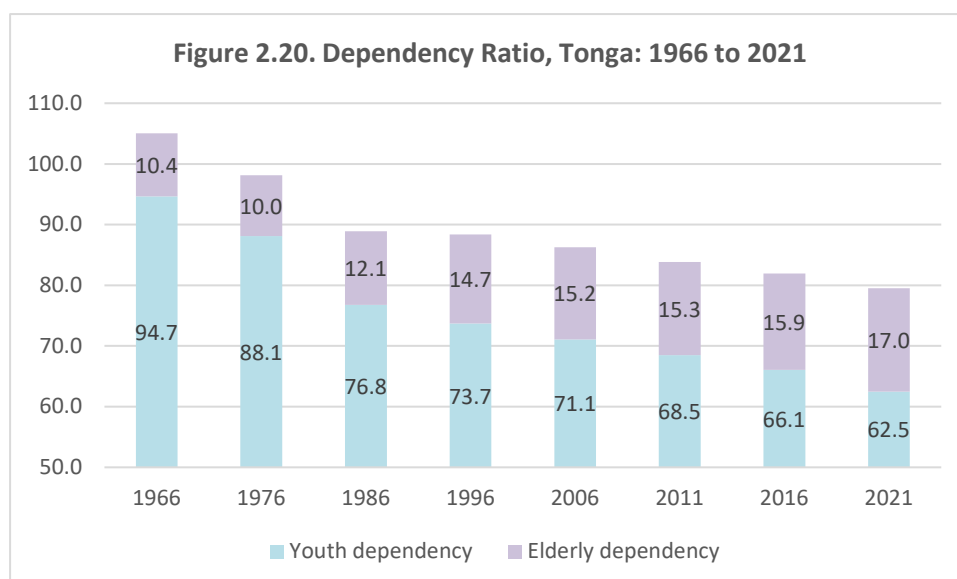


Figure 2.21 shows the dependency ratios for 2016 and 2021. The total decreased from about 82 in 2016 to about 80 in 2021. Tongatapu had the lowest dependency ratios, decreasing from about 79 in 2016 to about 77 in 2021. The rates were lower than the other Divisions because most paid work was on Tongatapu and so that encouraged movements to that atoll for work. The highest dependency ratios in 2016 were in Vava'u and 'Eua. And the highest in 2021 was Ongo Niua, also at 92. The dependency ratios for the other Divisions in 2021 were around 87.

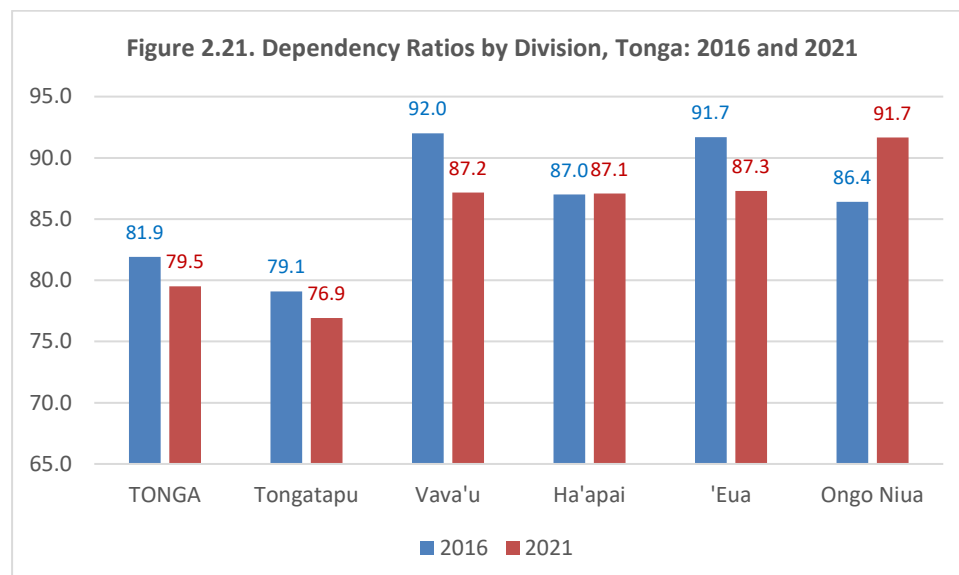
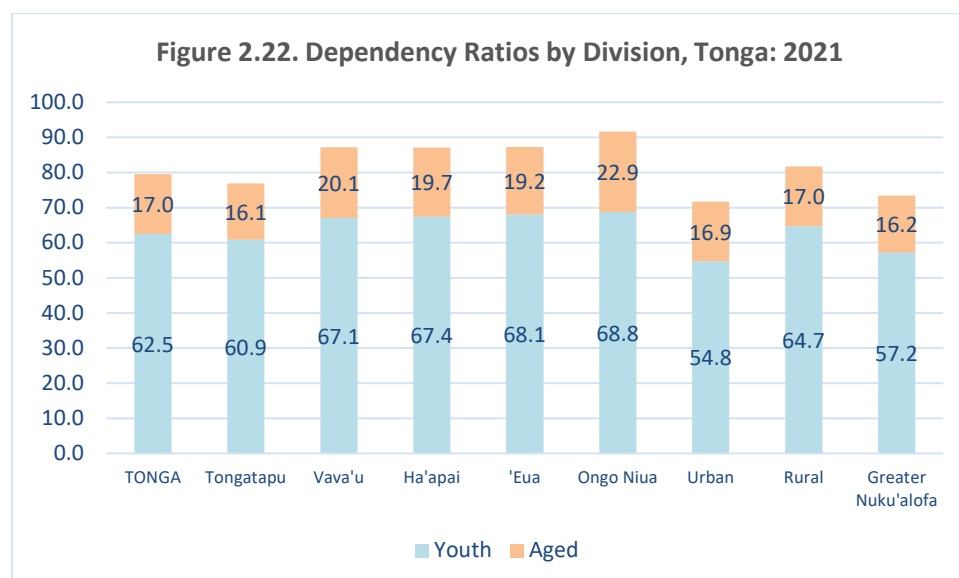


Figure 2.22 disaggregates the dependency ratios for the Divisions in 2021 into youth and elderly dependency. All the Divisions had youth dependency ratios in the 60s in 2021. However, the youth dependency in urban areas was around 55 compared to the 65 in rural areas – these are still lower than in previous years as fertility decreased and migration removed young people. The elderly dependency ratios of the Divisions ranged from 16 for Tongatapu to 23 for Ongo Niua, higher than in previous years, but showing an aging population throughout the nation. The elderly ratio in both urban and rural areas was about 17.



Conclusions

Tonga's population remains stationary – migration offsets births, so the population does not grow. But the population's median age continues to increase as fertility decreases and Tongans live longer. The sex ratio remains about the same, and the dependency ratio remains young.

CHAPTER 3: FERTILITY

Fertility – Introduction and terms

This section presents the following fertility indicators for Tonga when based on the census data:

- The *Age Specific Fertility Rate (ASFR)*, which is the number of births to women of a particular age group during a specific period.
- The *Total Fertility Rate (TFR)* is the average number of children that would be born to a woman during her childbearing years (15–49) if she were to pass through all her childbearing years conforming to the age-specific fertility rates of a specific period.
- The *Crude Birth Rate (CBR)* is the number of live births per 1,000 population in a specific period.
- The *Teenage Fertility Rate* relates to childbearing among women aged 15–19, and is equivalent to the ASFR (15–19); (SDG Indicator 3.7.2)
- *Mean Age at Childbearing (MAC)* refers to the arithmetic average age of mothers at the birth of their children.
- The number of *birth registration* among children (SDG Indicator 16.9.1)
- The census asked women over 14 years of age the following questions in the 2021 Census to calculate the level and pattern of fertility in Tonga:
 - How many children they had born alive?
 - When their last child was born.

Age at First Birth

Median age at first birth has only increased slightly between 1966 and 2021 (Table 3.1). The median age at first birth in 1966 was about 21.9 years and the median age at first birth in 2021 was about 23.5 years, an increase of about 1½ years. The median age at first birth in Tongatapu followed the pattern for the entire country since it was such a large part of the population. But the median ages at first birth were about the same for all the divisions. The median age at first birth was younger in 2021 than in 2016, partly because of selective out migration, but the change was minor.

Table 3.1 Median Age at First Birth by Division, Tonga: 1966 to 2021

	Tonga	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
1966	21.9	22.0	21.9	21.7	21.8	21.8
1976	22.6	22.7	22.5	22.8	22.3	22.2
1986	22.6	22.6	22.7	22.7	22.3	22.2
2016	23.8	23.8	23.9	23.7	23.1	24.2
2021	23.5	23.6	23.4	23.4	23.4	23.4

Sources: Tonga Censuses

Children ever born and surviving.

The census asked each adult female how many children she had ever born and how many of those children were still alive. The numbers of children ever born (CEB) and children still alive (CS) provide information about a female's reproduction schedule and numbers as well as the data used for an indirect technique for determining the mortality of the population.

Table 3.2 shows the average number of children ever born by age of mother and sex of the children from the 2016 and the 2021 censuses. The average number of children ever born to females of all ages in 2016 was 2.4, but this value decreased to about 2.1 in the 2021 census. The value of 2.1 is approximately "replacement" since two children would offset the parents and a small number of females do not live long enough to reproduce, so replacement is slightly higher.

The average number of male children decreased from 1.26 to 1.11 in the 5 years and the average number of female children ever born to all females decreased from about 1.15 to about 1.03. In general, more male than female are born, but males die earlier because of various health problems.

If we look at the 45-to-49-year age group, we see the averages for about the time females stop having children, so we get a good idea of the current total fertility of the females in the population. For these females, the average number of children ever born in 2016 was about 3.7, and the average in 2021 was about 3.2, so the number decreased by about half a child. Both total male and female children decreased during the period.

Table 3.2. Children Ever Born by Sex per Mother's Age, Tonga: 2016 and 2021

	2016			2021		
	Total	Males	Females	Total	Males	Females
Average	2.41	1.26	1.15	2.14	1.11	1.03
15–19	0.04	0.02	0.02	0.03	0.02	0.01
20–24	0.47	0.24	0.22	0.33	0.17	0.16
25–29	1.24	0.65	0.59	1.04	0.54	0.51
30–34	2.23	1.18	1.05	1.84	0.95	0.88
35–39	2.97	1.54	1.43	2.57	1.34	1.23
40–44	3.29	1.70	1.59	3.02	1.56	1.46
45–49	3.73	1.92	1.81	3.21	1.64	1.57
50–54	3.94	2.10	1.85	3.45	1.79	1.66
55–59	4.24	2.23	2.01	3.70	1.95	1.75
60–64	4.40	2.30	2.11	3.93	2.05	1.88
65–69	4.67	2.48	2.19	4.16	2.12	2.05
70–74	4.76	2.50	2.26	4.43	2.30	2.13
75+	5.23	2.70	2.53	4.92	2.54	2.38

Source: 2016 and 2021 Tonga Censuses

So, average parity increased with age, since women had more time to be “exposed” to the chance of bearing children. While women 20 to 24 years of age had less than one child, on average, women aged 45–49 had 3.7 children. Women aged 75 years and over had an average of over five children. The average parity of women over 49 years of age is the *completed fertility rate*, a cohort measure showing how many children a certain cohort of women who have completed their childbearing produced during their childbearing years.

The average number of children ever born over the last four censuses (Table 3.3 and Figure 3.1) show sustained fertility decline over the previous decade and a half. Every age group shows this fertility decline. For example, the average parity has fallen from 2.7 children per woman in 2006 to 2.1 in 2021. For the 45 to 49 year age group, the decrease was from 4.4 in 2006 (with a slight increase in 2011) to 3.7 in 2016 and 3.2 in 2021.

Table 3.3. Children Ever Born by Age, Tonga: 2006 to 2021

Age of woman	Average number children ever born			
	2006	2011	2016	2021
Total	2.7	2.7	2.4	2.1
15–19	0.0	0.0	0.0	0.0
20–24	0.4	0.5	0.5	0.3
25–29	1.4	1.5	1.2	1.0
30–34	2.6	2.5	2.2	1.8
35–39	3.6	3.4	3.0	2.6
40–44	4.2	4.1	3.3	3.0
45–49	4.4	4.5	3.7	3.2
50–54	4.9	4.5	3.9	3.5
55–59	5.1	4.9	4.2	3.7
60–64	5.1	5.3	4.4	3.9
65–69	5.3	5.2	4.7	4.2
70–74	5.8	5.5	4.8	4.4
75+	5.7	6.0	5.2	4.9

Source: 2006 to 2021 Tonga Censuses

Figure 3.1 shows the decrease graphically. As expected, the number of children ever born increased with age, but most of the graph shows completed fertility. And while the 2006 and 2011 lines are about the same, the 2016 shows a real decrease at all ages and the 2021 shows further decrease at all ages.

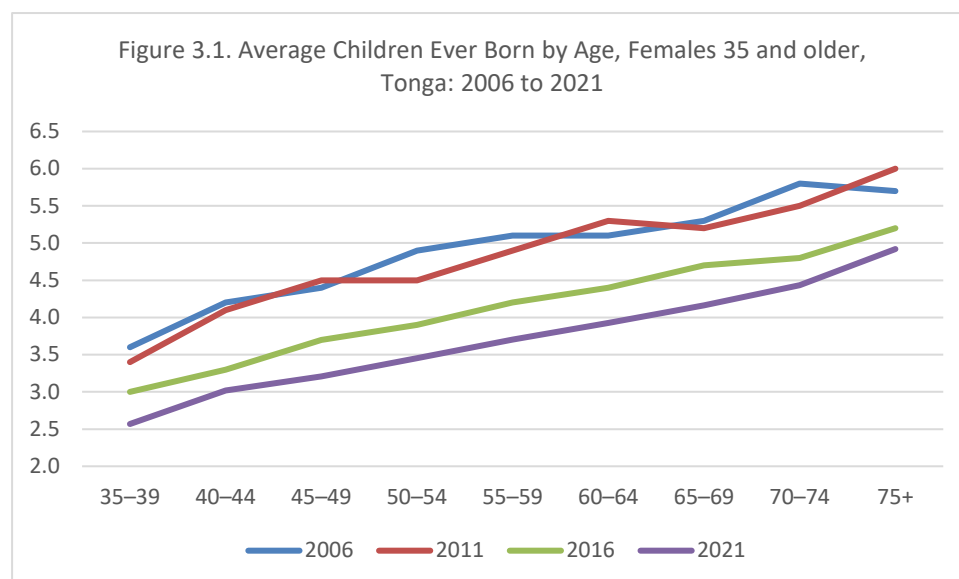


Table 3.4 shows the numbers of children ever born to females by age in each division in 2021. As noted, the average for all adult females was 2.1 children per female. Tongatapu had the lowest average number of children ever born, at 2.0, partly because it is the urban center for Tonga, and unmarried and childless females come for education and to work. Ha'apai's value was 2.2 and 'Eua's was 2.3. But Vava'u (at 2.6) and Ongo Niua (at 2.8) had higher averages of children ever born recorded in 2021.

For the females 45 to 49, the averages were higher since they either completed or nearly completed their reproduction. The average number of the children ever born to these females was 3.2 children, with Tongatapu at 3.1. Vava'u (at 3.7 children) and Ha'apai (at 3.8) had the highest average number of children.

Table 3.4. Children Ever Born by Age of Mother and Division, Tonga: 2021

	Total	Tongatapu	Vava'u	Ha'apai	Eua	Ongo Niua
Total	2.1	2.0	2.6	2.2	2.3	2.8
15-19	0.0	0.0	0.0	0.0	0.0	0.0
20-24	0.3	0.3	0.5	0.4	0.3	0.3
25-29	1.0	1.0	1.4	1.0	1.2	1.7
30-34	1.8	1.7	2.2	2.0	1.9	2.5
35-39	2.6	2.5	2.9	2.2	3.2	3.0
40-44	3.0	3.0	3.2	2.7	3.4	2.7
45-49	3.2	3.1	3.7	3.8	3.2	3.0
50-54	3.5	3.3	3.8	3.5	3.8	4.7
55-59	3.7	3.6	4.2	3.6	4.0	4.0
60-64	3.9	3.8	4.5	4.3	3.6	3.7
65-69	4.2	3.9	4.8	4.5	4.2	7.0
70-74	4.4	4.2	5.0	4.0	5.8	4.7
75+	4.9	4.8	5.7	4.0	5.5	6.6

Source: Tonga Population and Housing Census 2021

CHILDREN EVER BORN AND STILL ALIVE

The average female in Tonga in 2021 had about 2.13 children, with 2.06 of them surviving (Table 3.5 and Figure 3.2). The number of total children was just at replacement (since some females die before reproducing) and most children were surviving at the time of the census. The 2021 census reported the 35,000 adult females having 74,000 children ever born and 72,000 of those children still alive at the time of the 2021 census. The average numbers of children ever born and children surviving increased with age of female. The oldest females had almost 5 children ever born and about 4 ½ children still alive.

Table 3.5. Children ever born and Children still alive by Age of Female, Tonga: 2021

	Females	Children ever born	Children still alive	Children ever born per female	Children still alive per female	Percent still alive
TONGA	34,722	73,907	71,635	2.13	2.06	96.9
15 - 19 years	5,531	166	165	0.03	0.03	99.4
20 - 24 years	4,238	1,373	1,359	0.32	0.32	99.0
25 - 29 years	3,601	3,745	3,707	1.04	1.03	99.0
30 - 34 years	3,188	5,817	5,762	1.82	1.81	99.1
35 - 39 years	3,280	8,378	8,260	2.55	2.52	98.6
40 - 44 years	2,800	8,434	8,321	3.01	2.97	98.7
45 - 49 years	2,559	8,153	8,021	3.19	3.13	98.4
50 - 54 years	2,430	8,328	8,144	3.43	3.35	97.8
55 - 59 years	1,879	6,917	6,727	3.68	3.58	97.3
60 - 64 years	1,542	6,027	5,814	3.91	3.77	96.5
65 - 69 years	1,288	5,327	5,087	4.14	3.95	95.5
70 - 74 years	892	3,941	3,684	4.42	4.13	93.5
75+ years	1,494	7,301	6,584	4.89	4.41	99.9

Source: Tonga Population and Housing Census 2021

The last column shows the percentage of the children ever born and surviving at the time of the census to females of increasing ages. About 97 percent of the children ever born were still alive at the time of the 2021 census. The percentages still alive decreased with age and some of the children died from various causes.

The results in Figure 3.2 differ slightly from the ones above because of slight differences in the geography and method used. Ongo Niua had the highest fertility, at 2.83 children ever born and 2.71 still alive, followed by Vava'u. Tongatapu had the lowest total fertility – at 2.04 children per woman below replacement. As noted above, Tongatapu had the smallest average number of children ever born (2.04), and also had the lowest number of children still alive (1.98). Ongo Niua had both the highest average number of children ever born (2.83) and the highest average number of children still alive – at 2.71.

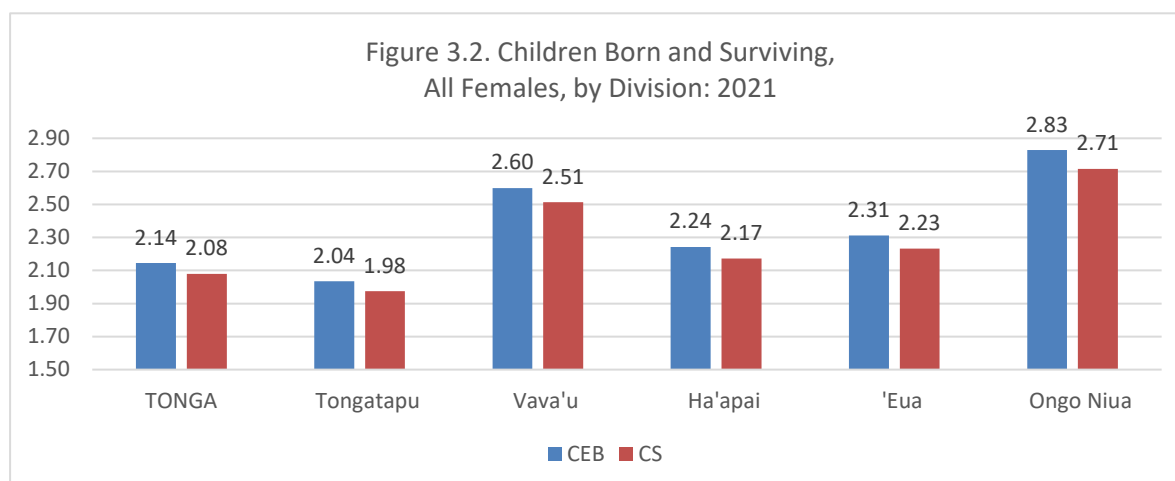


Table 3.6 shows the numbers and rates of children ever born and children surviving by age and by the sex of the child. For the males, the average adult female had 1.10 male children ever born and 1.06 children surviving, and the average for female children was 1.03 female children ever born and 1.00 female children surviving. About 96 all male children were still alive as were 97 percent of the female children.

When we look specifically at the females 45 to 49, those nearing completed fertility, we find that the average female of these ages had 1.63 male children, with 1.60 still alive (98 percent), and 1.56 female children ever born with 1.54 surviving or 99 percent. So, as noted above, the average female 45 to 49 had more children, and most of them were still alive at the time of the 2021 census.

Table 3.6. Children ever born and still alive by Sex of Child and Age of Mother, Tonga: 2021

	Females	Male babies					Female babies				
		Children ever born	Children Still alive	CEB per female	CS per female	Percent alive	Children ever born	Children Still alive	CEB per female	CS per female	Percent alive
Total	34,722	38,267	36,895	1.10	1.06	96.4	35,640	34,659	1.03	1.00	97.2
15 - 19 years	5,531	84	84	0.02	0.02	100.0	82	81	0.01	0.01	98.8
20 - 24 years	4,238	719	711	0.17	0.17	98.9	654	648	0.15	0.15	99.1
25 - 29 years	3,601	1,933	1,915	0.54	0.53	99.1	1,812	1,792	0.50	0.50	98.9
30 - 34 years	3,188	3,014	2,982	0.95	0.94	98.9	2,803	2,780	0.88	0.87	99.2
35 - 39 years	3,280	4,360	4,288	1.33	1.31	98.3	4,018	3,972	1.23	1.21	98.9
40 - 44 years	2,800	4,367	4,303	1.56	1.54	98.5	4,067	4,018	1.45	1.44	98.8
45 - 49 years	2,559	4,164	4,082	1.63	1.60	98.0	3,989	3,939	1.56	1.54	98.7
50 - 54 years	2,430	4,311	4,191	1.77	1.72	97.2	4,017	3,953	1.65	1.63	98.4
55 - 59 years	1,879	3,648	3,525	1.94	1.88	96.6	3,269	3,202	1.74	1.70	98.0
60 - 64 years	1,542	3,144	3,011	2.04	1.95	95.8	2,883	2,803	1.87	1.82	97.2
65 - 69 years	1,288	2,708	2,556	2.10	1.98	94.4	2,619	2,531	2.03	1.97	96.6
70 - 74 years	892	2,044	1,886	2.29	2.11	92.3	1,897	1,798	2.13	2.02	94.8
75+ years	1,494	3,771	3,361	2.52	2.25	89.1	3,530	3,223	2.36	2.16	91.3

Source: Tonga Population and Housing Census 2021

The 2021 census collected the current location of the children of each adult female. Figure 3.3 shows the geographical distribution of the living children by division. About 3 in every 5 children of the adult females were living in their home. About 1 in 5 were living elsewhere in Tonga and about 1 in 5 were living overseas. These figures give one measure of the outflow of the younger population. About 62 percent of those in Tongatapu were living at home compared to only 49 percent – about half – of those living in Ongo Niua. The other divisions were in between. While about 1 in every 5 of the children in Tongatapu and Vava'u were living overseas, this was true for only 1 in 6 of those in the other divisions. About 1 in every 3 of the children of Ha'apai and Ongo Niua females were living in Tonga, but not in their division, showing internal migration.

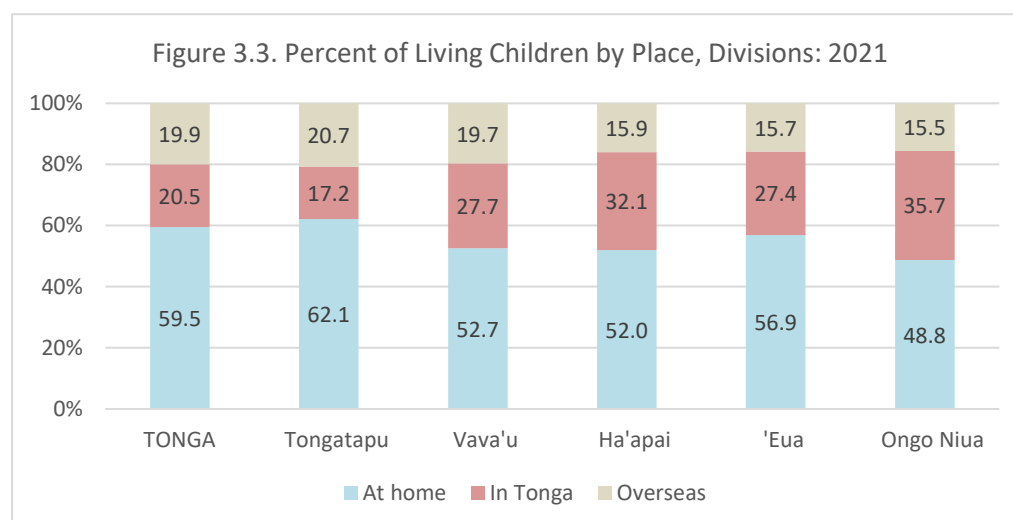


Figure 3.4 shows the place of residence for living children of females in the 2021 census by age of mother. As expected, the youngest females were the most likely to have their living children in their household, and secondly, if not in the household, still in Tonga. The older females were more likely to have their living children living outside the household and have larger percentages outside Tonga altogether. As the children age, they leave the house, so very few of those over 50 years old were living in the unit. The percentage deceased was small throughout but increasing for the older females.

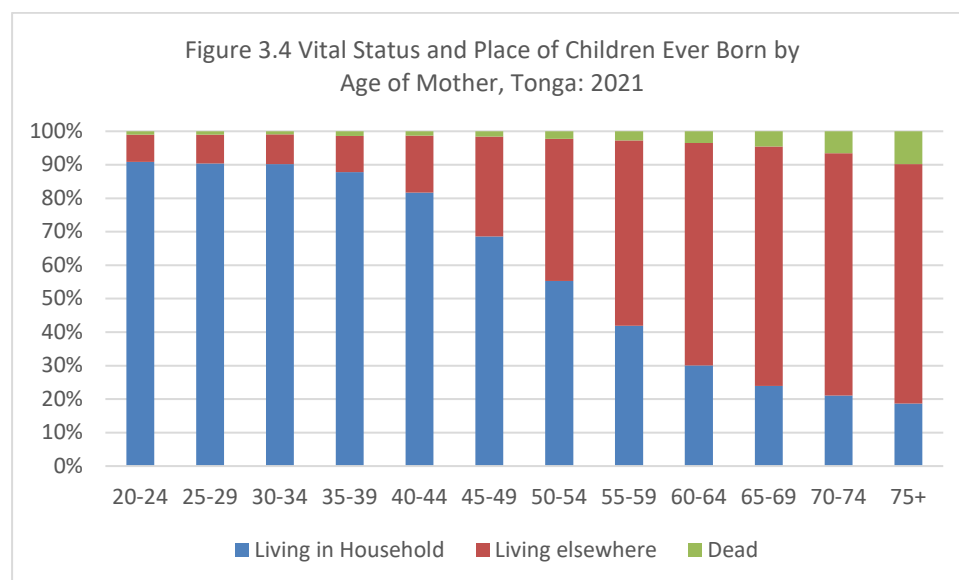


Figure 3.5 shows both sexes combined by age and residence for those still alive. Very few young people were living overseas, but those percentages increased with age. The percentage of males overseas was smaller than the percentage of females overseas. But the percentages of males and females within Tonga were more alike.

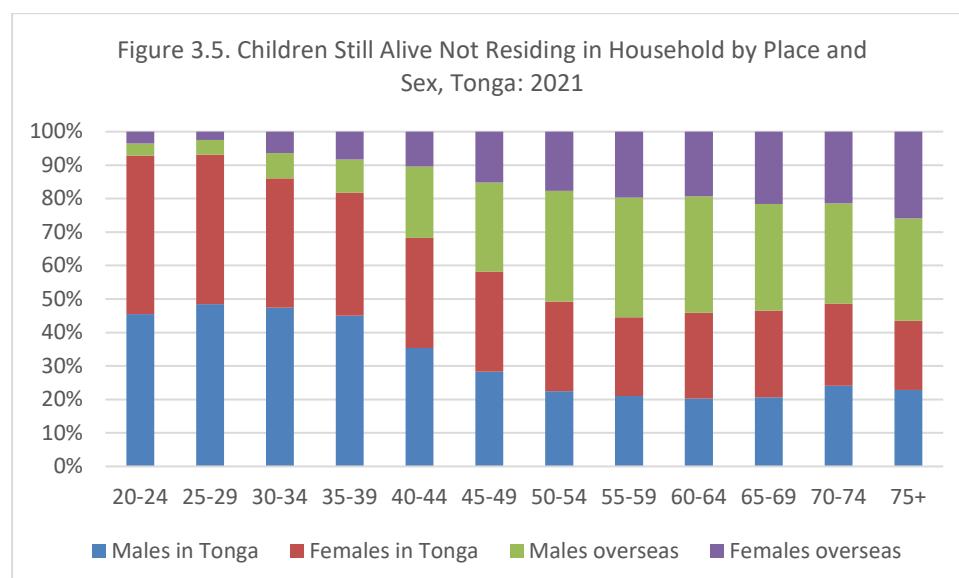
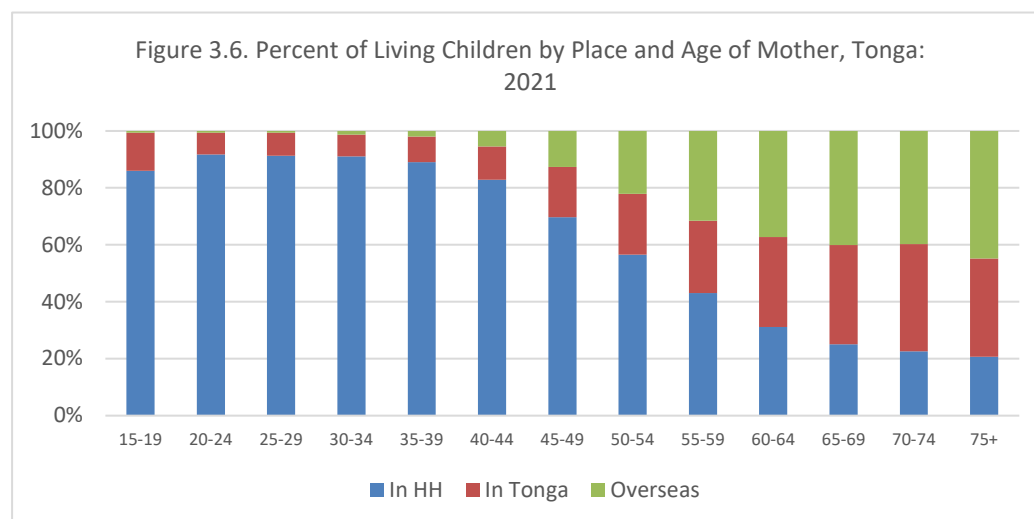
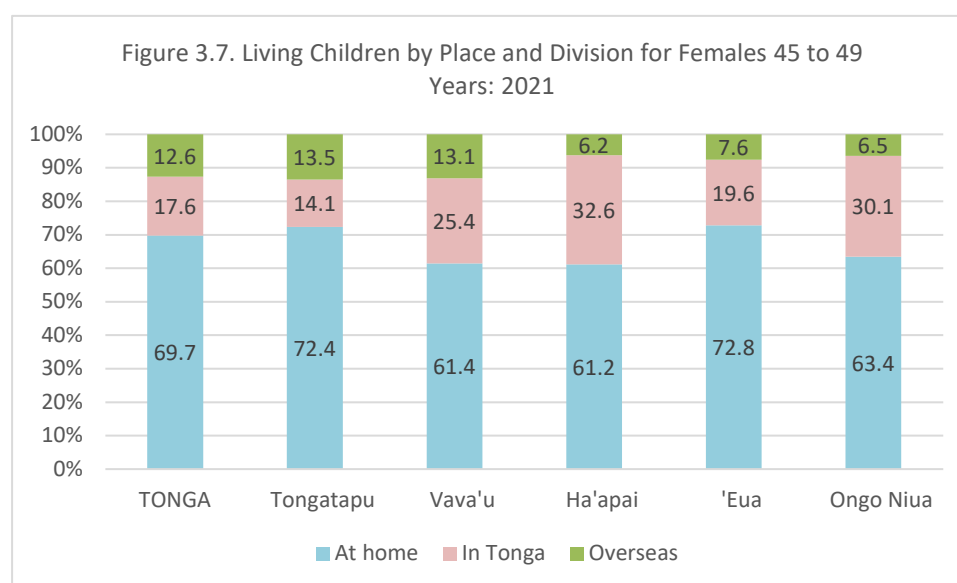


Figure 3.6 disaggregates those children in Tonga into the children in the household and the children living elsewhere in Tonga, but not by sex. The figure shows that the percentage of children living outside household did not start increasing until females were aged 35 years and older. From there, the percentage in the house decreased age group by age group until, and at 75 years and older, very few remained in the house. The percentage of children outside the house but remaining in Tonga, started increasing about the age that the children would start leaving the house, and increased continuously. Those overseas displayed a pattern similar to the children living outside the house but in Tonga.

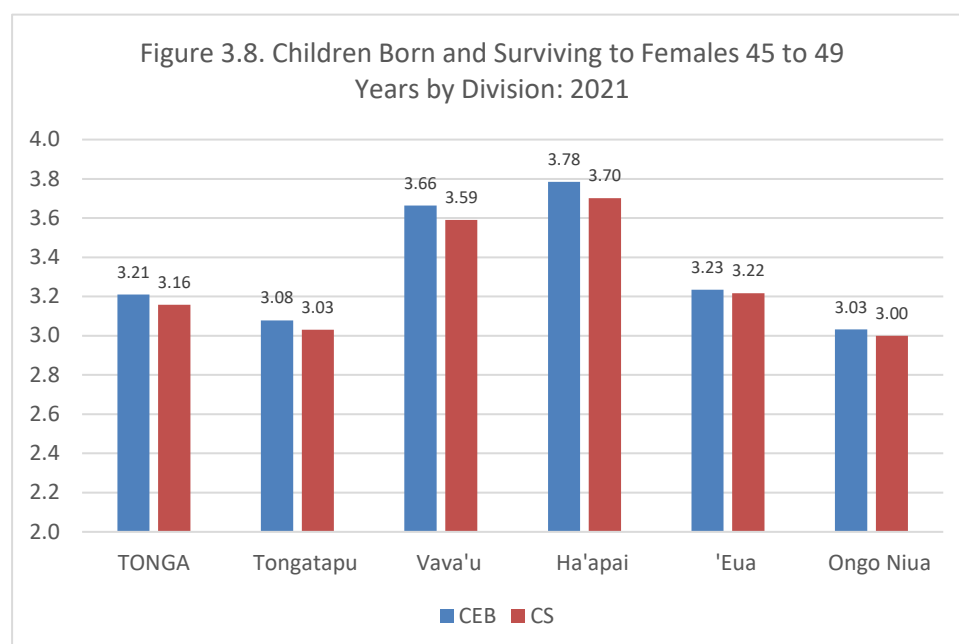
The proportion of children living in their mother's household decreased with the age group of mothers, because as children grow older, they leave their parents' home and form their own household. Interestingly, more than 40 percent of children to mothers aged 70 years and older lived overseas in 2021.



About 7 in every 10 of the children ever born to females 45 to 49 (near their ends of their reproduction) had their children ever born still living in their household (Figure 3.7). Tongatapu and 'Eua had the highest percentages still living at home. Ha'apai and Ongo Niua had the highest percentages of children living in Tonga but not living at home. And mothers living in Tongatapu and Vava'u had the largest percentages of their children living outside Tonga at the time of the census. About 1 in every 8 children ever born lived outside Tonga at the time of the census.



When we look at the females 45 to 49 years old at the time of the census, at the end of the reproductive lives, we find about 3.2 children per female, again with very few of the children having died (Figure 3.8). In this case, Ha'apai had the highest fertility for females in this age group, at 3.8 children, followed by Vava'u at 3.7 children per female. Ongo Niua with 3.0 children and Tongatapu with 3.1 children ever born had the lowest fertility.



Children born in previous 12 months

The demographic indicator most used to describe a country's fertility situation is the total fertility rate (TFR). We calculate this from the number of live births by age of women each year divided by the number of women in those age groups. This is the age-specific fertility rate (ASFR). Based on the reported births in the previous 12 months, the calculated TFR was 2.8 children per women in 2021 (Table 3.7), which represents a continuation of the fertility decline observed in Tonga over recent decades. When we look at births first reported in the last 12 months on the census itself, and use that as the numerator, we get the results shown in the last column of the table. While the age-specific rates differ slightly, they are in the same "ballpark", and show a total fertility rate of about 2.9 children per female, very close to the direct estimate using the registered births. Given the suspected undercount in the census birth data, demographers prefer indirectly estimated fertility.

Table 3.7. Age-Specific and Total Fertility Rates from Recorded Births, Tonga: 2021

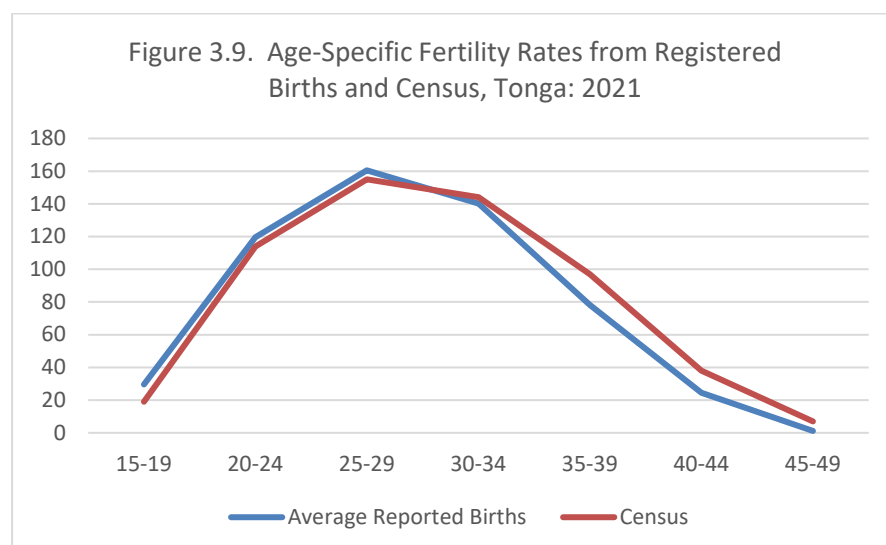
	2021 Population	Births	ASFR	
			From Births	Census births
15 - 19 years	5,531	163	30	19
20 - 24 years	4,238	507	120	114
25 - 29 years	3,601	578	161	155
30 - 34 years	3,188	447	140	144
35 - 39 years	3,280	256	78	97
40 - 44 years	2,800	69	25	38
45 - 49 years	2,559	3	1	7
		TFR ==>	2,768	2.874

Source: 2018-2020 Vital Statistics Report and 2021 Census

Note: Births are the average of 2018 to 2020

Figure 3.9 uses the numbers of females enumerated in the 2021 census as denominators and two methods of obtaining the births to obtain age-specific birth rates in the year before the census. The "Census" line in the figure uses census data only – the births come from the item on births in the last year, which start as unadjusted values, but are then adjusted using the PFRatio (see below). The "Average Reported Birth" line comes from the average of the registered births between 2018 and 2020. The totals for the 3 years appear in the vital statistics report for those years; we then divide the reported births by 3 to get an average number for any particular year.

The graph shows very close estimations for ages 15 to 34, but lower reporting of average registered births for subsequent ages.



Demographers have developed a spreadsheet called PFRatio that compares the children ever born against children born in the 12 months before the census to see how they mesh. With children born in the year before the census, we get age-specific rates by dividing by the “exposed” females. Algorithms provide an adjusted age-specific and total fertility rates schedule and estimates of births can come from that. Table 3.8 shows the results of PFRatio run on the entire country for the 2016 and the 2021 censuses.

Most of the age specific rates continued to decline, producing an adjusted total fertility rate of 2.9, down from 3.5 in 2016. Mean age at childbirth increased from about 28.7 years to 30.1 years, an increase of about 1 ½ years over the 5-year period. And the estimated number of births derived from this method decreased from about 2,445 in 2016 to 2,051, a decrease of about 400 annual births.

Table 3.8. Estimated Age-Specific and Total Fertility Rates, Tonga: 2016 and 2021

	2016			2021		
	Females	Est.ASFR	Est. births	Females	Est.ASFR	Est. births
Total	24,413	TFR = 3.5	2,445	25,197	TFR = 2.9	2,051
15–19	5,053	36	182	5,531	19	107
20–24	4,128	129	531	4,238	114	482
25–29	3,467	180	626	3,601	155	559
30–34	3,527	189	665	3,188	144	459
35–39	2,941	96	282	3,280	97	320
40–44	2,716	44	118	2,800	38	107
45–49	2,581	16	42	2,559	7	18
Mean Age at Childbirth			28.7			30.1

Sources: 2016 and 2021 Tonga censuses

Note: Age specific rates are per 1,000 females

Table 3.9 shows the unadjusted age-specific rates obtained directly from the census, using the ages of the females as the denominators and the births in the previous 12 months as the numerators. The results are in the first of each of the two columns for the entire country and for each division. The Total Fertility Rate or the TFR comes from summing the age-specific rates and then multiplying by 5 because each is a 5-year interval. The TFR is often expressed as children per female rather than per 1,000 females to make it easier to use.

The computer package called the PFRatio analyzes the relationship between the children ever born and the children born in the 12 months and “adjusts” the age-specific fertility rates based on those relationships. The adjusted age-specific rates appear in the second column in each set, for the entire population and for each division.

For the entire population, the age-specific fertility rates increased in most cases, and the total fertility rate increased from about 2.0 children per female to 2.9 children per female. As before, Tongatapu had lower unadjusted and adjusted age-specific and total fertility than the entire country, but the other districts reported higher fertility. In fact, the fertility for Ongo Niua was highest at 2.8 children for females unadjusted and 4.3 children per female when adjusted.

Table 3.9. Unadjusted and Adjusted ASFRs and TFRs using PFRatio for Divisions, Tonga: 2021

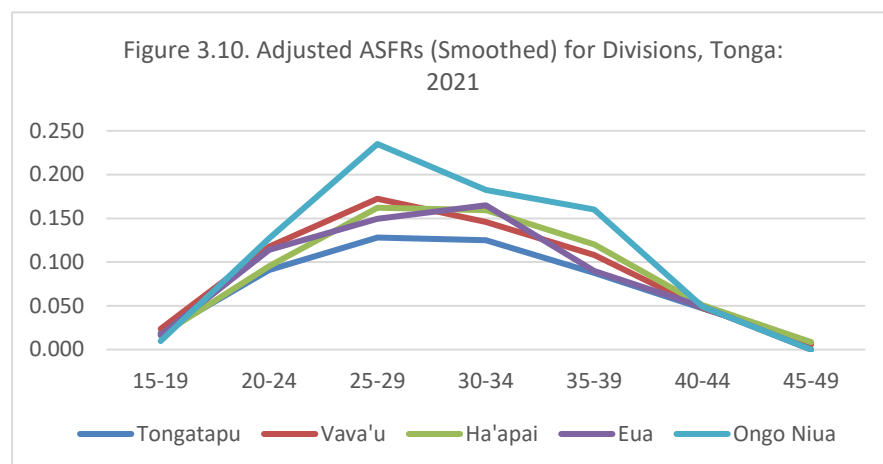
	Tonga		Tongatapu		Vava'u		Ha'apai		Eua		Ongo Niua	
	Unadj ASFR	Adjust ASFR	Unadj ASFR	Adjust ASFR	Unadj ASFR	Adjust ASFR	Unadj ASFR	Adjust ASFR	Unadj ASFR	Adjust ASFR	Unadj ASFR	Adjust ASFR
15-19	10	19	10	19	11	24	7	16	9	17	0	10
20-24	73	114	71	106	95	155	69	120	55	92	167	264
25-29	108	155	106	148	113	175	89	149	164	234	67	108
30-34	104	144	96	130	128	188	135	217	90	123	211	333
35-39	72	97	74	97	51	75	76	112	105	138	75	106
40-44	30	38	30	37	44	61	22	32	8	8	31	41
45-49	7	7	7	8	5	6	7	9	0	0	0	0
TFR	2.02	2.87	1.97	2.72	2.23	3.42	2.03	3.27	2.16	3.06	2.75	4.31

Source: Tonga Population and Housing Census 2021

Note: Age-Specific Rates are per 1,000 females

The Teenage Fertility rate increased from 21 in 1996 to 30 in 2011 and 36 in 2016, but, as the estimates in Table 3.9 show, in 2021, decreased to about 19 (i.e., 19 births per 1,000 women aged 15–19). This level of teenage fertility is about average observed in Polynesian countries.

Figure 3.10 shows smoothed age-specific rates for the 5 divisions in 2021. Because Ongo Niua is so small, its curve is much more fragile than the others. The curve for Tongatapu is lowest and least pronounced since it has the lowest fertility. Only 'Eua had its highest age-specific fertility rate at 30 to 34 years old. All the other divisions peaked in the 25 to 29 year old age group.



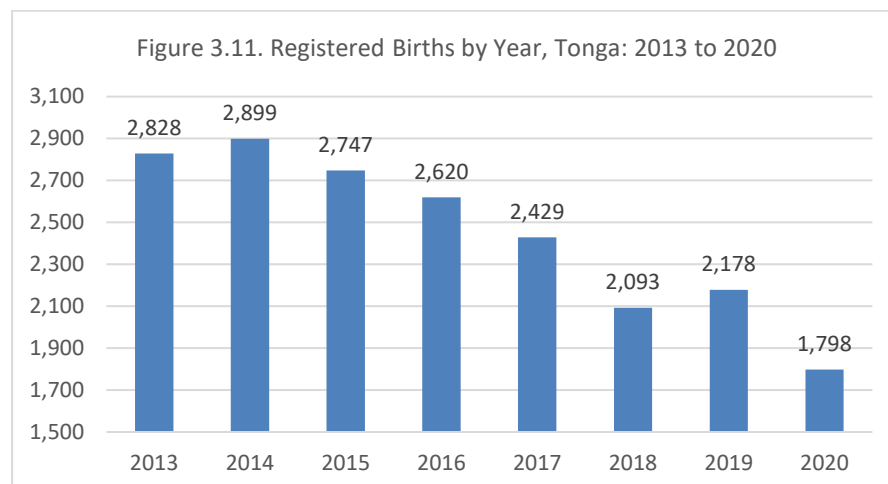
An alternate source of information on births is the Tongan Civil Registry system (administered through the Ministry of Justice). The last public health publication did not include births and deaths for 2021. The registered births for the period from 2013 through 2020 appear in Table 3.10. The last report provided births by sex, with more boys than girls, at about 108 boys for each 100 girls.

Table 3.10. Registered Births by Sex, Tonga: 2013 to 2020

Year	Registered Births			Sex ratio at birth
	Total	Males	Females	
2013	2,828	...	...	...
2014	2,899	...	...	...
2015	2,747	...	...	...
2016	2,620	...	...	...
2017	2,429	...	...	...
2018	2,093	1,086	1,007	107.8
2019	2,178	1,129	1,049	107.6
2020	1,798	967	831	116.4

Source: Tonga Vital Statistics Reports

The National Civil Registry probably did not record all registered births for 2020 before the publication of the 2018 to 2020 report. Often, females in outlying areas, especially, do not report the births of their children immediately. So, as Figure 3.11 shows, the 1,800 births reported for 2020 was probably an undercount for the whole year, and so probably should not be used to calculate the crude birth rate based on the census population and registered births.



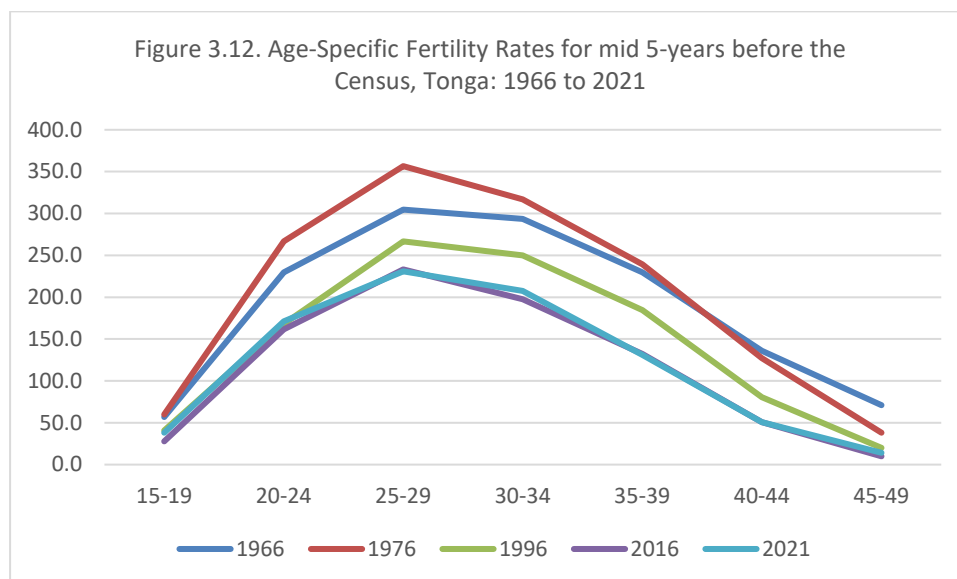
Demographers derive the crude birth rate by dividing the estimated number of births by the total 2021 census usually resident population (100,179), multiplied by 1,000. Unfortunately, the registered births for 2021 was not available. But, as Table 3.8 shows, an estimated 2,051 births occurred in the year before the census, so the estimated Crude Birth Rate (CBR) for 2021 was $2,051/100,179 \times 1,000 = 20.5$, that is about 20 births per 1,000. The CBR from the 2016 was 24, so the CBR decreased by about 4 per 1,000 in the 5 years between censuses.

Mismatches in counts of births suggest women did not report the birth of their child during the year before the census; they did not accurately report the exact date of birth of their children, or they were out of the country on Census Day. The census reported few multiple births such as twins or triplets by the last child born question in the census.

Although births and census ages provide one measure of fertility directly, indirect estimation is also possible. Indirect estimation techniques use (1) the number of children ever born and (2) children born in the year before the census by age of women to estimate Tonga's fertility. This is preferred to the direct estimation, given the undercount in census reported births. Note, again, that the direct births come from the average of the registered births between 2018 and 2020.

We also obtained fertility estimates by applying the Arriaga method from the Population Analysis Spreadsheets based on 2016 and 2021 census data. The Arriaga method calculates age specific fertility based on an average of the adjustment factors for women aged 20–34, the age group for which women's reported fertility is assumed to be most accurately reflected in census collection. Using this method, Tonga's TFR was estimated at 2.9 children per woman, continuing the decline experienced since 2006 (TFR of 4.2), 2011 (TFR 3.9), and 2016 (TFR 3.5).

Shifts in the fertility pattern by age of women occurred in the last five decades (Figure 3.12). In each census, peak fertility occurred to females in the 25-to-29-year age group, although in 1966, females in the 30 to 34 age group had nearly as high fertility as the 25 to 29 age groups. The 2016 Census reports notes that in 2006, peak fertility was in the 30–34-year group. The 1976 census showed the highest peak fertility at about 350 births per 1,000, but fertility at all levels decreased after that. Fertility levels of women aged 45–49 decreased from 1976 and then remained consistently low.



Own Children Fertility Estimates

Birth estimates based on indirect fertility rates.

The own-children method appears in earlier publications, so we cover it only briefly here. The method is a census- or survey-based reverse-survival technique for estimating age-specific birth rates for years before a census or household survey. Most applications first match children to their mothers within households using information on age, sex, marital status, relation to head of household (or householder), and number of children still living. (For the 2021 Tonga census, matching was based on a special question on mother's line number or person number in the household schedule, if mother was present.)

These matched (i.e., own) children, classified by child's age and mother's age, are reverse survived to estimate numbers of births by the age of mother in previous years. Reverse-survival estimates numbers of women in previous years. After adjusting for incorrect enumeration and unmatched (non-own) children, dividing the number of births by the number of women creates the age-specific birth rates.

We compute estimates for each previous year or group of years back to fifteen years before the census. We do not get estimates further back than fifteen years because births must then be based on children at ages 15 or older at enumeration. A sizable proportion of these females do not live in the same household as their mother and hence we cannot match them. We start by calculating single years of women's ages and births to children in years before the census. We get estimates for groups of ages or groups of calendar years by aggregating numerators and denominators of single-year rates and then dividing the aggregated numerator by the aggregated denominator.

We allocate non-own (unmatched) children to mothers by multiplying each age-specific category of own (matched) children, specified by mother's age, by the corresponding age-specific ratio of all children to own children (Figure 3.13). Thus, we adjust the number of own children at each age upward by the same factor regardless of mother's age, introducing some error in the fertility estimates. The proportionate distribution of non-own children by the age of mother differs from the proportionate distribution of own children by age of mother.

We cannot specify non-own adjustment factors by age of mother since the mother of an unmatched child is not in the household. Since older women are usually in more stable households than younger women, the nature of the error from not specifying non-own adjustment factors by mother's age is usually to reallocate erroneously a certain proportion of non-own children of a given age from younger mothers to older mothers. This error, if present, usually has negligible effect on the total fertility rate, but it produces an age pattern of fertility that is

too low at the younger ages and too high at the older ages. The error is minor if the adjustment factors for non-own children are low, but sometimes these factors can be quite high.

Children are often not with their parents because of adoption or movements for education, and so forth. The rates for Tonga are high because so many children move among relatives. Throughout the period, the rates were high. The 1976 census had the lowest non-own child rate of about 10 percent – about 1 in every 10 children of these ages were not living with their mothers at the time of the census. The average was more than one-third in 2006, indicating different definitions that year. The rates for the 2021 census were higher than the lowest rates, at about 1 in every 4 of the children. Again, Tonga has adoption, and movements for education, and parents move to other households for work, leaving the children with grandparents or other relatives.

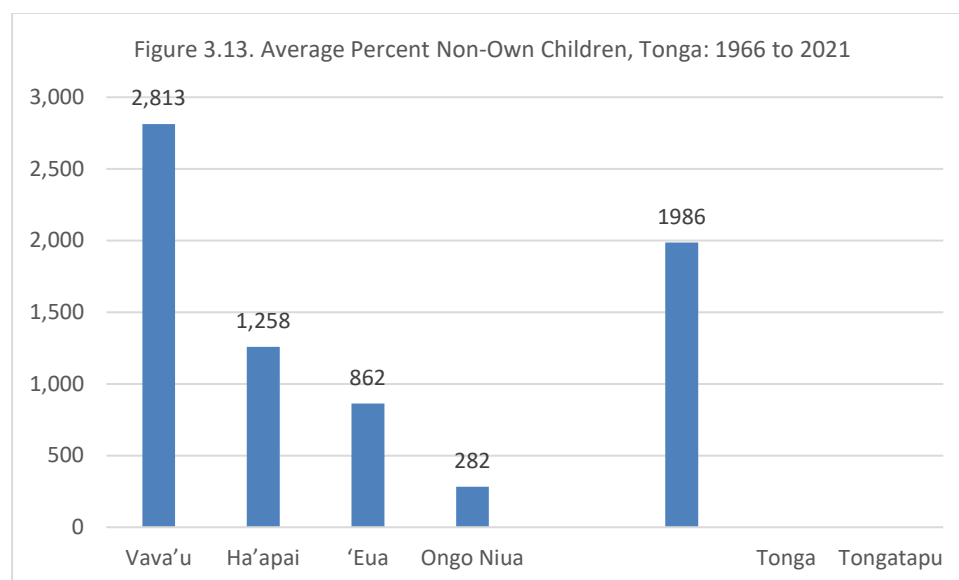


Figure 3.14 shows the percentage of non-own children for each year before the census, by age of child at the time of the census. The percentages being non-own children are low by Pacific Island standards because many females keep their children in the household where they are living. Less than 1 child out of every 5 children aged less than 1 were not living in the same household as their mother. While the percentage increased with age, it peaked at about 1 in 4 at age 12. The method distributes the non-own children to females by age in the same proportions as the own children. This procedure is not perfect because older women adopted a child if they are infertile or if the other children have left the household.

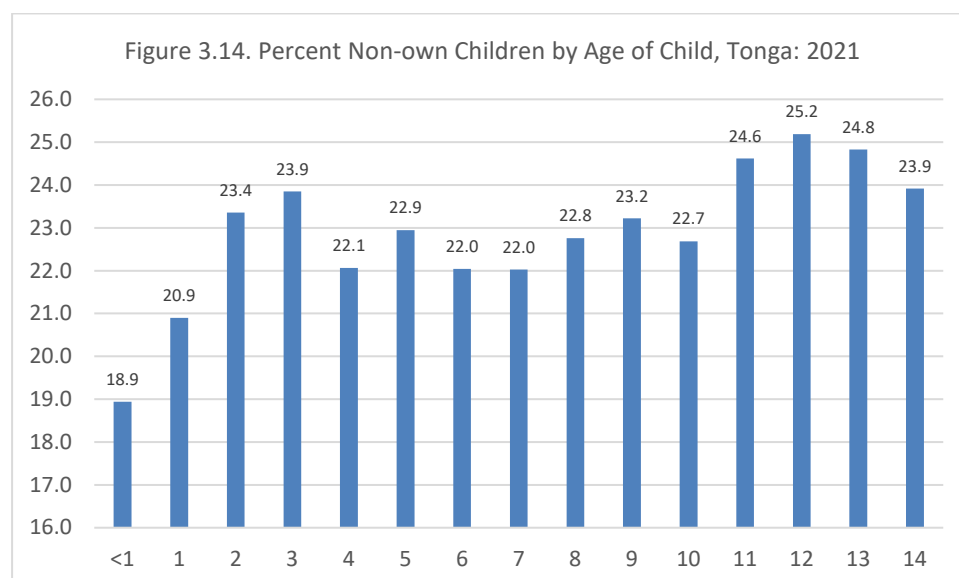
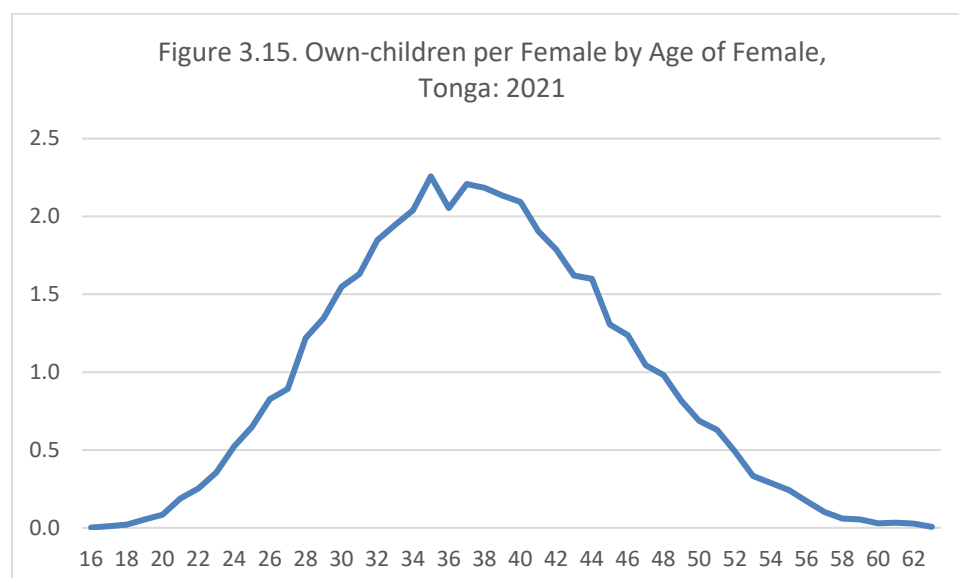


Figure 3.15 shows the distribution of own children per female by age of female. The numbers of children in the household increases with age to about 36 or 37 years, and then decreased after that. In theory, the distribution of non-own children would be similar.



You can see that Table 3.11 shows own children fertility estimates from eight censuses. The data mesh well with what we discussed in earlier sections of this chapter¹. The total fertility rates decreased precipitously throughout this period, from 1966 to 2021, from 7 children per woman at the beginning to about 6 per woman in 1986, and then to less than 5 in recent censuses. The average woman in Tonga in the 1966 had about 7 children during her reproductive period, but this average decreased to about 4 by 2021.

Table 3.11A. Own Child Derived 5-Year Age-Specific and Total Fertility Rates, Tonga: 1966 to 2021

Census	Period	15-19	20-24	25-29	30-34	35-39	40-44	45-49	TFR
1966	1962-66	36.8	222.1	325.3	313.8	262.9	177.6	93.4	7,160
	1957-61	56.8	229.7	304.7	293.7	229.8	136.2	70.8	6,608
	1952-56	78.3	226.2	285.8	281.8	219.3	125.6	80.5	6,488
1976	1962-66	64.2	262.0	370.1	329.8	254.5	139.4	35.6	7,277
	1967-71	59.8	266.6	356.6	317.0	239.1	127.2	38.1	7,021
	1972-76	43.8	195.4	265.6	242.9	180.6	86.2	28.8	5,216
1986	1972-76	156.5	311.1	344.4	312.3	229.5	143.2	50.8	7,739
	1977-81	132.2	284.9	316.8	273.4	202.4	112.3	45.0	6,835
	1982-86	116.2	264.3	286.8	250.9	182.2	90.7	34.3	6,127
1996	1982-86	54.7	219.6	307.2	281.5	197.1	89.1	22.8	5,860
	1987-91	40.7	168.0	266.7	250.1	184.7	80.6	20.0	5,054
	1992-96	32.2	151.1	239.1	233.7	172.8	88.8	24.6	4,711
2006	2002-06	20.0	120.7	213.5	244.4	192.4	78.3	18.7	4,440
	1997-01	27.1	141.7	241.9	244.5	177.0	76.3	20.1	4,643
	1992-96	31.0	166.6	272.7	243.5	181.6	96.3	13.8	5,027
2011	2007-11	47.1	139.9	205.2	195.4	142.9	61.6	14.6	4,034
	2002-06	41.9	142.5	221.2	222.5	165.2	65.1	13.2	4,358
	1997-01	40.4	157.8	242.5	230.5	166.9	67.1	11.7	4,585
2016	2012-16	34.3	155.3	206.5	188.3	117.7	44.2	8.2	3,773
	2007-11	27.8	161.7	233.2	197.5	132.0	50.6	9.9	4,064
	2002-06	26.4	163.7	239.1	223.2	163.2	55.5	9.8	4,405
2021	2017-21	21.4	111.6	175.4	160.3	106.9	39.6	10.3	3,128
	2012-16	38.0	171.1	230.9	207.6	131.0	50.6	14.1	4,217
	2007-11	29.6	170.3	242.8	211.3	141.0	53.1	11.1	4,296

Sources: Own Child Analysis Using the East-West Center's FERT Program

¹ We ran the own-children tabulations using the East-West Center's FERT program for all censuses. The program is in DOS, and is in the process of being updated as a Windows application.

Total Fertility Rates

Figure 3.16 shows the Total Fertility Rates derived for the 15 years before the 2021 Tonga Census using the Own-Child method. Because the population of Tonga is small for the method, smoothing the results by summing three adjacent years and then dividing by 3 provides a smoother estimate of the change over time. The number of children ever born during a Tonga female's reproductive span decreased from more than 4 children per female in the early years (2007 to about 2015) and then decreased in the years immediately before the census.

Some respondents report children almost 1 to age 1 and those almost 2 to age 2 which tends to decrease the age specific and total rates in the two years immediately before the census, and that appears here, but the decrease is still present.

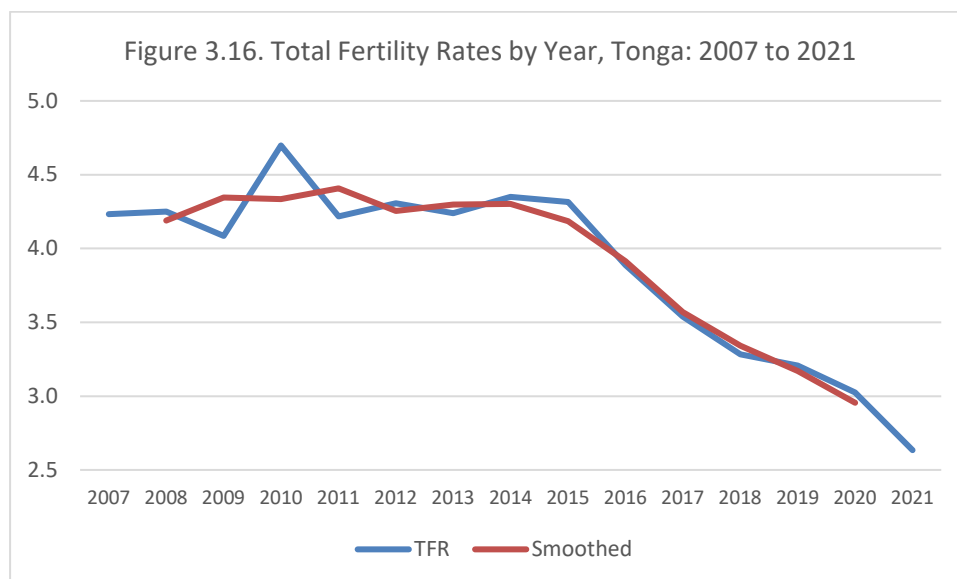
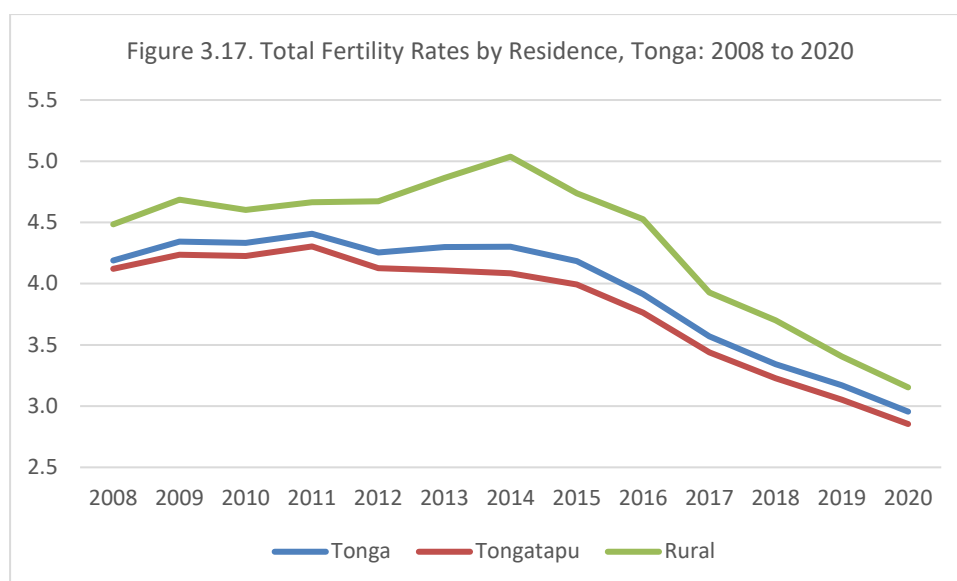
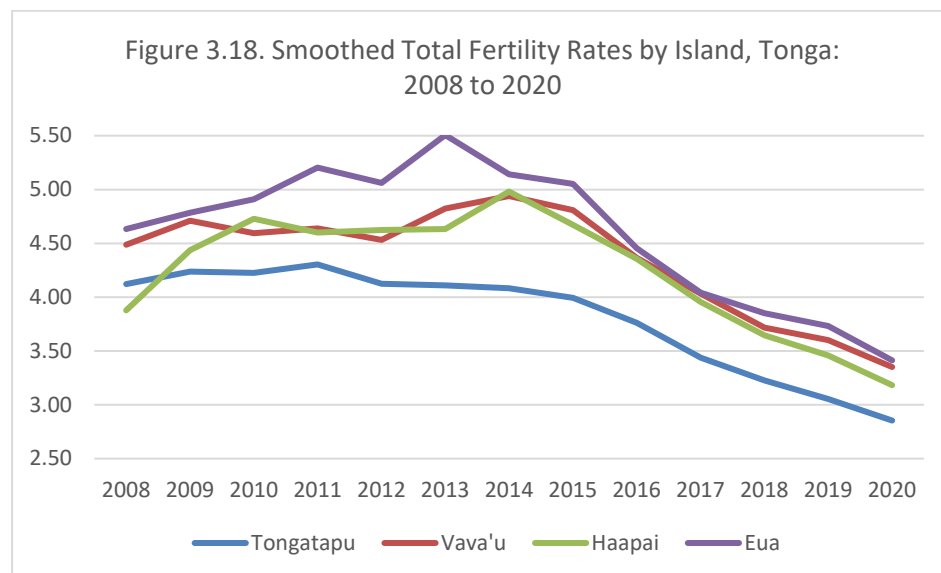


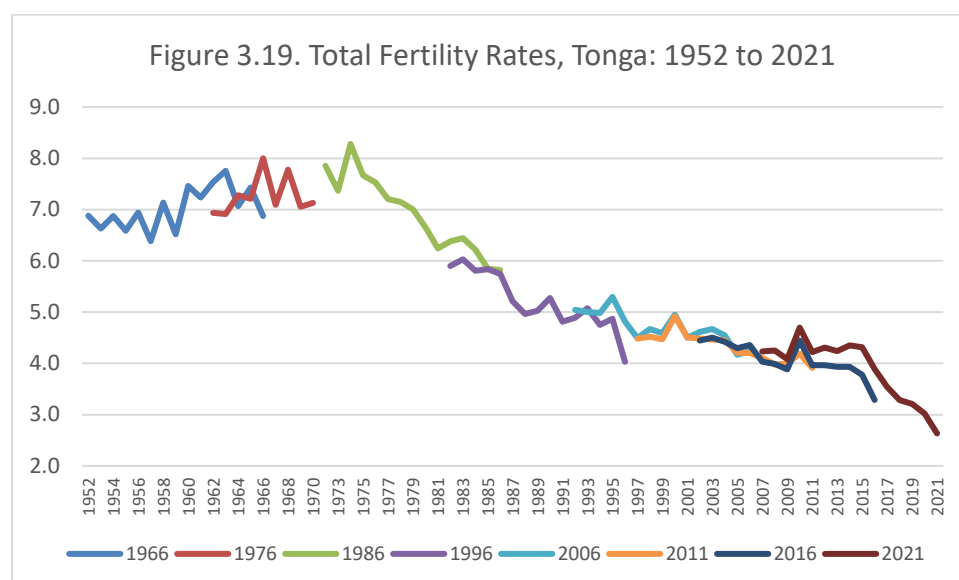
Figure 3.17 shows urban-rural difference in total fertility rates by urban-rural residence if we consider all Tongatapu as urban and the other 4 divisions as rural. As expected, rural fertility was higher throughout the period – increasing from about 4.5 to 5 during the years from about 2008 to about 2014, and then decreasing rapidly, to about 3 children per female in the years immediately before the census. Rural fertility was greater than urban fertility every year. The fertility on Tongatapu decreased along with the total fertility, just a bit less than the total because Tongatapu was most of Tonga's population in 2021.



While Tongatapu's fertility was near the average for the country, the changes in total fertility for the other Divisions were higher and more pronounced. Ongo Niua's population was too small for the own children analysis separately but appears in the totals. For the other Divisions, 'Eua consistently showed the highest fertility over the period, reaching about 5.5 children about 2013 before decreasing to about the level of the other "rural" divisions (Figure 3.18). Vava'u and Haapai showed similar patterns to each other, increasing from about 4.5 to about 5 children per female around 2013, before decreasing together to about 3.5 just before the census.



The own-child method requires microdata, since a match between children and their mothers occurs. Fortunately, Tonga has microdata back to its 1966 census. These data can show the change in fertility over the lengthy period from about 1953 to just before the 2021 census and appear in Figure 3.19. The total fertility rate in Tonga based on these eight censuses started by increasing from about 7 children per female in the early 1950s to about 8 children per female in the mid-1970s. After that, the TFRs decreased continuously, to about 6 in the mid-1980s, then to about 5 in the 1990s, four in the first decade of this century, and finally to about 3 in recent years.



In Figure 3.20 we have smoothed the overlapping census results to provide a continuous line of TFRs. As above, the decrease started around 1975, and proceeded rapidly downward until the 1990s, and then less rapidly, but continuously, to about 3 in 2020.

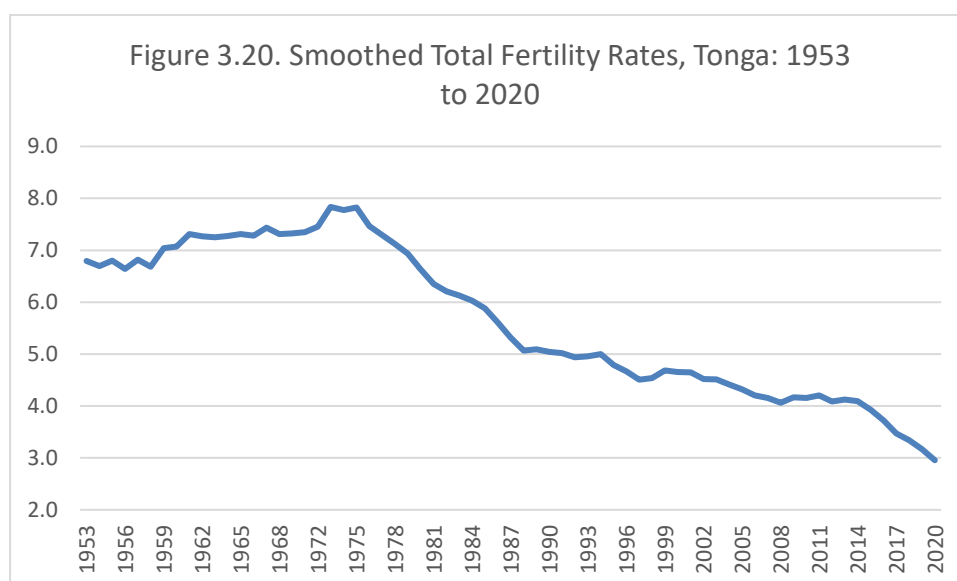


Figure 3.21 shows age-specific fertility rates for the middle 5-year period the various censuses, starting with the 1966 census. So, the age-specific rates are the average of 5 to 9 years before the census. Because the total fertility rate has decreased so much over the years, so have the age-specific fertility rates. The 1966 and 1976 census results are striking because they are so high in the middle of the reproductive years. In 1976, for example, a female had a 35 in 100 chance of having a baby if they were 25 to 29 years old. The age-specific rates were highest in 1976, so this was the peak fertility rate, up from 1966, when health conditions were worse.

But starting with the 1996 census, we see much lower age-specific fertility at most ages. The younger females in the 1996 census continued higher fertility than in the subsequent censuses, but lower than in the earlier censuses. After that, the rates were low in each census.

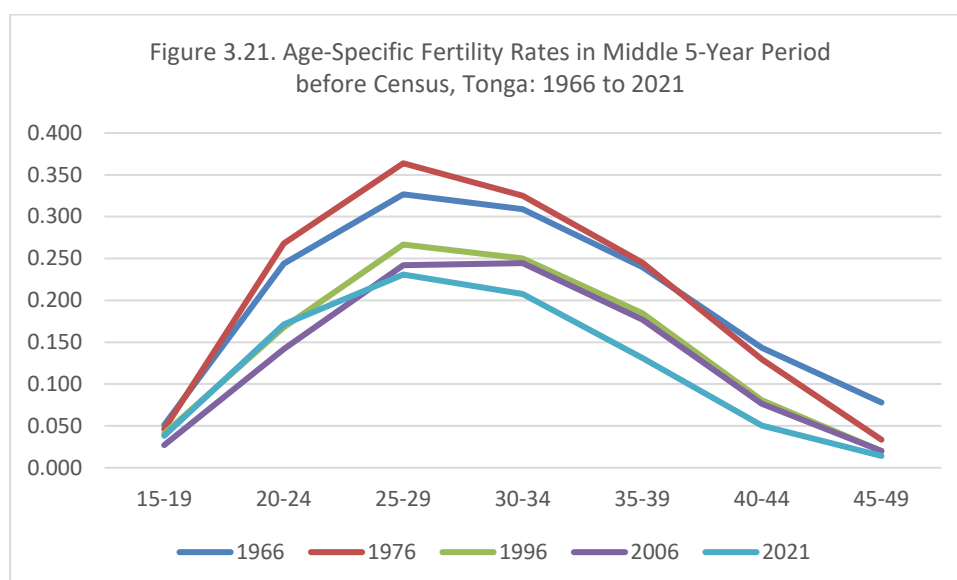


Figure 3.22 shows the total fertility rates for groups of 3 years before the 2021 census. The total fertility rate increased from about 4.2 children per female in the earliest 3-year period, to 4.4 in the second period, before decreasing for the rest of the series. The TFR decreased to about 4.3 for the period 2013 to 2015, then by more than half a child to 3.6 in 2016 to 2018, and finally to less than 3 children per female in the period 2019 to 2021.

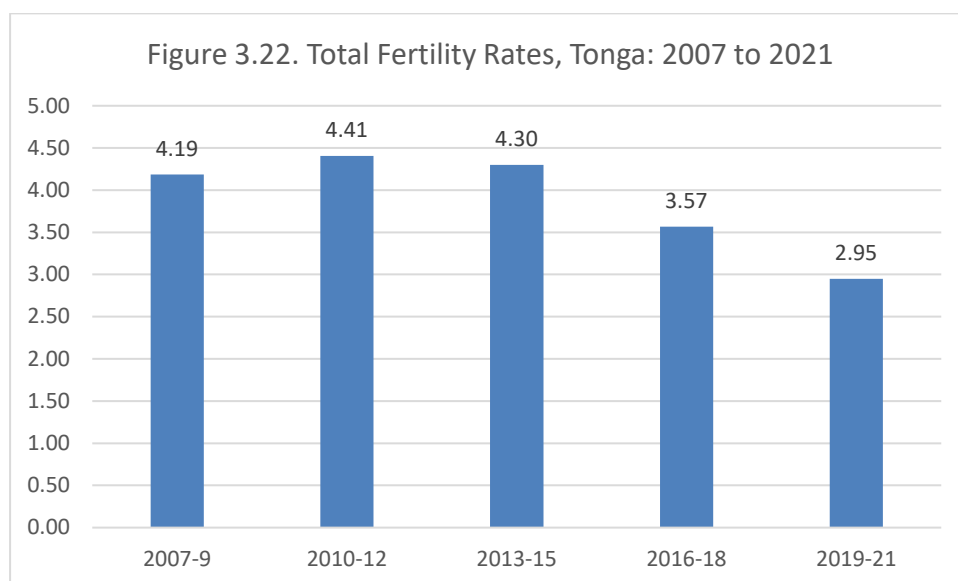
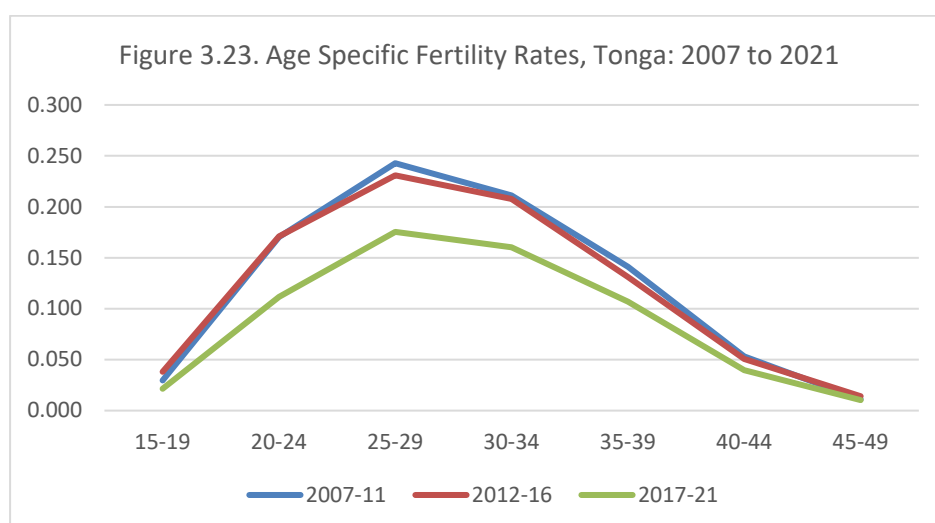


Figure 3.23 shows age-specific fertility rates for the mid-point of each 5-year period before the 2021 Census. These results also show a continuous decrease in the age-specific rates (with one exception at age 30 to 34). Unlike the previous figure, the same females appear in the denominator throughout the series – the numerators, as before, come from the reported births. The results show continuing low fertility, fertility which is likely to continue to decline.

The own child method provides estimates for up to 15 years before the census by reverse surviving the women and their children. As described above, the programmer develops a mother-child matrix, which puts the women by age, usually ages 15 to 65, as the rows, and the children by age (usually from 0 to 14) as the columns. So, if a female is currently 35 and has a 5-year-old biological child determined by the relationship or by mother's person number, the computer updates the cell (35,5) by 1. At the end of the procedure, the mother-child matrix results. The program then distributes the unmatched children by age to those who could match in the same proportions. Then, the package applies mortality to the mothers year-by-year backwards (so those 35 at the time of the census, become 34-year-olds the year before – but a smaller group because of those dying during the year); and the children are reverse survived as well.



Fertility for characteristics

Figure 3.24 shows changing TFRs for the educational attainment over the 15-year period before the census. Not enough females with only primary school who were 15 to 49 appeared in the data set to do their analysis. So, for Lower secondary – Standards 1 to 4 – the fertility was highest throughout the period, increasing from about 4.5 children to about 5 in 2014 before decreasing to about 3.5 in 2019. The TFRs for the higher secondary years – Forms 5 to 7 – started at about the same level as for the lower secondary, but they did not increase, and started their own decline about 2011. The Total for all of Tonga appears on the chart. And the TFRs for tertiary educated females started lower, at least 4 children per female, and decreased to less than 3 in recent years.

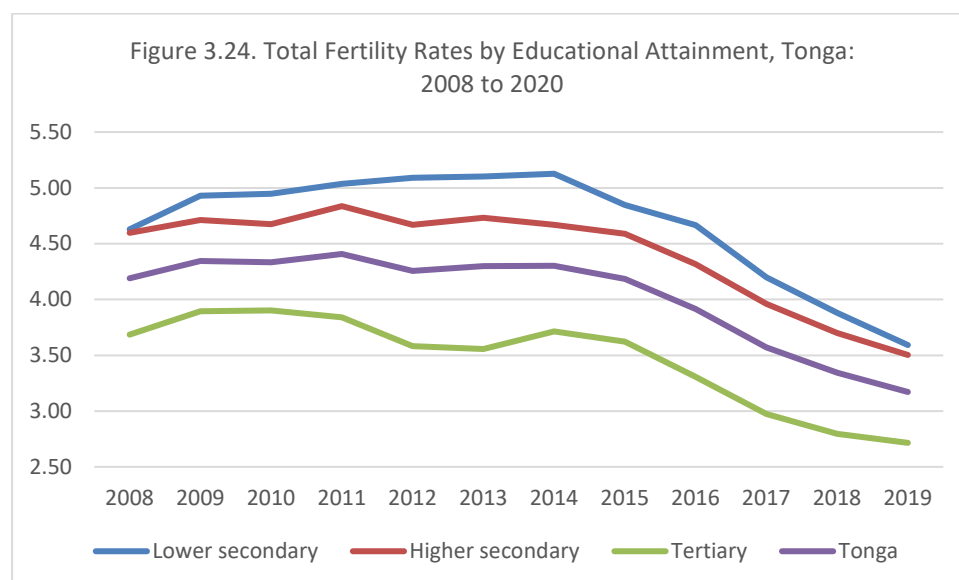


Figure 3.25 shows the age-specific fertility rates by educational attainment for the middle 5 years of the 15 years before the 2021 census, from 2012 to 2016. These years are the most representative since they do not suffer from child ages moved up just before the census, and children 12 to 14 departing the house before the census. The age-specific fertility peaked at ages 25 to 29 for both lower secondary and higher secondary. (Too few primary schools so only educated females occurred for the analysis.) The peak was at 250 per 1000, showing about a 1 in 4 chance that a female of those ages would have a child in that year. The peak for tertiary females, however, was at 30 to 34 years, and was lower than for the secondary school educated females – the peak for the former was at about 200 per 1000, so that in those ages a female had about a 1 in 5 chance of having a baby in that age group at that time. From ages 35 onward, all the females had about the same age-specific fertility, and all saw a regular decrease over time.

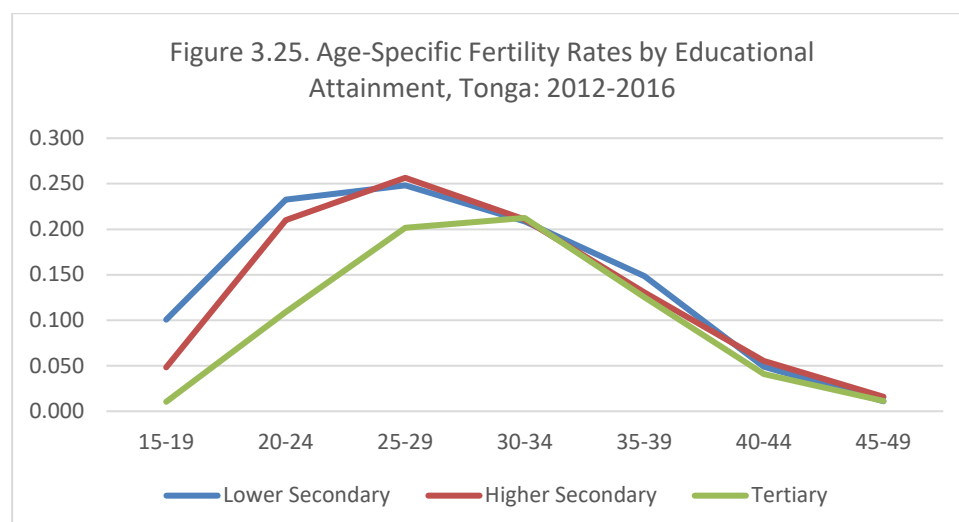
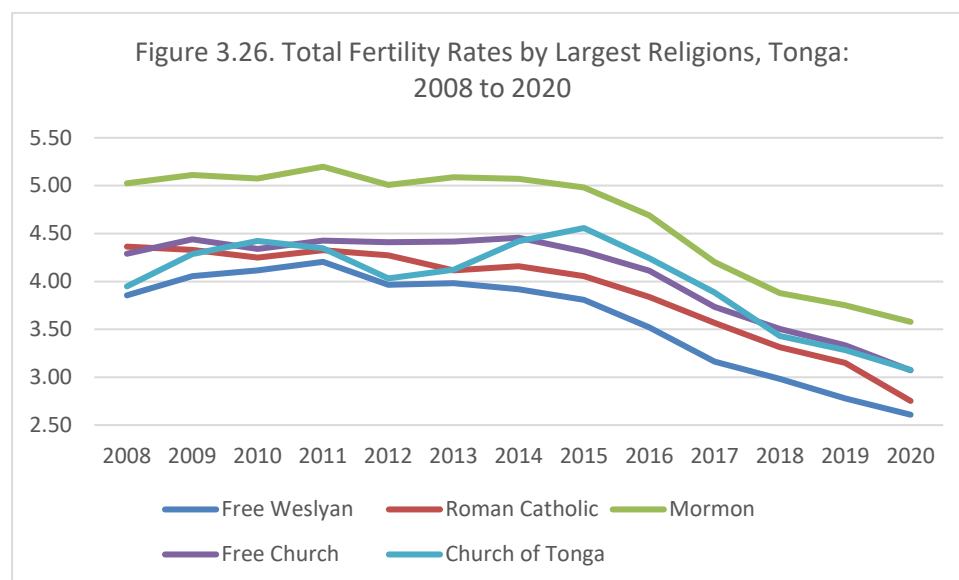
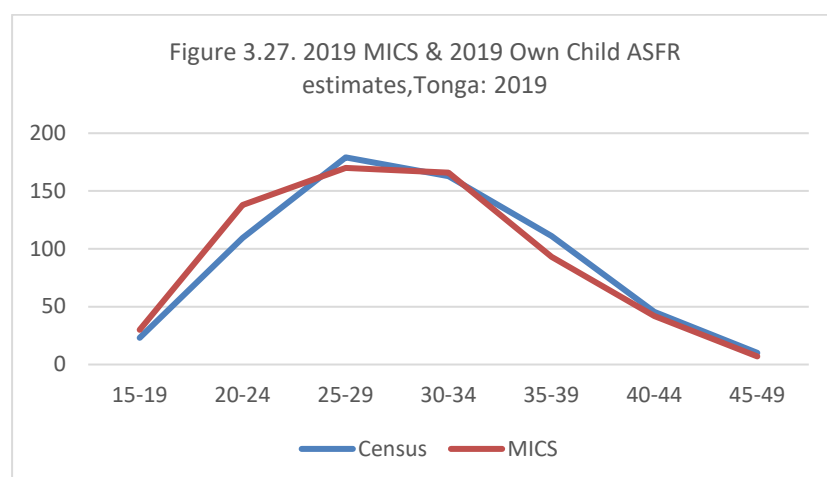


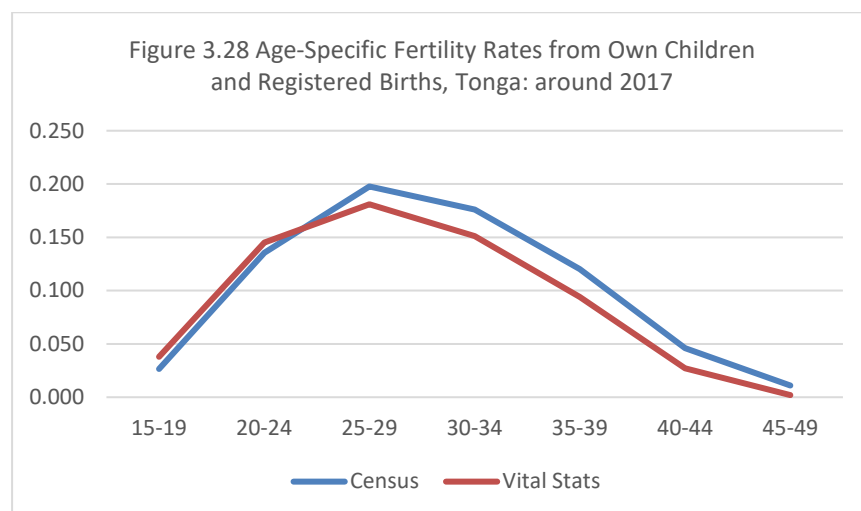
Figure 3.26 shows changing fertility in the years before the 2021 census for the largest religions in Tonga. In cases of small populations, we smooth the data over each 3 years. Mormons had the highest fertility throughout the period, decreasing from about 5 children per female in 2008 to about 3.5 children per female in 2020, a decrease of about one-third. We group the other major religions together and note significantly lower than Mormon fertility throughout the period. Free Wesleyan had the lowest fertility throughout the period, decreasing from about 4 children per female in 2008 to about 2.5 in 2020. Roman Catholics decreased from about 4.5 to about 2.7 over the period.



Tonga carried a Multiple Indicator Cluster Survey (MICS) in 2019 and because it was a health survey, it included fertility for the females included in the sample. Figure 3.27 shows the comparison of age-specific fertility rates from the MICS compared to the estimates of age-specific fertility for the year 2019 in the own child estimates. The results are almost identical. Although MICS showed slightly higher fertility for the 20- to 24-year-olds and the census showed slightly higher fertility for those 35 to 39, in general the rates were the same. The MICS sample showed remarkable consistency with the census in the fertility estimates so verifies the excellent work done on it, like the procedures used in the census itself.



And, finally, Figure 3.28 shows the comparison of the age-specific fertility rates derived using the own child method specifically for 2017 with the estimated based on the census females but the registered births for 2017. Although the registered births were for the calendar year and the own-children births were for the 12 months before the census, the results are consistent. They show remarkable consistency between the recorded births and the estimated births matching the mothers and children in the census. The results for the younger females were the same, but the census showed slightly higher ages specific fertility than the registered births, which could show a very slight under-registration of the births, although the two lines are remarkably close.



Birth Registration

A new question in the 2016 Census allowed estimation of the level of completeness of birth registration in Tonga. It also provided the proportion of the population in possession of a national identification card. Questions on birth certificate, birth registration, and child notification appeared on the 2021 Census.

Table 3.11 shows the numbers of children by single year of age under 6 who had a birth certificate, and for those who did not have a birth certificate if they were registered. About 89 percent of those 5 years of age and younger had a birth certificate. About 80 percent of those less than 1 year had a birth certificate, and the percentage increased with age. Around 93 percent of the children aged 5 had a birth certificate.

Of the children who did not have a birth certificate – about 11 percent of all children – 83 percent of them were registered. As with the birth certificates, the percentage who were registered increased with age, going from 70 percent for those less than 1 year old to 89 percent for the 1 and 3 year olds, before decreasing slightly.

Table 3.11B. Childbirth Certificate and Registration by Age, Tonga: 2021

	Birth Certificate						
	Total	Yes		No		Child Registered	
		Number	Percent	Total	Yes	Percent	No
Total	12,549	11,130	88.7	1,419	1,180	83.2	239
Less than one year	1,786	1,423	79.7	363	256	70.5	107
1	2,004	1,734	86.5	270	240	88.9	30
2	2,070	1,836	88.7	234	205	87.6	29
3	2,087	1,909	91.5	178	158	88.8	20
4	2,207	2,001	90.7	206	181	87.9	25
5	2,395	2,227	93.0	168	140	83.3	28

Source: 2021 Tonga Census

Table 3.12 shows the numbers and percentages of male children with birth certificate and those who were registered. About 88 percent of the male children had birth certificates and of those who did not, about 80 percent were registered. Smaller percentages of male than females were registered (Table 3.13).

Table 3.12. Childbirth Certificate and Registration by Age for Males, Tonga: 2021

	Birth Certificate								
	Total	Yes		No	Child Registered				
		Number	Percent		Total	Yes		Percent	No
Total	6,494	5,727	88.2	767	615	80.2	152		
Less than one year	958	755	78.8	203	139	68.5	64		
1	1,054	901	85.5	153	132	86.3	21		
2	1,061	934	88.0	127	109	85.8	18		
3	1,038	953	91.8	85	73	85.9	12		
4	1,149	1,041	90.6	108	90	83.3	18		
5	1,234	1,143	92.6	91	72	79.1	19		

Source: 2021 Tonga Census

Table 3.13 shows similar distributions for females. About 89 percent of the females had birth certificates, a slightly higher percentage than for the males. And, about 87 percent of the females who did not have a birth certificate were registered, a larger percentage than for the males.

Table 3.13. Childbirth Certificate and Registration by Age for Females, Tonga: 2021

	Birth Certificate						
	Total	Yes		No			
		Number	Percent		Child Registered		
				Total	Yes	Percent	No
Total	6,055	5,403	89.2	652	565	86.7	87
Less than one year	828	668	80.7	160	117	73.1	43
1	950	833	87.7	117	108	92.3	9
2	1,009	902	89.4	107	96	89.7	11
3	1,049	956	91.1	93	85	91.4	8
4	1,058	960	90.7	98	91	92.9	7
5	1,161	1,084	93.4	77	68	88.3	9

Source: 2021 Tonga Census

Figure 3.29 shows the percentage with birth certificates by single year of age for males and females. As noted, about 79 percent of males and 81 percent of the females received birth certificates in their first year of life. The percentages with birth certificates increased year by year for each sex, with females having higher percentages except for age 3, and there the difference was very minor.

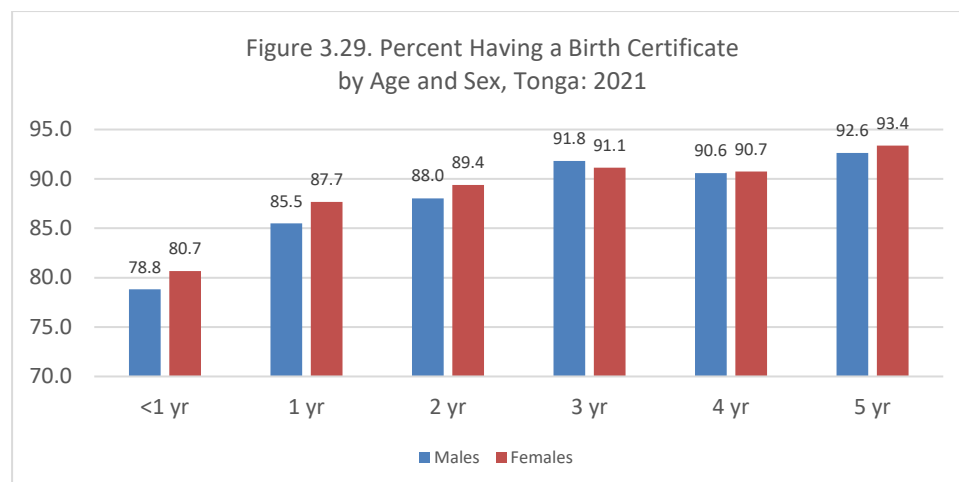
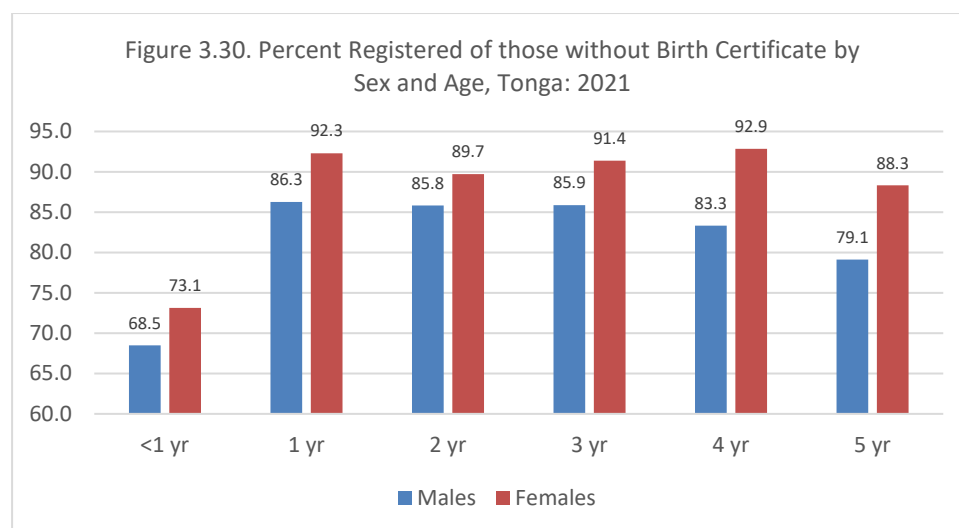
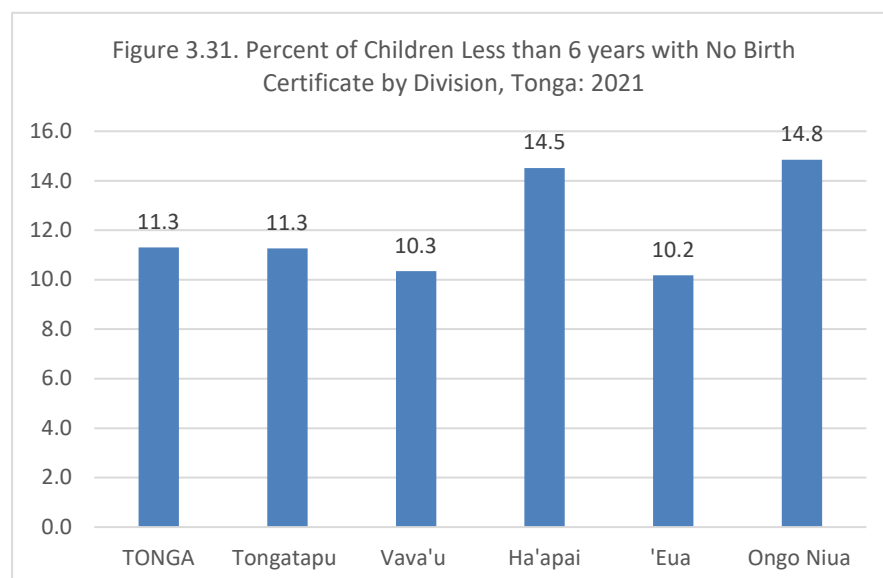


Figure 3.30 shows the percentage of the children who did not have a birth certificate but who were registered. Again, the percentage for females was higher than for males at each age, with more significant differences than found in birth certification.

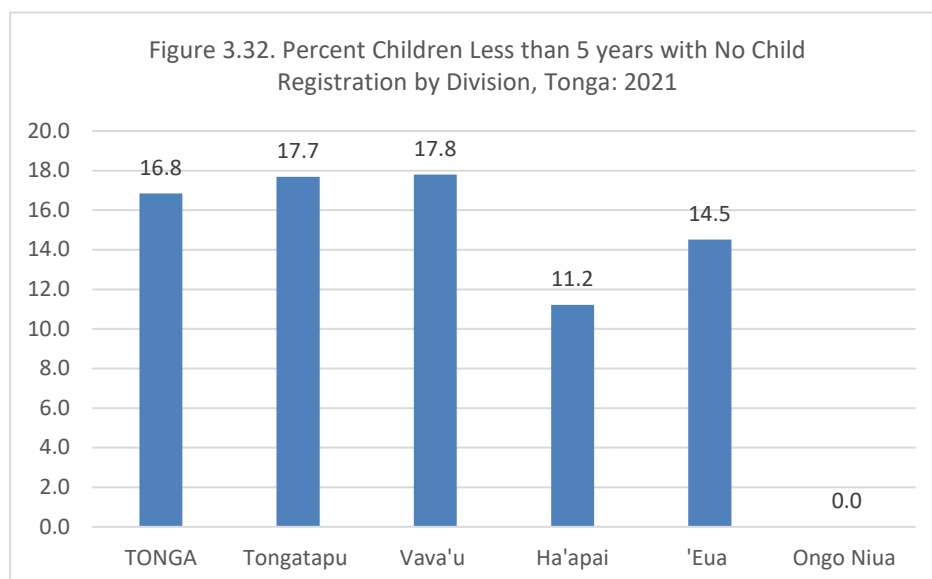


The United Nations considers 90 percent completeness as sufficient to undertake extensive vital statistics tabulations. The UN recommends that registration occur as close to the event (birth or death) as possible and ideally within one year of occurrence, to ensure that countries include data from these events in national vital statistics.

Figure 3.31 shows the percentage of children younger than 6 years old who had no birth certificate by division as of the census day in 2021. About 11 percent of the young children did not have a birth certificate, with Tongatapu having the same percentage. About 1 in 10 of the young children in Vava'u and 'Eua did not have a birth certificate. But about 15 percent of the children in Ha'apai and Ongo Niua had no birth certificate, this could be due to the difficulty of getting to where they needed to go to apply for the certificate.

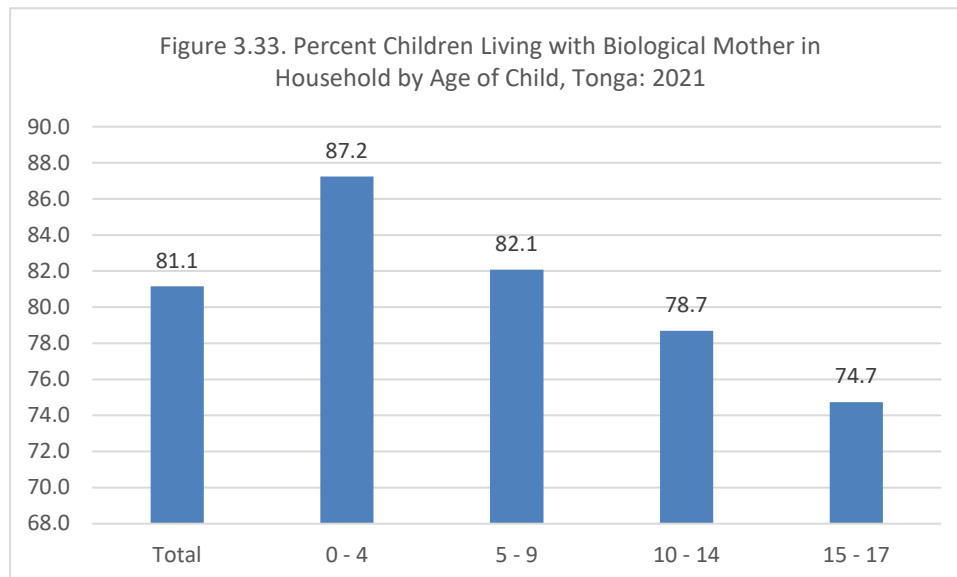


The percentages for lack of civil registration for children were even higher. About 1 in every 6 children did not have civil registration (Figure 3.32). All children under 5 in Ongo Niua did have civil registration according to the census.

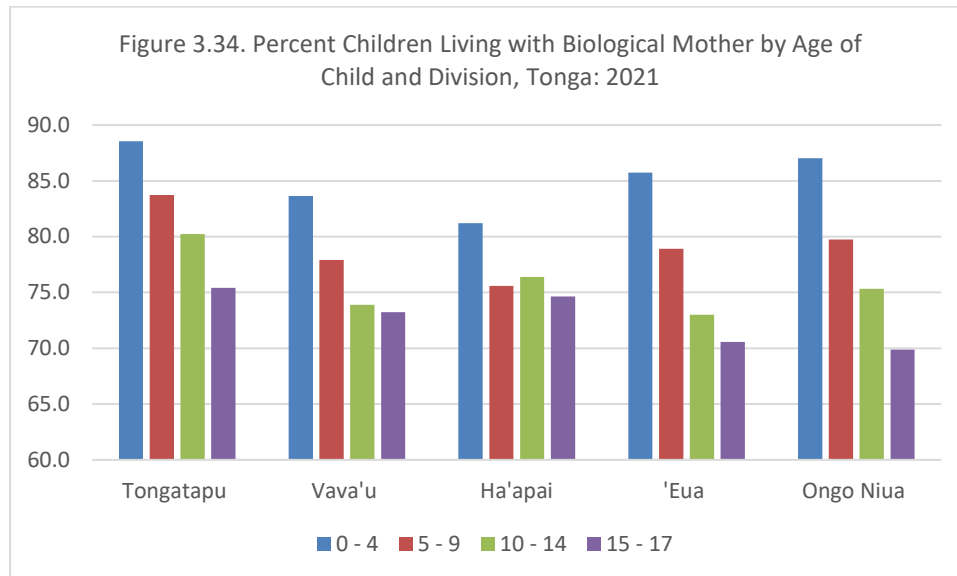


Children Living with their Biological Mother

Finally, the census collected information on the children living with their biological mother at the time of the census by age of child. As Figure 3.33 shows, about 4 out of every 5 children younger than 18 years lived with the biological mother in the household. As expected, the percentage of children living with their biological mother decreased with age of child. While about 7 in every 8 children 0 to 4 years old lived with their biological mother, only about 3 in 4 of those 15 to 17 years old lived with their biological mother.



And Figure 3.34 shows the percentages of children living with their biological mother by division. Except for Ha'apai, each age group was represented in smaller amounts than the next younger age group. More children 10 to 14 than 5 to 9 in Ha'apai were living with the biological mother at the time of the 2021 census.



Conclusion

Fertility in Tonga continues to decline, although not as rapidly in earlier decades. The average female has about 3 children during her reproductive years, and almost all of them survive.

CHAPTER 4: MORTALITY

Mortality definitions

The data relating to mortality collected in the 2021 census were:

- How many live births a woman has ever had, and how many of those born were still alive or had died.
- Whether a respondent's marital status was "widowed" (widowhood); and
- Whether any residents of the household died during the last 12 months prior to the census

Mortality from Children Ever Born and Still Alive

Of all children that were ever born to women 15 years and older (73,907) reported in the 2021 census, 97 percent (71,635) were still alive, about the same percentage as in 2016 (Table 4.1). The table shows the children ever born and surviving by age of mother and sex of child. The table also shows the average number of children ever born by age of mother and sex of child, and the average number of children still alive at the time of the 2021 Tonga census.

The values for the averages increased with age of mother for each sex and for the totals. By ages 45 to 49, most females have completed their reproduction, so we can look at that line. Females 45 to 49 in 2021 had an average of 3.2 children "ever born". The method reported slightly more males than female babies. Similarly, the average female in this age group had an average of 3.1 children still alive, again with slightly more male than female babies.

Table 4.1. Children Ever Born and Surviving by Age of Mother and Sex of Child, Tonga: 2021

	Females	Children Ever Born			Children Surviving			CEB per female			CS per female		
		Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
Total	34,722	38,267	35,640	73,907	36,895	34,740	71,635	1.10	1.03	2.13	1.06	1.00	2.06
15–19	5,531	84	82	166	84	81	165	0.02	0.01	0.03	0.02	0.01	0.03
20–24	4,238	719	654	1,373	711	648	1,359	0.17	0.15	0.32	0.17	0.15	0.32
25–29	3,601	1,933	1,812	3,745	1,915	1,792	3,707	0.54	0.50	1.04	0.53	0.50	1.03
30–34	3,188	3,014	2,803	5,817	2,982	2,780	5,762	0.95	0.88	1.82	0.94	0.87	1.81
35–39	3,280	4,360	4,018	8,378	4,288	3,972	8,260	1.33	1.23	2.55	1.31	1.21	2.52
40–44	2,800	4,367	4,067	8,434	4,303	4,018	8,321	1.56	1.45	3.01	1.54	1.44	2.97
45–49	2,559	4,164	3,989	8,153	4,082	3,939	8,021	1.63	1.56	3.19	1.60	1.54	3.13
50–54	2,430	4,311	4,017	8,328	4,191	3,953	8,144	1.77	1.65	3.43	1.72	1.63	3.35
55–59	1,879	3,648	3,269	6,917	3,525	3,202	6,727	1.94	1.74	3.68	1.88	1.70	3.58
60–64	1,542	3,144	2,883	6,027	3,011	2,803	5,814	2.04	1.87	3.91	1.95	1.82	3.77
65–69	1,288	2,708	2,619	5,327	2,556	2,531	5,087	2.10	2.03	4.14	1.98	1.97	3.95
70–74	892	2,044	1,897	3,941	1,886	1,798	3,684	2.29	2.13	4.42	2.11	2.02	4.13
75+	1,494	3,771	3,530	7,301	3,361	3,223	6,584	2.52	2.36	4.89	2.25	2.16	4.41

Source: 2021 Tonga Census

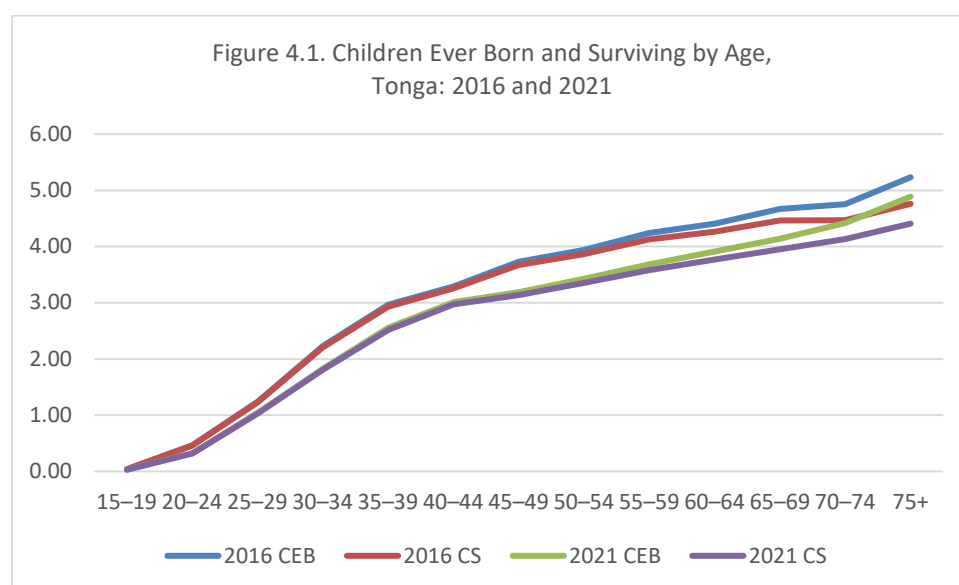
The proportion of surviving children decreased with the age of women (Table 4.2, which repeats Table 3.6). While 99 percent of all children that were ever born to women now aged under 25 years were still alive, about 90 percent of children born to women now aged 75 years and older were still alive. We expect this since as mother's age increases, so does the age of her children and thus the risk of dying increases.

Table 4.2. Children ever born and still alive by Sex of Child and Age of Mother, Tonga: 2021

	Females	Male babies					Female babies				
		Children ever born	Children Still alive	CEB per female	CS per female	Percent alive	Children ever born	Children Still alive	CEB per female	CS per female	Percent alive
Total	34,722	38,267	36,895	1.10	1.06	96.4	35,640	34,659	1.03	1.00	97.2
15 - 19 years	5,531	84	84	0.02	0.02	100.0	82	81	0.01	0.01	98.8
20 - 24 years	4,238	719	711	0.17	0.17	98.9	654	648	0.15	0.15	99.1
25 - 29 years	3,601	1,933	1,915	0.54	0.53	99.1	1,812	1,792	0.50	0.50	98.9
30 - 34 years	3,188	3,014	2,982	0.95	0.94	98.9	2,803	2,780	0.88	0.87	99.2
35 - 39 years	3,280	4,360	4,288	1.33	1.31	98.3	4,018	3,972	1.23	1.21	98.9
40 - 44 years	2,800	4,367	4,303	1.56	1.54	98.5	4,067	4,018	1.45	1.44	98.8
45 - 49 years	2,559	4,164	4,082	1.63	1.60	98.0	3,989	3,939	1.56	1.54	98.7
50 - 54 years	2,430	4,311	4,191	1.77	1.72	97.2	4,017	3,953	1.65	1.63	98.4
55 - 59 years	1,879	3,648	3,525	1.94	1.88	96.6	3,269	3,202	1.74	1.70	98.0
60 - 64 years	1,542	3,144	3,011	2.04	1.95	95.8	2,883	2,803	1.87	1.82	97.2
65 - 69 years	1,288	2,708	2,556	2.10	1.98	94.4	2,619	2,531	2.03	1.97	96.6
70 - 74 years	892	2,044	1,886	2.29	2.11	92.3	1,897	1,798	2.13	2.02	94.8
75+ years	1,494	3,771	3,361	2.52	2.25	89.1	3,530	3,223	2.36	2.16	91.3

Source: Tonga Population and Housing Census 2021

Figure 4.1 shows the children ever born and children still alive for 2016 and 2021 censuses. The curves are almost identical, showing that the rates of children ever born and children surviving did not change much during the 5-year period. However, except for the very oldest females, the 2016 rates were higher at each age than the 2021 rates, and so fertility declined over the 5-year period.



The patterns become a little clearer if we look only at the oldest females at the time of the two censuses. The children ever born for 2016 increased from about 3.75 to around 5.25 for the oldest females; in 2021, the children ever born were about 3.25 for the 45- to 49-year-old females, but the increase was to about 4.75, so about half a child less. The 2016 children surviving line was flatter than the 2021 line, but the 2021 line continued to show fewer children surviving by age.

Figure 4.2 shows the numbers of children ever born and surviving for older females in the 2016 and 2021 censuses. The numbers of children decreased between the two censuses except in a few cases for the very oldest women, where there were very few cases. The spread between children ever born and children surviving was about the same at most ages in the two censuses. The differences were minor for the 45 to 49 year olds, showing high survival rates, but expanded for the older ages.

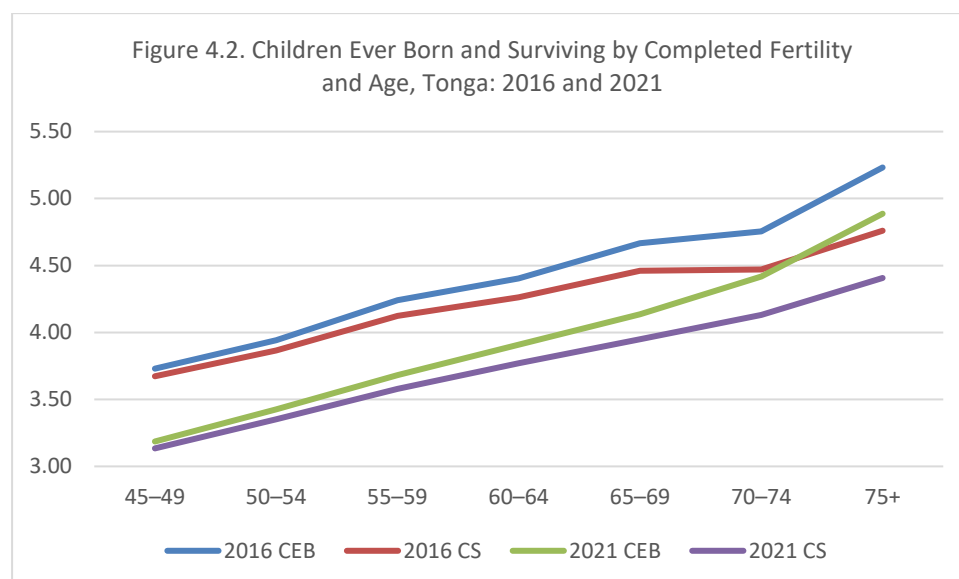
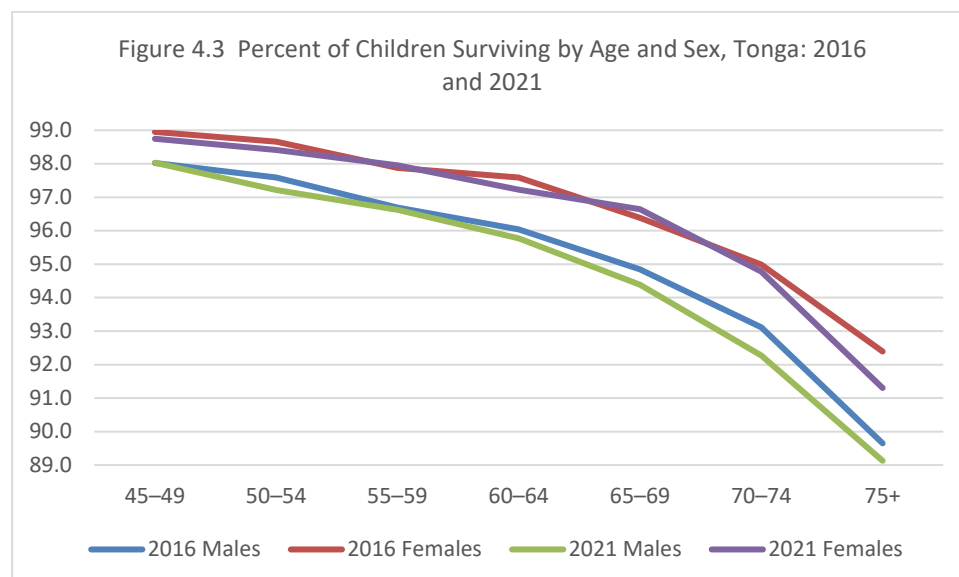


Figure 4.3 shows the percentage of children surviving by sex of those ever born by age of mother in 2016 and 2021. As expected, the older the female, the more likely that her children would not still be alive. For 2016, the males and females decreased at the same levels and same rates. For 2021, the percentage of males still alive was always less than the percentage of females, all the decreases were about the same.



A comparison of data on children ever born and still alive from the last two censuses shows mortality improvements have occurred in most age groups in Tonga.

Infant and Child Mortality

The infant mortality rate (IMR) measures the number of deaths of children under one year of age per 1,000 live births and is an important indicator of infant and maternal wellbeing. The estimated IMR based on the 2021 Census was 9 per 1,000 for males and 8 per 1,000 for females, similar as the 9 per 1,000 for males and 6 per 1,000 for females in 2016 (Table 4.3). This was significantly lower than the 22 and 15 for males and females, respectively in 2011. We need to be cautious in interpreting this decrease without reconciling the death data with other administrative data sources.

Table 4.3. Indirect Indicators of Infant and Early Childhood Mortality, Tonga: 2016 and 2021

Indicator	2016			2021		
	Total	Males	Females	Total	Males	Females
Infant mortality rate (IMR)	8	9	6	8	9	8
Child mortality rate ¹	1	2	1	3	2	3
Under 5 mortality rate ²	9	11	7	10	10	12

Source: MORTPAK QFIVE

¹The probability of dying between one and five years of age.

²The probability of dying between birth and five years of age.

The estimated child mortality, the probability of dying between one and five years of age was 3 deaths per 1,000 in 2021, somewhat more than the very low 1 death per 1,000 people of that age group. These numbers are so low that they are subject to consider possible error.

Estimated under five mortality, the probability of dying between birth and five years of age was 11 and 7 for males and females, respectively, per 1,000 births in 2016, but 10 for males and 12 for females in 2021. These also were much lower levels than that reported in the 2011 census (26 and 17 for males and females, respectively, per 1,000 births).

The 2021 Census did not collect deaths in the household, so the number of deaths that might be in the Census cannot be reconciled with Registry and Ministry of Health data. This means that direct life expectancy estimates calculated using age-specific death rates based on census deaths cannot tell the true mortality experience of the Tongan population if the census were more accurate than the registry.

Instead, an average annual number of deaths by age and sex across was calculated using deaths registered as having occurred in the period 2018 to 2020. Dividing by 3 provides the age specific deaths and the population by age and sex from the 2021 Census, gives us the denominators for the age-specific death rates. The average number of annual deaths reported in 2018 to 2020 was 574, not very different from the 525 in 2016.

Table 4.4 provides summary measures for life table development using an estimated crude death rate based on the age specific rates determines and the age and sex of the population in the 2021 census. The estimated crude death rate came from the average of various sources both inside and outside Tonga. This method provides lower life expectancies than the method of using the actual age-specific death rates from the average of the 2018 to 2020 deaths and the census population. This estimate of life expectancy was 68 for males and 74 for females.

The estimates for infant mortality were 33 per 1,000 for males and 22 for females, a crude birth rate of 18 and a crude death rate of 6. We obtain the crude death rate by determining the number deaths in the census year divided by the census population enumerated in that year and then multiplying by 1,000 to obtain the crude death rate.

Table 4.4. Summary Demographic Characteristics, Tonga: 2021

Item	Both sexes	Male	Female
Life expectancy	70.78	68.33	73.65
Infant mortality rate	0.028	0.033	0.022
Crude birth rate *	18.43	20.44	16.53
Crude death rate *	5.73	6.50	5.00
Rate of natural increase (%)	1.27	1.39	1.15
Total deaths	574	317	257

Sources: 2021 Census age and sex distribution and infant mortality rate

* Per 1,000 population.

Life Tables

A life table is a concise way of showing the probabilities of a person living to or dying at a particular age. Life tables contain a lot of information for demographers to assist in estimating various aspects of the mortality of a population, but we will look at what is most commonly used by governments and private sector accountants in predicting the life expectancy of an individual, usually at birth.

Life tables can be developed in several ways, but each requires levels of mortality, either as the crude deaths rates, or much better, age-specific deaths in the population, either collected in the census, or indirectly by using registered deaths by age and sex provided by Vital Statistics. The first method, with the crude death rate, is much less reliable, since it requires a very good estimation of the actual crude death rate, which is difficult to obtain in small populations with few deaths. The second method also is very susceptible to error since usually not all deaths are registered, which lowers the death rate. We will discuss life expectancy using the second method. At the end of the chapter, we present the life tables using the crude death rates combined from several sources, which produce somewhat lower rates.

Table 4.5 shows what was available at the time of writing this report for registered deaths. As with registered births, Tonga vital statistics provided the combined 2018-to-2020-year registered deaths. The first 3 data columns provide the age and sex distribution of the population in the 2021 census. The next three columns provide the average of the age-specific deaths over the three-year period considered. Then, dividing the deaths by the population and multiplying by 1000 provided the age-specific death rates as shown in columns 7 through 9. And, finally, we used these values as input to the Census Bureau's Population Analysis Spreadsheets to obtain life tables. The last column of the life table gives life expectancy – years likely to be lived from each age. For those 0-year-old, the life expectancy is "from birth", and that is the figure which is used most often in discussing life expectancy.

In 2021, this method provided a life expectancy at birth of 74.6 years, about 70.9 years of males and about 78.7 years for females. At birth, the average female would be expected to live about 7.7 years longer than the average male.

Table 4.5. Life Expectancy from Age-Specific Death Rates, Tonga: about 2021

Age	Census Population			Average Deaths 2018-20			Age-Specific Fertility Rates			Life Expectancy			Female	
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Extra yrs	
Total	100,179	48,749	51,430	586	333	253	5.8	6.8	4.9	-	74.6	70.9	78.7	7.7
0	1,790	961	829	6	4	3	3.5	3.8	3.2	73.8	70.2	78.0	7.7	
1-4	8,377	4,308	4,069	6	3	2	0.7	0.8	0.6	73.8	70.2	78.0	7.7	
5-9	12,654	6,570	6,084	1	0	1	0.1	0.1	0.2	70.0	66.4	74.1	7.7	
10-14	12,052	6,326	5,726	3	1	2	0.2	0.2	0.3	65.1	61.4	69.2	7.7	
15-19	11,209	5,678	5,531	5	3	2	0.4	0.5	0.4	60.1	56.5	64.3	7.8	
20-24	8,030	3,792	4,238	7	4	3	0.8	1.0	0.7	55.3	51.6	59.4	7.8	
25-29	6,349	2,748	3,601	6	3	3	0.9	1.0	0.8	50.5	46.8	54.6	7.8	
30-34	5,674	2,486	3,188	9	5	4	1.6	2.1	1.2	45.7	42.1	49.8	7.7	
35-39	5,799	2,519	3,280	17	11	6	2.9	4.2	1.9	41.1	37.5	45.1	7.6	
40-44	5,198	2,398	2,800	23	14	9	4.5	5.8	3.3	36.6	33.2	40.5	7.3	
45-49	4,834	2,275	2,559	35	20	15	7.2	8.6	6.0	32.4	29.1	36.1	7.0	
50-54	4,866	2,436	2,430	53	34	20	11.0	13.8	8.1	28.4	25.3	32.0	6.8	
55-59	3,847	1,968	1,879	51	29	22	13.3	14.9	11.5	24.8	21.7	28.3	6.6	
60-64	2,948	1,406	1,542	47	31	16	16.1	22.0	10.6	21.3	18.3	24.5	6.2	
65-69	2,362	1,074	1,288	46	29	17	19.5	26.7	13.5	17.8	15.1	20.9	5.8	
70-74	1,666	774	892	68	40	28	40.8	51.2	31.8	14.7	12.2	17.4	5.3	
75+	2,524	1,030	1,494	203	103	100	80.3	100.0	66.7	12.4	10.0	15.0	5.0	

Sources: 2021 Census and Tonga Vital Statistics

Figure 4.4 shows the average of the registered age-specific deaths over the 3 years of the 2018 to 2020 period. The numbers are presented on a logarithmic scale because the numbers rise rapidly and to a high level in the oldest ages. The total shown is the sum of the males and females, which is why it is higher than either sex. The number of deaths for newborns is relatively high, producing the infant mortality rate, and then decreases to almost 0 over the next few decades, then rising to the end. Male deaths are usually higher than female deaths at each age, but the numbers for Tonga are extremely low.

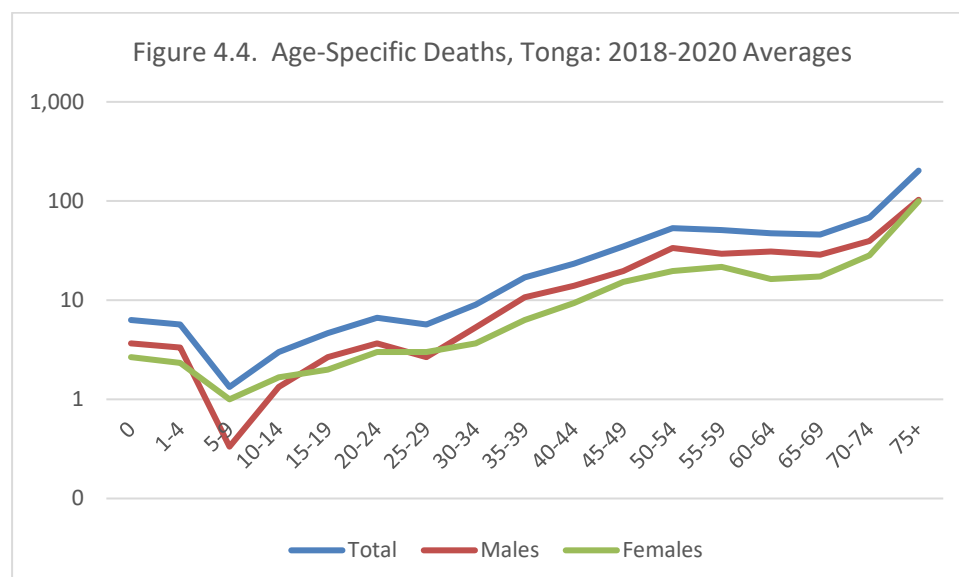
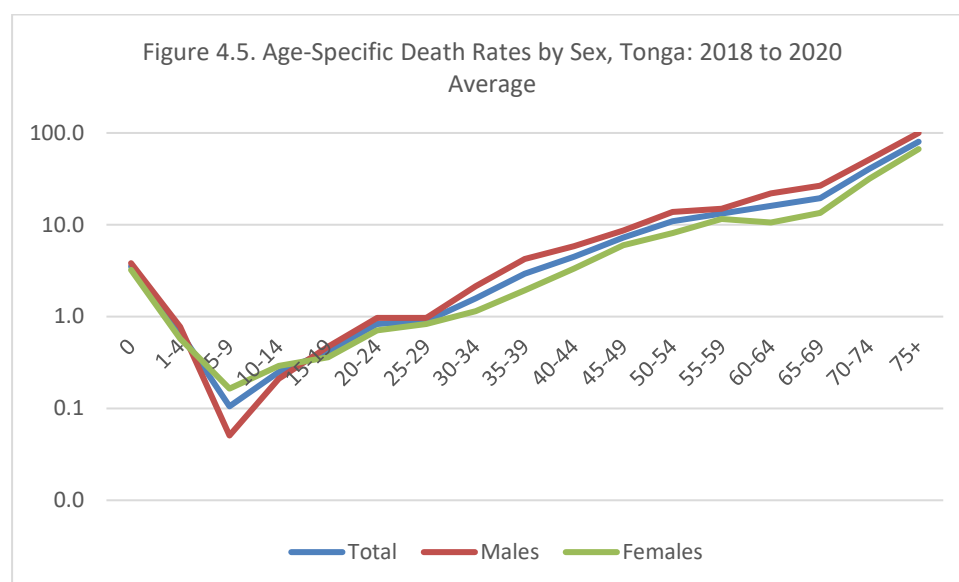


Figure 4.5 shows the age-specific death rates for Tonga around 2021, using the average of the deaths for 2018 to 2020. The curves look so much alike because Tonga has almost exactly 100,000 people so the deaths themselves and the age-specific death rates will be similar.



When we constructed life tables using the crude death rates, we came close to the life tables shown for the 2016 census. We constructed separate tables for males and females, resulting in a life expectancy at birth of 69.3 years for males (Table 4.9) and 74.6 years for females (Table 4.7). This compares to 69.3 years for males in 2011 and 2016 and 74.6 years in 2016 and 73.1 years in 2016 for females. Table 4.6 shows the life table for males when the estimated age-specific death rates provide the input with the population structure from the census to obtain the life table.

Table 4.6. Male Abridged Life Table from age specific deaths, Tonga: 2021

Age,	Width,	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	1	0.00322	0.060	0.00321	100,000	321	99,698	0.99579	7,869,822	78.70
1	4	0.00057	1.728	0.00229	99,679	228	398,198	0.99830	7,770,124	77.95
5	5	0.00016	2.500	0.00082	99,451	82	497,051	0.99886	7,371,925	74.13
10	5	0.00029	2.500	0.00145	99,369	145	496,485	0.99824	6,874,875	69.19
15	5	0.00041	2.500	0.00206	99,225	205	495,612	0.99751	6,378,390	64.28
20	5	0.00059	2.500	0.00293	99,020	290	494,377	0.99639	5,882,777	59.41
25	5	0.00086	2.500	0.00430	98,731	424	492,591	0.99485	5,388,401	54.58
30	5	0.00120	2.500	0.00600	98,306	590	490,055	0.99225	4,895,809	49.80
35	5	0.00191	2.500	0.00951	97,716	929	486,256	0.98704	4,405,754	45.09
40	5	0.00331	2.500	0.01643	96,787	1,590	479,957	0.97864	3,919,498	40.50
45	5	0.00534	2.500	0.02636	95,196	2,509	469,707	0.96711	3,439,541	36.13
50	5	0.00808	2.500	0.03960	92,687	3,670	454,257	0.95644	2,969,834	32.04
55	5	0.00977	2.500	0.04769	89,016	4,245	434,469	0.94814	2,515,577	28.26
60	5	0.01157	2.500	0.05625	84,771	4,768	411,937	0.93321	2,081,108	24.55
65	5	0.01623	2.500	0.07797	80,003	6,237	384,423	0.88885	1,669,172	20.86
70	5	0.03176	2.500	0.14714	73,766	10,854	341,695	0.73404	1,284,749	17.42
75	+	0.06671	14.990	1.00000	62,912	62,912	943,053		943,053	14.99

Source: Tonga Population and Housing Census 2021

- nMx = Age-specific central death rate.
 Nax = Average person-years lived by those who die between x and x+n.
 Nqx = Probability of dying between exact ages x and x+n (age-specific mortality rate).
 Lx = Number of survivors at age x.
 Ndx = Number of deaths occurring between ages x and x+n.
 nLx = Number of person-years lived between ages x and x+n.
 5Px = Survival ratio for persons aged x to x+5 surviving 5 years to ages x+5 to x+10 = $5Lx+5/5Lx$ (first 5Px = $5L0/5L0$, second 5Px = $5L5/5L0$, last 5Px = $Tx+5/Tx$).
 Tx = Number of person-years lived after age x.
 Ex = Life expectancy at age x.

Table 4.7 shows the life table for females when the estimated crude death rates provide the input with the population structure from the census to obtain the life table.

Table 4.7. Female Abridged Life Table using the estimated crude death rates, Tonga: 2021

Age,	Width,	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	1	0.02215	0.115	0.02173	100,000	2,173	98,078	0.97587	7,365,090	73.65
1	4	0.00162	1.698	0.00645	97,827	631	389,857	0.99454	7,267,013	74.28
5	5	0.00059	2.500	0.00293	97,197	285	485,271	0.99733	6,877,155	70.76
10	5	0.00048	2.500	0.00241	96,912	233	483,976	0.99691	6,391,884	65.96
15	5	0.00076	2.500	0.00377	96,679	365	482,482	0.99544	5,907,908	61.11
20	5	0.00107	2.500	0.00535	96,314	515	480,283	0.99415	5,425,426	56.33
25	5	0.00128	2.500	0.00636	95,799	609	477,474	0.99331	4,945,143	51.62
30	5	0.00141	2.500	0.00703	95,190	669	474,278	0.99229	4,467,669	46.93
35	5	0.00169	2.500	0.00840	94,521	794	470,620	0.98966	3,993,390	42.25
40	5	0.00248	2.500	0.01230	93,727	1,153	465,752	0.98573	3,522,770	37.59
45	5	0.00328	2.500	0.01626	92,574	1,505	459,105	0.97928	3,057,018	33.02
50	5	0.00511	2.500	0.02525	91,068	2,299	449,593	0.97019	2,597,913	28.53
55	5	0.00702	2.500	0.03450	88,769	3,062	436,189	0.95497	2,148,320	24.20
60	5	0.01151	2.500	0.05595	85,707	4,795	416,545	0.92563	1,712,131	19.98
65	5	0.01970	2.500	0.09388	80,912	7,596	385,567	0.87603	1,295,586	16.01
70	5	0.03411	2.500	0.15717	73,315	11,523	337,770	0.79728	910,018	12.41
75	5	0.05892	2.500	0.25678	61,793	15,867	269,296	0.52941	572,249	9.26
80	+	0.15159	6.597	1.00000	45,926	45,926	302,953		302,953	6.60

Source: Tonga Population and Housing Census 2021

Table 4.8 shows the life table for males when the estimated age-specific death rates provide the input with the population structure from the census to obtain the life table.

Table 4.8. Male Abridged Life Table using age-specific death rates, Tonga: 2021

Age,	Width,	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	1	0.00382	0.053	0.00380	100,000	380	99,640	0.99491	7,094,992	70.95
1	4	0.00077	1.848	0.00309	99,620	308	397,817	0.99807	6,995,352	70.22
5	5	0.00005	2.500	0.00025	99,312	25	496,497	0.99935	6,597,535	66.43
10	5	0.00021	2.500	0.00105	99,287	105	496,173	0.99834	6,101,038	61.45
15	5	0.00045	2.500	0.00227	99,182	225	495,349	0.99698	5,604,865	56.51
20	5	0.00076	2.500	0.00377	98,957	373	493,853	0.99499	5,109,517	51.63
25	5	0.00125	2.500	0.00625	98,584	616	491,380	0.99178	4,615,664	46.82
30	5	0.00205	2.500	0.01020	97,968	1,000	487,341	0.98568	4,124,284	42.10
35	5	0.00373	2.500	0.01848	96,968	1,792	480,361	0.97618	3,636,943	37.51
40	5	0.00594	2.500	0.02925	95,176	2,784	468,921	0.96394	3,156,582	33.17
45	5	0.00881	2.500	0.04308	92,392	3,981	452,009	0.94942	2,687,661	29.09
50	5	0.01204	2.500	0.05842	88,412	5,165	429,145	0.93161	2,235,652	25.29
55	5	0.01644	2.500	0.07898	83,246	6,575	399,795	0.91219	1,806,507	21.70
60	5	0.02048	2.500	0.09741	76,672	7,469	364,688	0.88074	1,406,712	18.35
65	5	0.03091	2.500	0.14346	69,203	9,928	321,196	0.81793	1,042,025	15.06
70	5	0.05125	2.500	0.22714	59,275	13,464	262,716	0.63554	720,829	12.16
75	+	0.10000	10.000	1.00000	45,811	45,811	458,113		458,113	10.00

Source: 2021 Tonga Census and Vital Statistics

Table 4.9 shows the life table for males when the estimated crude death rates provide the input with the population structure from the census to obtain the life table.

Table 4.9. Male Abridged Life Table using crude death rates, Tonga: 2021

Age,	Width,	nMx	nax	nqx	lx	ndx	nLx	5Px	Tx	ex
0	1	0.03434	0.138	0.03335	100,000	3,335	97,127	0.96256	6,833,101	68.33
1	4	0.00291	1.759	0.01158	96,665	1,119	384,151	0.98948	6,735,974	69.68
5	5	0.00127	2.500	0.00633	95,546	605	476,217	0.99464	6,351,823	66.48
10	5	0.00088	2.500	0.00439	94,941	417	473,664	0.99371	5,875,606	61.89
15	5	0.00165	2.500	0.00819	94,524	774	470,686	0.98995	5,401,943	57.15
20	5	0.00240	2.500	0.01193	93,750	1,118	465,954	0.98795	4,931,257	52.60
25	5	0.00245	2.500	0.01217	92,632	1,127	460,340	0.98728	4,465,303	48.20
30	5	0.00267	2.500	0.01328	91,504	1,215	454,485	0.98592	4,004,962	43.77
35	5	0.00300	2.500	0.01490	90,289	1,345	448,084	0.98328	3,550,478	39.32
40	5	0.00375	2.500	0.01857	88,944	1,652	440,590	0.97853	3,102,394	34.88
45	5	0.00495	2.500	0.02443	87,292	2,132	431,130	0.96888	2,661,804	30.49
50	5	0.00774	2.500	0.03798	85,160	3,234	417,713	0.95557	2,230,674	26.19
55	5	0.01049	2.500	0.05113	81,926	4,189	399,156	0.93458	1,812,961	22.13
60	5	0.01677	2.500	0.08048	77,737	6,256	373,045	0.89795	1,413,804	18.19
65	5	0.02678	2.500	0.12552	71,481	8,972	334,974	0.84272	1,040,760	14.56
70	5	0.04287	2.500	0.19360	62,509	12,102	282,290	0.75883	705,785	11.29
75	5	0.07063	2.500	0.30015	50,407	15,130	214,211	0.49418	423,496	8.40
80	+	0.16856	5.933	1.00000	35,277	35,277	209,285		209,285	5.93

Sources: 2021 Tonga census and estimated crude death rate

Conclusion

The 2021 census did not collect deaths in the year before the census, we did not do direct estimation of mortality. But, we used children ever born and surviving to provide one set of mortality estimates. We used the age-specific deaths for 2018 to 2020 to provide a separate set of mortality estimates, including life expectancy.

CHAPTER 5: MIGRATION

Internal migration

Countries estimate internal migration, the movement of people from one part of a country to another by comparing a person's:

- Place of birth with the place of residence during the census enumeration (lifetime migration).
- Place of residence five years prior to the census with the place of residence during the census enumeration (short-term migration).
- Place of residence one year prior to the census with the place of residence during the census enumeration (short-term migration).

International migration refers to movements across national boundaries. Time and intent are important. Persons moving for brief visits are not migrants — they are visitors or tourists. Migration involves a change of a person's permanent residential address for employment, education, or family relocation.

The net impact of migration flows (net migration) is the difference between the number of arrivals and departures during a period.

Net migration = Arrivals – Departures

A positive **net migration** means that the number of arrivals to a division is higher than the number of departures from that division – an increase to population through migration. Alternatively, a negative net migration value means more people have left the division than arrived.

Birthplace – Lifetime Migration

Lifetime migration. Table 5.1 shows the entire population in 2021 crossing their birthplace by their residence at the time of the 2021 census (that is, their current residence²). Of the 100,179 enumerated in the 2021 census, 62,378 were born in Tongatapu. Of the 74,320 people living in Tongatapu, 57,455 were born in Tongatapu. The diagonals show those who “never moved;” they were in the same division at the time of the census as the division where they were born. It is important to note that these are just two points in time, persons could have been born in one place, moved one or multiple times, but ended up in the same division as where they were born.

This figure is 92 percent of all the births in Tongatapu (see the last column to the right) and 77 percent of all people living in Tongatapu at the time of the census. So, about 23 percent of the people living in Tongatapu were born elsewhere, either one of the other divisions, or one of the 2,780 people born abroad. (As a *de facto* census, it did not count persons abroad at the time of the census; the census counted those persons present in their “current” location).

Table 5.1. Birthplace Division to Current Division, Tonga: 2021

Birth Division	Current Division						Same Division
	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua	
Total	100,179	74,320	14,182	5,665	4,864	1,148	
Tongatapu	62,378	57,455	2,109	1,229	1,233	352	92.1
Vava'u	17,747	6,009	11,035	351	253	99	62.2
Ha'apai	9,815	5,223	473	3,870	208	41	39.4

² We use “current residence” as the place where the person was counted by the enumerator. This is the *de facto* residence. The “usual residence” of the person – the place where they spent 6 months or more in the year prior to the census – makes up a *de jure* census.

'Eua	4,868	1,605	108	97	3,031	27	62.3
Ongo Niua	2,132	1,248	139	44	81	620	29.1
Abroad	3,239	2,780	318	74	58	9	
Percent same		77.3	77.8	68.3	62.3	54.0	

Source: Tonga Population and Housing Census 2021

The table also shows the change in lifetime residence. Under the 57,455 for the people born in Tongatapu and living there, we find 6,009 people born in Vava'u but living in Tongatapu. And, to the right of the 57,455, we find 2,109 people who were born in Tongatapu but living in Vava'u at the time of the census. So, 3,900 more people moved from Vava'u to Tongatapu than moved from Tongatapu to Vava'u during their lifetimes.

So, Figure 5.1 shows the distribution by percentage of the persons who were living in the division of their birth in 2021 – combining all ages creates shewing based on ages within the divisions. About 92 percent of those born in Tongatapu lived in the same division at the time of the 2021 census as their place of birth. However, based on the current residence at the time of the census, only 77 percent of those in Tongatapu in 2021 had been born on Tongatapu. The rest were born in another division or another country. Vava'u, Ha'apai, and Ongo Niua all showed net out migration from birth, while 'Eua showed about the same percentages born and living there, whether based on birthplace or current residence in 2021. While about half of those in Ongo Niua in 2021 were born there, only about 3 in 10 were born and living there in 2021 – that is, about 7 in every 10 were living elsewhere in 2021.

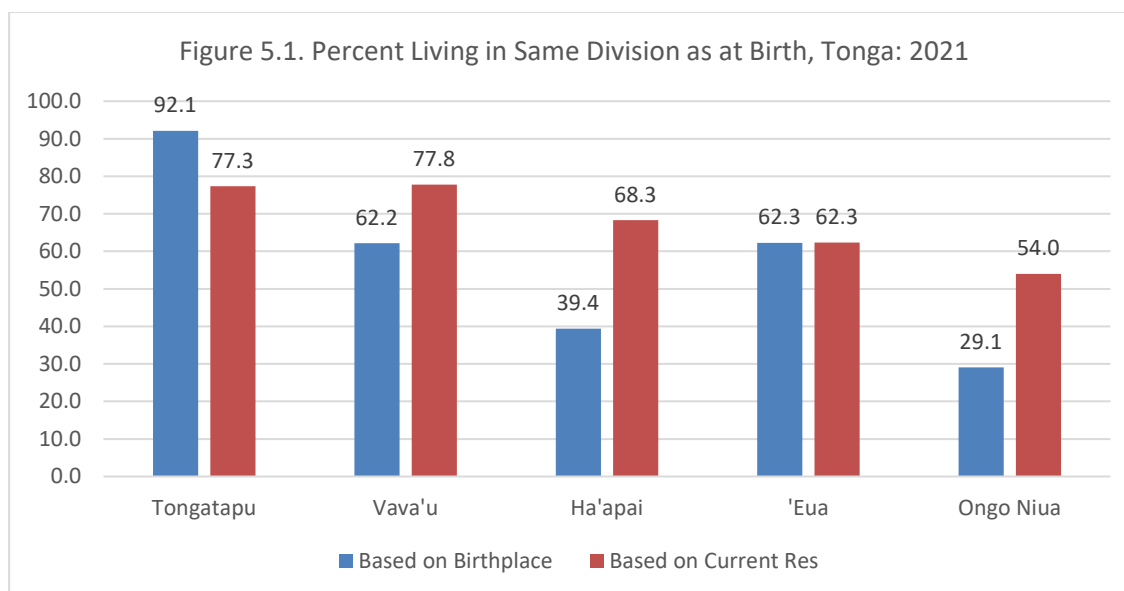


Table 5.2 shows the migrants moving to each of the divisions and those moving out of the division, and the net migrants for the 2016 and 2021 censuses. About 17,700 people moved in to one division from another one (and an equal number moved out of one division for another), and these were the same people. The largest number of people in the 2016 census had moved out of Vava'u compared to those moving in, and this continued in the 2021 census. Ha'apai had fewer out-migrants than Vava'u in 2016, but more net migrants than Vava'u in 2021. In 2016, 'Eua had net in-migrants, but net out-migrants in 2021.

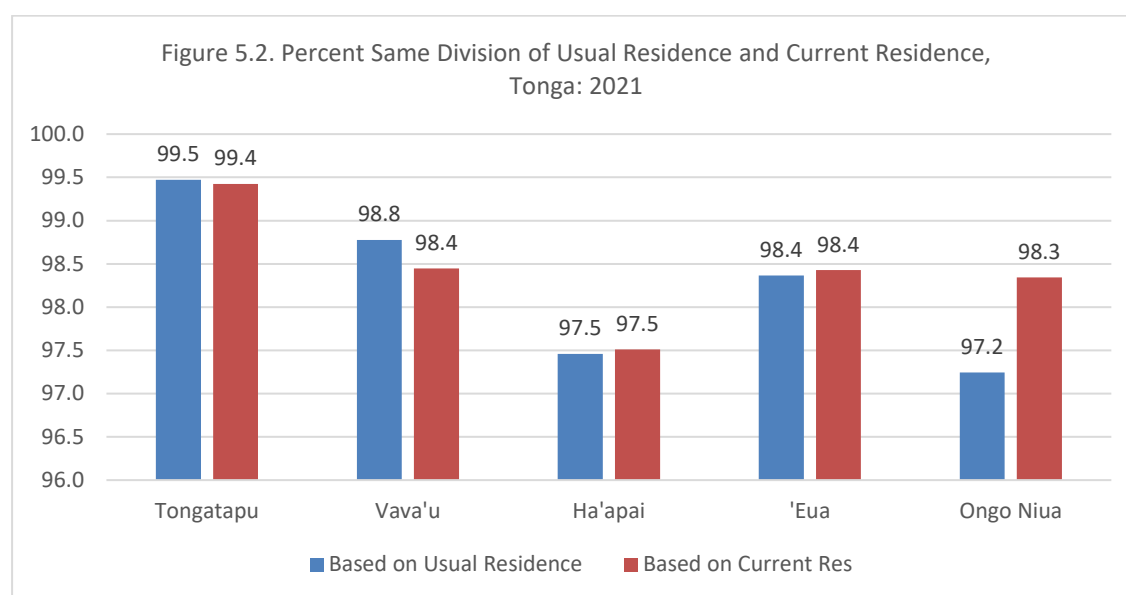
Table 5.2. Internal Migrants from Birthplace to Current Division, Tonga: 2016 and 2021

Division	Birth to 2016 Residence			Birth to 2021 Residence		
	In-migrants	Out-migrants	Net migrants	In-migrants	Out-migrants	Net migrants
Tonga	17,706	17,706	-	20,929	20,929	0
Tongatapu	12,321	3,717	8,604	14,378	4,923	9,455
Vava'u	1,713	6,039	-4,326	2,829	6,712	-3,883
Ha'apai	1,551	5,003	-3,452	1,721	5,945	-4,224
'Eua	1,739	1,535	204	1,775	1,837	-62
Ongo Niua	382	1,412	-1,030	226	1,512	-1,286

Sources: 2016 and 2021 Tonga censuses

Usual Residence

The census asked for usual residence. Censuses that collect and tabulate based on “usual residence” – where the person usually lived, based on the most time in the 6 months before the census, the census considers that place their actual place of residence rather than where they were at the time of the census. The 2021 Census asked for the usual residence of each person. The usual residence produces a *de jure* census while when the current residence is used as the basis, we get a *de facto* census. As Figure 5.2 shows, the usual residence and the “current” or *de facto* residence were about the same for the divisions. Ongo Niua might be the exception, since 97 percent of its population was usually there based on the usual residence of the entire country, whereas the percentage increases to 98 if the current residence is the base.



Short term migration

Residence one year before the census, so 2020 for the 2021 census, shows short-term migration, and the movements are usually relatively minor (Table 5.3 and Figure 5.3). About 98 percent of Tongatapu's population lived there both in 2020 and 2021. 'Eua showed the largest difference between the two measures, about 96 percent were in the same place in 2020 as 2021 based on where the Tonga population was in 2020, but the percentage was 94 based on the 2021 census enumeration. Table 5.3 shows the migration over the one-year period before the census. Obviously, fewer people moved in that one year than moved since birth. Countries use these data to see the ongoing migration in the country to assist in planning for new schools and schoolrooms and new health facilities.

Table 5.3. Current Division by Divisions of Residence 1 year before, Tonga: 2021

	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua	Overseas	Percent Same
Total	97,622	72,152	13,599	5,500	4,646	1,125	600	...
Tongatapu	72,447	71,054	442	338	142	59	412	98.1
Vava'u	13,766	463	13,095	35	12	19	142	95.1
Ha'apai	5,516	328	38	5,111	7	17	15	92.7
'Eua	4,760	223	16	11	4,476	5	29	94.0
Ongo Niua	1,133	84	8	5	9	1,025	2	90.5
Percent Same	...	98.5	96.3	92.9	96.3	91.1	...	...

Source: 2021 Tonga census

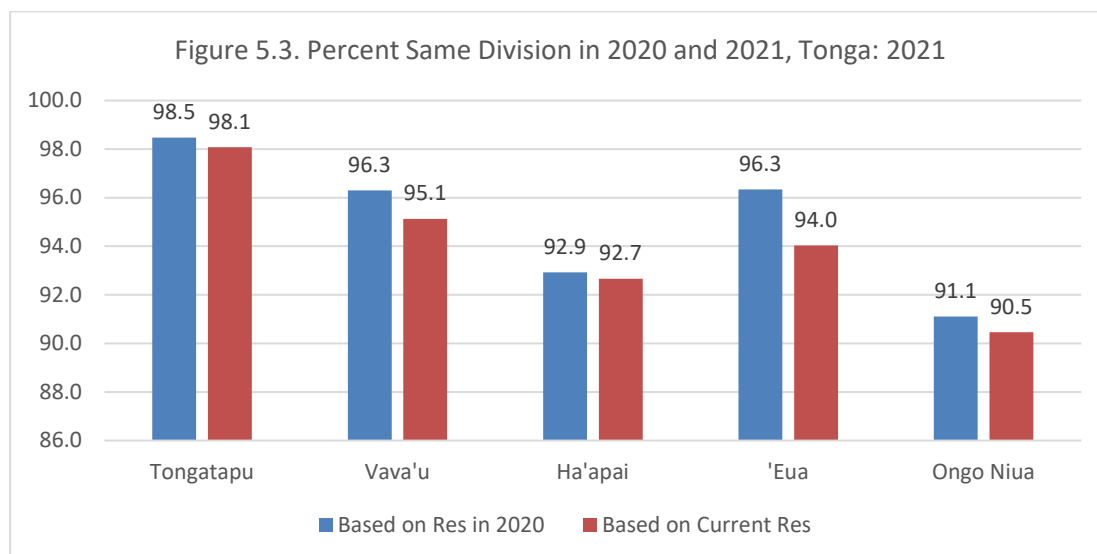


Table 5.4 shows the net very short-term migrants for the 2016 and 2021 censuses. The net migration is the same total – the same number of people move from division to division as in-migrants and out-migrants. It depends on where they go. The total number of movers decreased between the 2016 and 2021 censuses when looking at the single year migration. And the migration was heavier in 2016 when Vava'u lost 282 in the one year. In 2021, Tongatapu gained the most in-migrants (as expected), while Vava'u lost fewer and 85 people moved from 'Eua.

Table 5.4. Net Internal Migration, One year Before the Census, Tonga: 2016 and 2021

Division	2015 to 2016			2020 to 2021		
	In-migrants	Out-migrants	Net migrants	In-migrants	Out-migrants	Net migrants
Tonga	2,615	2,615	0	2,261	2,261	0
Tongatapu	1,271	1,112	159	1,098	981	117
Vava'u	464	746	-282	504	529	-25
Ha'apai	448	386	62	389	390	-1
'Eua	305	224	81	170	255	-85
Ongo Niua	127	147	-20	100	106	-6

Sources: 2016 and 2021 Tonga Censuses

Short-term migration: Residence in 2016, 5 years before the census. Table 5.5 and Figure 5.4 show the percentages of the population living in the same division in 2016 as in 2021 at the time of the census. As before, the first column is based on their residence in 2016. The population distribution of 2016 becomes the base). So, 97 percent of the persons lived in Tongatapu in both 2016 and 2021 compared to 94 percent when the base is the 2021 census distribution by division. The percentage using the 2016 distribution was higher in each of the divisions except for Ongo Niua; this last division showed a net outflow of persons over the 5-year period.

Most people 5 years and older lived in the same division in 2021 as they had in 2016 (Table 5.5). Based on the residence 5 years before the census, in 2016, about 97 percent of those living in Tongatapu in 2016 were also living in that division in 2021; but, using 2021 as a base, about 94 percent of those living in Tongatapu in 2021 also lived there in 2016.

Of the 89,000 people 5 years and older enumerated in the 2016 census, about 2,400 were overseas in 2016, with most of those living in Tongatapu in 2021. The diagonal shows the numbers who were in a particular division in both 2016 and 2021. Users can see the in- and out-flow for each division as well. For example, 664 were living in Ha'apai in 2016 but in Tongatapu in 2021, compared to 642 living in Ha'apai in 2021 who had been living in Tongatapu in 2016, so a net change of 22 people.

Table 5.5. Usual Division in 2016 to Current Division, Tonga: 2021

Usual Division in 2016	Current Division					
	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
Tonga	89,254	66,295	12,550	5,027	4,342	1,040
Tongatapu	64,175	62,197	780	642	391	165
Vava'u	12,429	986	11,344	50	32	17
Ha'apai	4,964	664	54	4,224	16	6
'Eua	4,206	304	26	31	3,836	9
Ongo Niua	1,082	184	33	29	6	830
Overseas	2,398	1,960	313	51	61	13
Percent same		93.8	90.4	84.0	88.3	79.8

Source: Tonga Population and Housing Census 2021

Figure 5.4 shows the percentage of the population that lived in the same division in 2016 and in 2021, without regard to whether they moved in the interim. That is, this was the percentage of the population enumerated in the same division in 2016 as 2021. The results are for those 5 years and older since those younger than 5 were not yet alive in 2016.

Based on the 2021 census, about 4 out of every 5 people living in Ongo Niua in 2021 also lived there in 2016. But, if the focus is on 2016, 5 years before the census, only about 3 out of every 4 in Ongo Niua in 2016 were also living there in 2021. Tongatapu had the highest percentages of non-movers, whether based on the 2016 period (5 years before the census) or the census date itself.

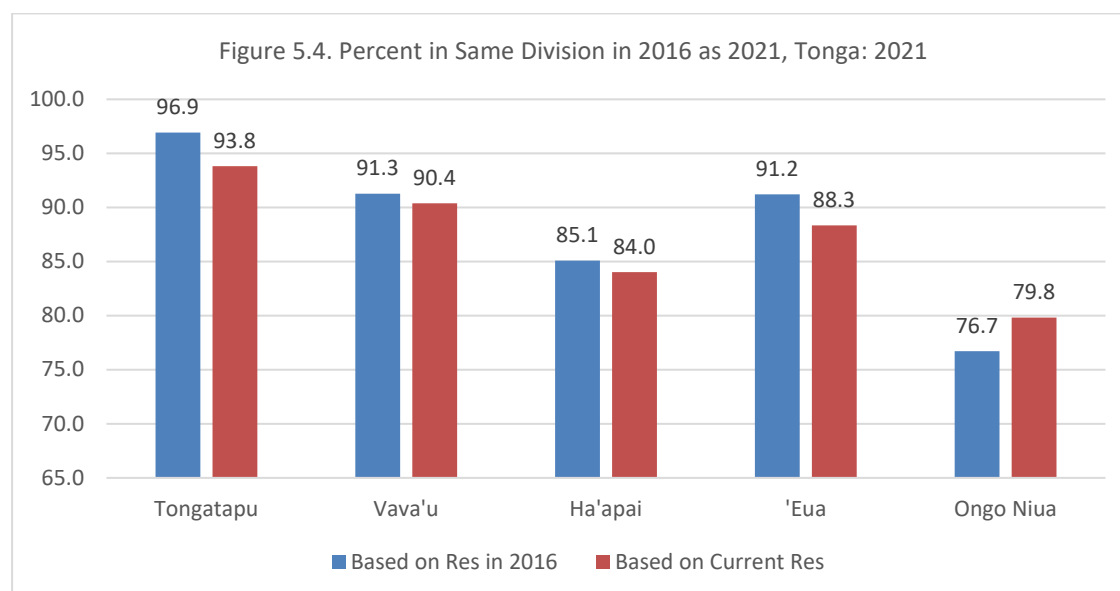


Figure 5.5 shows the percentage of persons who were in the same division 5 years before the census as at the time of the 2016 and 2021 censuses. As noted, 94 percent of the persons in Tongatapu were in that division in both 2016 and 2021. But the 2016 census showed that only 81 percent of the residents of Tongatapu in 2016 reported being there in 2011 – that is about 1 in 5 of those in Tongatapu in 2016 were elsewhere in 2011. Looking at the data from the 2016 perspective, about 4 in every 5 of the population living in Tongatapu and Vava'u in 2016 also lived there in 2021 compared to about 7 in 10 of those living in Ongo Niua, with the others in between.

This pattern pertained to each of the divisions. The population moved much less in 2021 over the 5 years before the census than seen in the 5 years preceding the 2016 census. In each census, persons living in Ongo Niua were the most likely to have changed residence over the 5 years preceding the census; those in Tongatapu were the least likely to have moved.

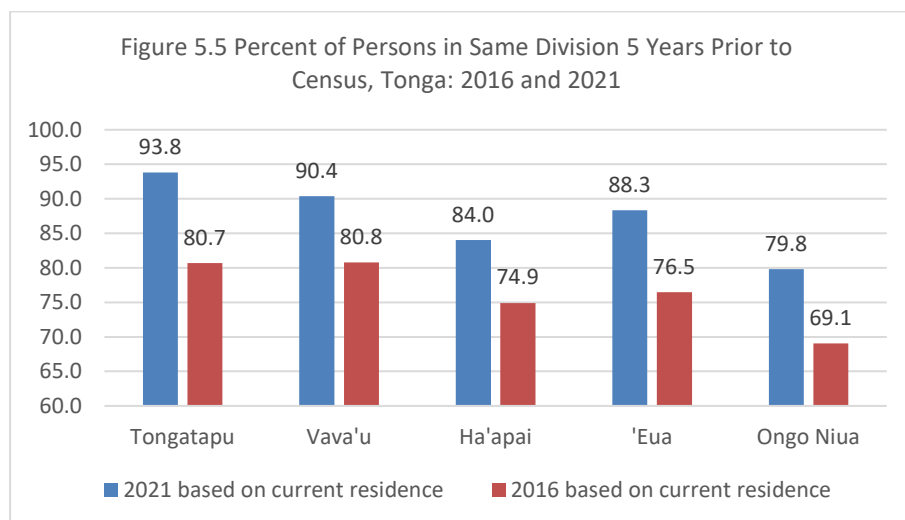


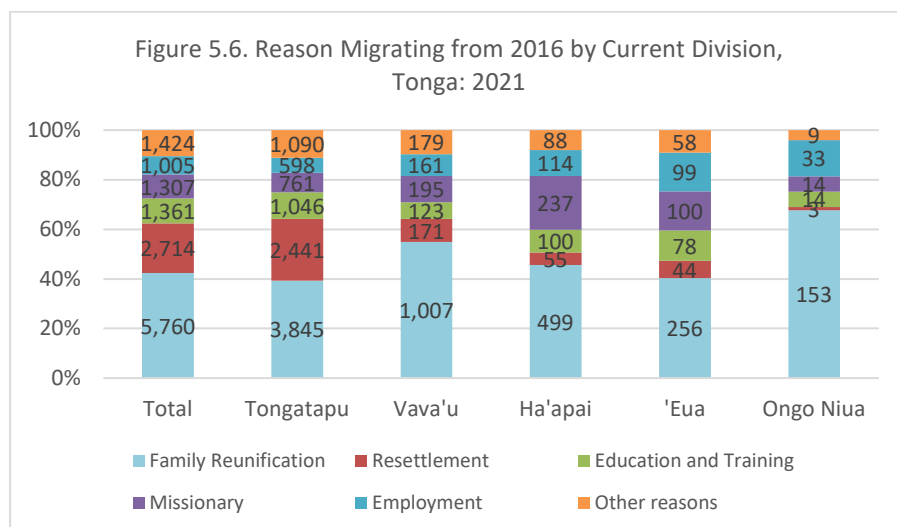
Table 5.5A shows in- and out-migrants for 5 years before census for the 2016 and 2021 censuses. Vava'u lost the most people between 2011 and 2016 and lost the most people between 2016 and 2021.

Table 5.5A. Internal Migrants from 5 Years before Census by Division, Tonga: 2016 and 2021

Division	2011 to 2016			2016 to 2021		
	In-migrants	Out-migrants	Net migrants	In-migrants	Out-migrants	Net migrants
Tonga	4,587	4,587	-	4,425	4,425	0
Tongatapu	2,516	1,605	911	2,138	1,978	160
Vava'u	708	1,441	-733	893	1,085	-192
Ha'apai	692	818	-126	752	740	12
'Eua	439	464	-25	445	370	75
Ongo Niua	232	259	-27	197	252	-55

Sources: 2016 and 2021 Tonga censuses

Figure 5.6 shows the main reasons residents moved between 2016 and 2021. The largest percentage was for family unification, with about 2 in every 5 moving for that reason. For the total population and for Tongatapu, the second largest reason was resettlement, with other reasons following behind them. Ha'apai experienced more missionary activity than the other divisions.



Point to point migration

The 2021 Tonga census asked questions to look at lifetime and short-term migration. The life-time migration came from the item on the birthplace. The census detailed birthplaces to the village level. Short-term migration came from two variables:

- (1) residence one year before the census – where the person was living at the same month one year before the 2021 census, and
- (2) residence in 2016, 5 years before the census.

The residence 5 years before the census provides insight into the analysis of the quality of the two censuses (the 2016 and 2021 censuses).

Finally, the census asked about the usual residence, the place where the person usually lived if they were not in that place at the time of the census. Users can tabulate the census based on the usual residence, which is a *de jure* census, which enumerates people where they usually live. The census that enumerates people where they were at the time of enumeration is a *de facto* census, which has become the more common enumeration, and the one used for the 2021 census.

So, for this study, the first point in the series in the division of birth – the birthplace. The second point is the place of residence 5 years before the census. And the third point was the “current” residence at the time of the 2021 census. The study can only look at private households since the census did not ask all items in institutions. About 89,000 people were residing in private households in 2021. Of those, about 66,000 lived in the same division in 2021 as they had in 2016, and in which they were born. About 22,400 people had moved to be in the same division at two points, but a different division at one of the three points – either birthplace differing from residence in 2016 and current residence, residence in 2016 differing from birthplace and current residence, or current residence differing from birthplace and residence in 2016. And, finally, the census counted about 1,000 people in three different divisions in the series – birthplace, residence in 2016 and current residence all differed from each other.

Table 5.6 shows the distribution of point-to-point migration by division of current residence in 2021. The census enumerated about 74 percent of the population 5 years and older in the same division as their birthplace and their residence in 2016. The percentages were slightly higher for Tongatapu and Vava'u, but lower for Ha'apai (at 64 percent), 'Eua at 60 percent and Ongo Niua at 51 percent. That is, only about half the persons 5 years and older living in Ongo Niua had been born there and were living there in 2021. But Ongo Niua had the highest percentages of those who had made one move and more than twice the percentage of the next highest of other divisions with two moves.

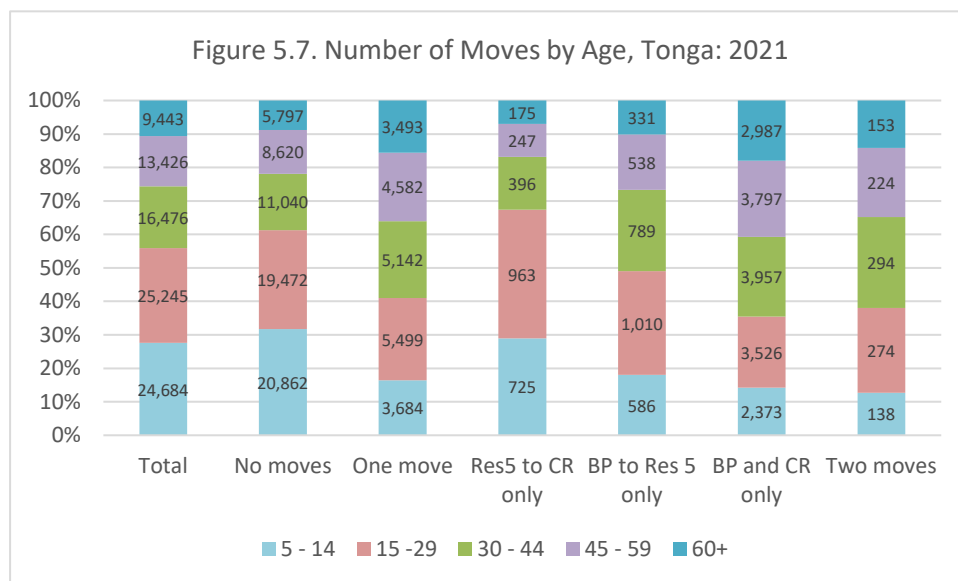
Table 5.6. Number of Moves by Division, Tonga: 2021

	Total	No moves	One move				Two moves
			Total	Res5 to CR	BP to Res5	BP and CR	
Total	89,274	65,791	22,400	2,506	3,254	16,640	1,083
Tongatapu	66,312	50,069	15,566	1,227	2,211	12,128	677
Vava'u	12,550	9,367	3,052	458	617	1,977	131
Ha'apai	5,029	3,230	1,682	440	248	994	117
'Eua	4,343	2,595	1,644	269	134	1,241	104
Ongo Niua	1,040	530	456	112	44	300	54
PERCENTS							
Total	100.0	73.7	25.1	2.8	3.6	18.6	1.2
Tongatapu	100.0	75.5	23.5	1.9	3.3	18.3	1.0
Vava'u	100.0	74.6	24.3	3.6	4.9	15.8	1.0
Ha'apai	100.0	64.2	33.4	8.7	4.9	19.8	2.3
'Eua	100.0	59.8	37.9	6.2	3.1	28.6	2.4
Ongo Niua	100.0	51.0	43.8	10.8	4.2	28.8	5.2

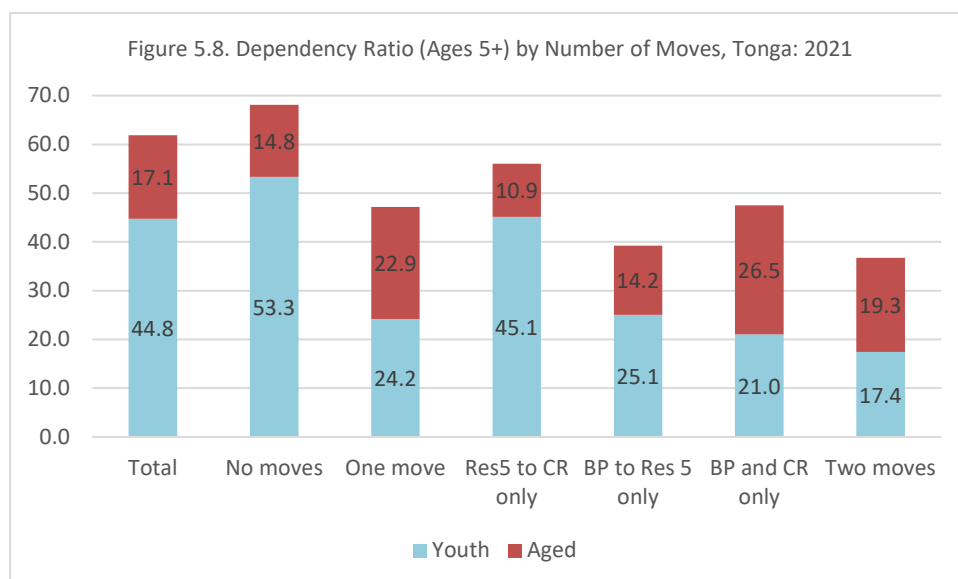
Source: Tonga Population and Housing Census 2021

Figure 5.7 shows the numbers of moves by age group. As before, we include only persons 5 years and older because the place of residence in 2016 was midpoint. Those with no moves were by far the largest population and so influenced the distribution by age the most. Of those who moved twice, the age group 30 to 44 was

largest, followed by the ages on either side. The youngest groups were the most likely to reside in the same place in 2016 as where they were born and then to move to a different division in 2021.

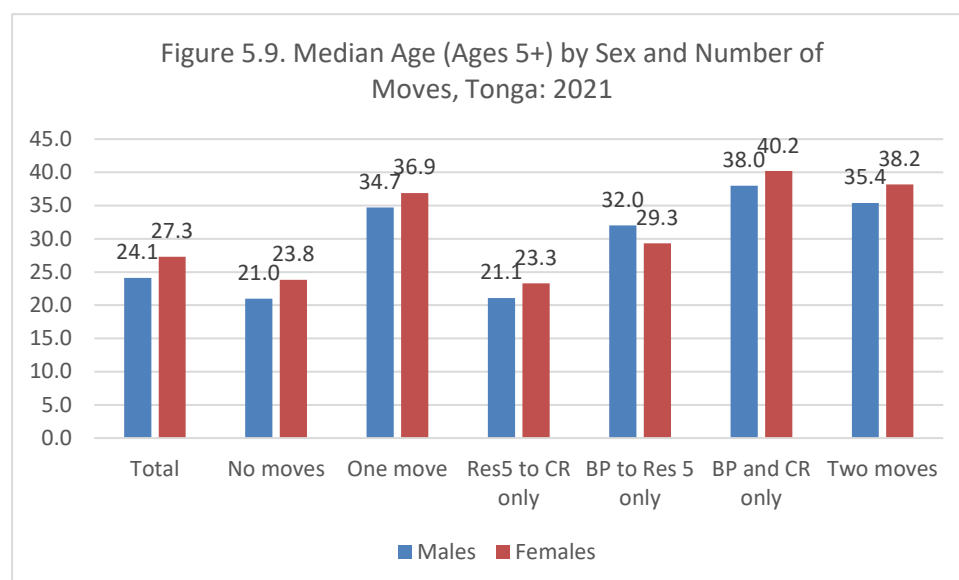


Since we are looking only at persons 5 years and older for the point-to-point study, the dependency ratios do not include persons younger than 5 years. But for those 5 years and older, the dependency ratio was about 60, meaning about 60 dependents – young people 5 to 14 and persons 60 years and older to each 100 potential workers, those 15 through 59 (Figure 5.8). The dependency ratio for those who were in the same division at each of the three points was slightly higher, at almost 70, while those with one move saw a dependency ratio of less than 50, and those with two moves had a dependency ratio of less than 40.



As noted, migration researchers only analyze the point-to-point migration for persons 5 years and older since residence 5 years before the census is the middle variable. For that population, the median age for males was 24.1 and the median age for females was 27.3, so females were about 3 years older, on average, than the males (Figure 5.9). The median age for those living in the same division in 2016 and at the time of the census and were born there, the median ages were significantly lower – 21 for males and 24 for females – showing that older Tongans were more likely to move than younger ones (expected because of those in school).

We can calculate median ages of those who moved once – either from birth to residence in 2016, or residence in 2016 to current residence or birthplace to current residence with residence in 2016 being elsewhere. The median age for males was 35 and the median age for females was 37, about 10 years older, on average, than for those who were in the same place at all three points in time. The median ages of those who moved twice (were in different divisions for birth and residence in 2016 and current residence), the medians were slightly higher than those who only moved once.



Tonga had about 93 males for every 100 females 5 years and older in 2021 (Figure 5.10). The sex ratio was about 95 for those living in the same place at each point in the migration stream. About 105 males for each 100 females were born in a division and lived in that division in 2016 before moving to their residence at the time of the census. These values showed that more males than females moved between divisions between 2016 and 2021. This value was similar, at 104 males per 100 females, to those who moved twice, the birth division, division of residence in 2016 and residence in 2021, each being different.

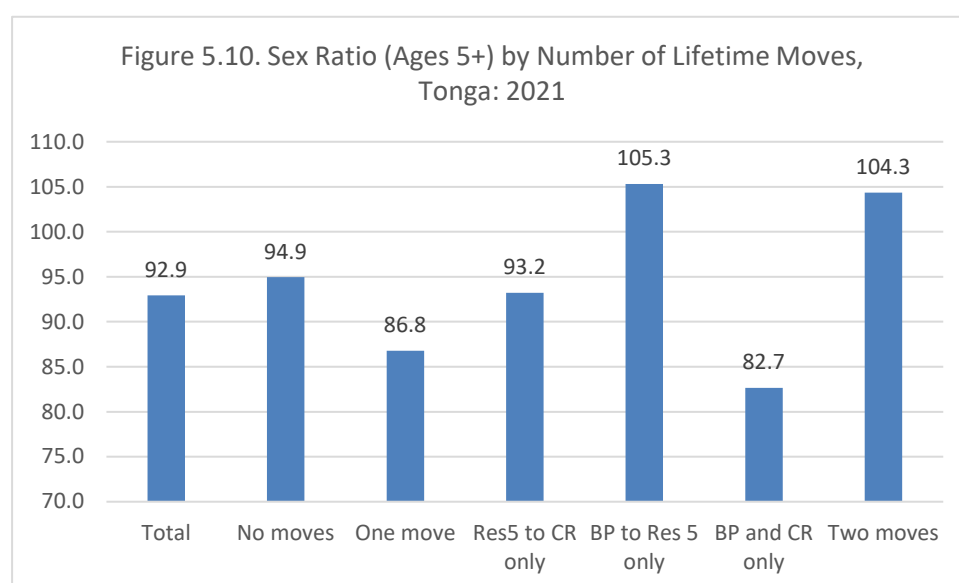


Table 5.7 shows the educational attainment levels for persons 18 years and older enumerated in the 2021 census. The percentages are cumulative. While 19 percent of the adult population had attained tertiary or university education, 27 percent had attained technical or vocational training, and this included the tertiary as well.

About 72 percent of the adults had attained upper secondary school attainment in 2021. The percents for those who were in the same place at each point and those who moved once were about the same. Only those who moved twice showed a higher percentage with upper secondary education or more in 2021, at 78 percent. About 30 percent of those with two moves attended tertiary or university education compared to 19 percent of those who were in the same division at each point and those who made one move.

Table 5.7. Educational Attainment Level by Number of Moves, Tonga: 2021

	Total	No moves	One move				Two moves
			Total	Res5 to CR	BP to Res5	BP and CR	
Total, 18+	54,828	37,257	16,725	1,512	2,387	12,826	846
Primary	2,613	1,725	861	68	73	720	27
Form 1 to Form 4	12,679	8,599	3,925	298	450	3,177	155
Form 5 to Form 7	24,630	17,021	7,272	710	999	5,563	337
Technical/Vocational	4,626	3,220	1,333	165	207	961	73
Tertiary/University	10,280	6,692	3,334	271	658	2,405	254
CUMULATIVE PERCENTS							
Primary (Class 1 to Class 6)	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Lower secondary (Form 1 to Form 4)	95.2	95.4	94.9	95.5	96.9	94.4	96.8
Upper secondary (Form 5 to Form 7)	72.1	72.3	71.4	75.8	78.1	69.6	78.5
Technical and Vocational (Year 1 to Year 3 or more)	27.2	26.6	27.9	28.8	36.2	26.2	38.7
Tertiary / University (Year 1 to Year 3 or more)	18.7	18.0	19.9	17.9	27.6	18.8	30.0

Source: Tonga Population and Housing Census 2021



CHAPTER 6: MARITAL STATUS

Marital status

The 2021 Census enumerated 30,584 males and 34,722 females 15 years and older (Table 6.1). About 54 percent of the males and 53 percent of the females were legally married, and another 1 percent were in de facto unions, so “somewhat married”. About 40 percent of the males, but only 35 percent of the females, had never married. More than 8 percent of the adult females were widows (versus 3 percent of the males). We discuss average age at first marriage below.

Table 6.1. Marital Status by Sex, Tonga: 2021

	Total	Never married	Legally married	De facto union	Widowed	Separated	Divorced
Males	30,584	12,173	16,464	322	983	309	333
Females	34,722	12,199	18,348	357	2,884	411	523
Males	100.0	39.8	53.8	1.1	3.2	1.0	1.1
Females	100.0	35.1	52.8	1.0	8.3	1.2	1.5

Source: Tonga Population and Housing Census 2021

Table 6.2 shows the marital status of males and females combined. As noted, the 2021 census divided the category “married” into “legally” married and “de facto” unions. About 1 percent of the population was in a de facto marital union, with the percentage peaking at age 30 to 34 at 1.6 percent, so less than 2 percent of the population at that age. About 77 percent of the residents were never married at ages 20 to 24, but by ages 25 to 29, the percentage had decreased to 44 percent, so the singulate mean age at marriage (SMAM) is determined within that range, as seen below.

Table 6.2. Marital Status by Age, Tonga: 2021

	Total	Never married	Married		Other	Total	Never married	Married		Other
			Legally	De facto				Legally	De facto	
Total	65,306	24,372	34,812	679	5,443	100.0	37.3	53.3	1.0	8.3
15-19	11,209	10,800	329	56	24	100.0	96.4	2.9	0.5	0.2
20-24	8,030	6,208	1,661	79	82	100.0	77.3	20.7	1.0	1.0
25-29	6,349	2,797	3,316	85	151	100.0	44.1	52.2	1.3	2.4
30-34	5,674	1,305	4,069	93	207	100.0	23.0	71.7	1.6	3.6
35-39	5,799	810	4,623	84	282	100.0	14.0	79.7	1.4	4.9
40-44	5,198	547	4,272	73	306	100.0	10.5	82.2	1.4	5.9
45-49	4,834	481	3,939	72	342	100.0	10.0	81.5	1.5	7.1
50-54	4,866	442	3,868	54	502	100.0	9.1	79.5	1.1	10.3
55-59	3,847	314	2,956	40	537	100.0	8.2	76.8	1.0	14.0
60-64	2,948	237	2,119	15	577	100.0	8.0	71.9	0.5	19.6
65-69	2,362	172	1,540	14	636	100.0	7.3	65.2	0.6	26.9
70-74	1,666	112	1,000	8	546	100.0	6.7	60.0	0.5	32.8
75+	2,524	147	1,120	6	1,251	100.0	5.8	44.4	0.2	49.6

Source: Tonga Population and Housing Census 2021

Tables 6.3 and 6.4 show marital status separately for males and females by age in the 2021 census. About 49 percent of the males 25 to 29 were married compared to 57 percent of the females. Males were less likely to be widowed, and more likely to be never married (Table 6.3).

Table 6.3. Marital Status by Age for Males, Tonga: 2021

	Numbers					Percents				
	Total	Never married	Married	Widowed	Separated/divorced	Total	Never married	Married	Widowed	Separated/divorced
Total	30,584	12,173	16,786	983	642	100.0	39.8	54.9	3.2	2.1
15-19	5,678	5,526	146	1	5	100.0	97.3	2.6	0.0	0.1
20-24	3,792	3,104	657	4	27	100.0	81.9	17.3	0.1	0.7
25-29	2,748	1,349	1,358	1	40	100.0	49.1	49.4	0.0	1.5
30-34	2,486	645	1,765	5	71	100.0	25.9	71.0	0.2	2.9
35-39	2,519	402	2,028	7	82	100.0	16.0	80.5	0.3	3.3
40-44	2,398	263	2,033	20	82	100.0	11.0	84.8	0.8	3.4
45-49	2,275	222	1,937	48	68	100.0	9.8	85.1	2.1	3.0

50-54	2,436	234	2,020	86	96	100.0	9.6	82.9	3.5	3.9
55-59	1,968	148	1,658	100	62	100.0	7.5	84.2	5.1	3.2
60-64	1,406	107	1,152	107	40	100.0	7.6	81.9	7.6	2.8
65-69	1,074	77	826	138	33	100.0	7.2	76.9	12.8	3.1
70-74	774	46	577	132	19	100.0	5.9	74.5	17.1	2.5
75+	1,030	50	629	334	17	100.0	4.9	61.1	32.4	1.7

Source: Tonga Population and Housing Census 2021

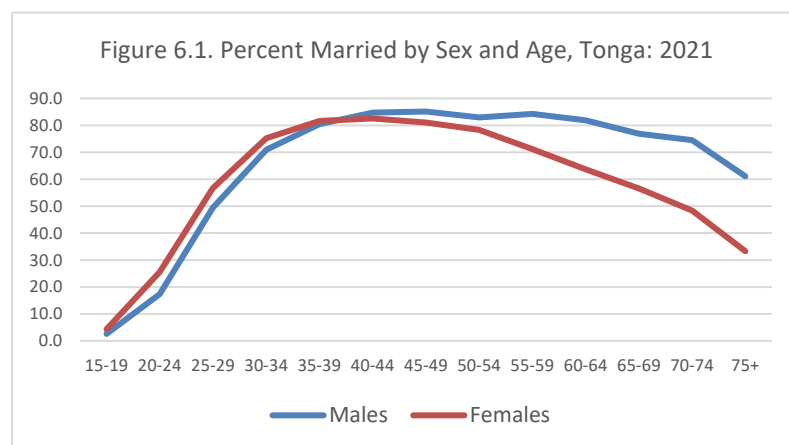
Females were more likely to be widowed at all ages, as males died earlier than females in general (Table 6.4).

Table 6.4. Marital Status by Age for Females, Tonga: 2021

	Numbers					Percents				
	Total	Never married	Married	Widowed	Separated/divorced	Total	Never married	Married	Widowed	Separated/divorced
Total	34,722	12,199	18,705	2,884	934	100.0	35.1	53.9	8.3	2.7
15-19	5,531	5,274	239	2	16	100.0	95.4	4.3	0.0	0.3
20-24	4,238	3,104	1,083	1	50	100.0	73.2	25.6	0.0	1.2
25-29	3,601	1,448	2,043	10	100	100.0	40.2	56.7	0.3	2.8
30-34	3,188	660	2,397	18	113	100.0	20.7	75.2	0.6	3.5
35-39	3,280	408	2,679	55	138	100.0	12.4	81.7	1.7	4.2
40-44	2,800	284	2,312	80	124	100.0	10.1	82.6	2.9	4.4
45-49	2,559	259	2,074	107	119	100.0	10.1	81.0	4.2	4.7
50-54	2,430	208	1,902	222	98	100.0	8.6	78.3	9.1	4.0
55-59	1,879	166	1,338	320	55	100.0	8.8	71.2	17.0	2.9
60-64	1,542	130	982	383	47	100.0	8.4	63.7	24.8	3.0
65-69	1,288	95	728	433	32	100.0	7.4	56.5	33.6	2.5
70-74	892	66	431	373	22	100.0	7.4	48.3	41.8	2.5
75+	1,494	97	497	880	20	100.0	6.5	33.3	58.9	1.3

Source: Tonga Population and Housing Census 2021

Figure 6.1 shows the percentage married by age for males and females in Tonga in 2021. A larger percentage of males than females were married from ages group 15 – 19 to about 40, and then, as males begin to “die out” because of earlier deaths than females, the percentage of males alive was higher than for the females.



De facto Marriages and Widows

Figure 6.2 shows the percentage of males and females by age who reported being in a de facto union rather than legally married. The youngest adults – those 15 to 19 years – reported the highest percentage of de facto unions vs legal marriages, at 17 percent for males and 13 percent for females. The percentages dropped to under 6 percent for males and 4 percent for females for those 20 to 24 years. And then continued decreasing continuously after that. By the time they were about 30 years old, they chose their unions to become “legal” and very few residents older than that remain in de facto unions.

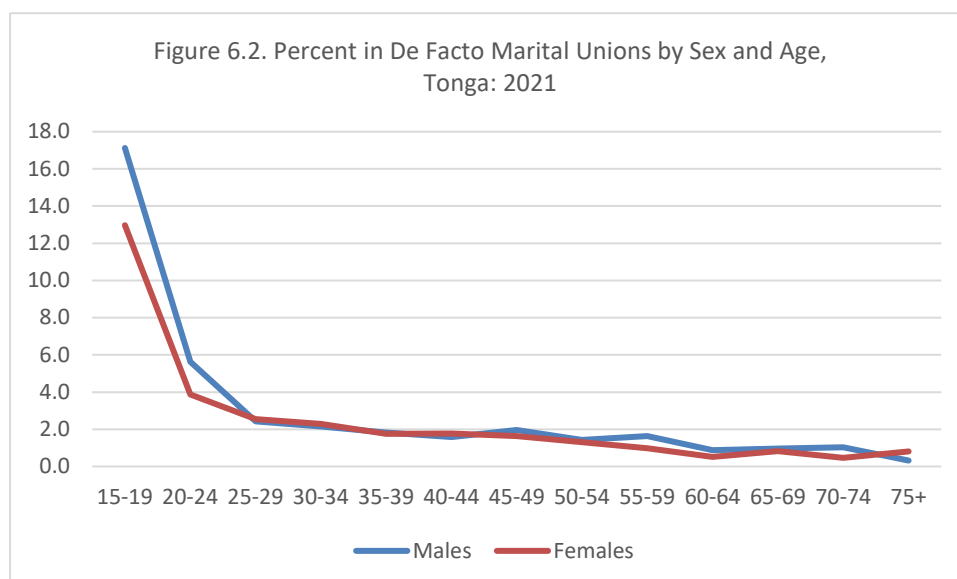
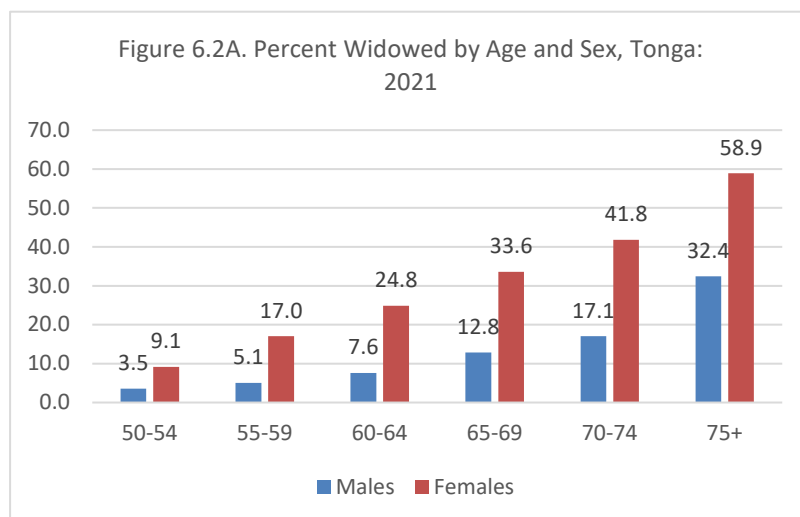


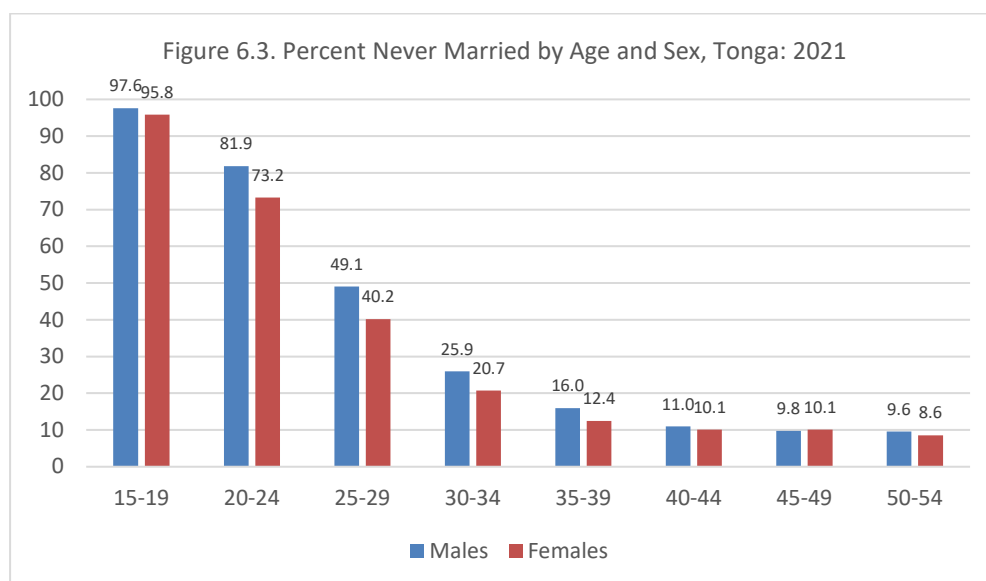
Figure 6.2A shows the percent of the population by age and sex who were widowed at the time of the census. Widowed people were those whose spouse had died, and they had not remarried. As expected, the percentage widowed increased with age, as older people are more likely to die than younger people. Also, because of lifestyle and habits, men are likely to die before their spouses, which as in the figure. For those aged 75 years and older about 1 in 3 males and more than half the females were widowed.

More female widows than males appeared in each age group. By ages 65 to 69, 1 in every 3 females were widowed. And, by ages 70 to 74, the proportion increased to 2 in every 5, and then 3 in every 5 for those 75 years and older. By age 75, about 1 in every 3 males was a widower.



Never married and Age at First Marriage

Figure 6.3 shows the percentage of the adult population who had never married by 2021 by age and sex. In each age group, males were more likely than females to have never married. The percentage never married provides the information to obtain an indirect measure of age at first marriage, since that is the point where half had never been married and half moved into another status, usually legally or de facto married.



The Singulate Mean Age at Marriage (SMAM) is a derived measure for age at first marriage. The SMAM is the age at which half the population had never married, and half had married at least once. Demographers get the SMAM from the distribution of never married males and females and a small Excel spreadsheet. Figure 6.5 shows the singulate mean age at marriage for males and females, based on the censuses from 1966 to 2021. In every census, the average age of males was greater than for females, with the difference narrowing over time. The average age at first marriage was about 27 years for males and 24 years for females in 1966, but while the average age for males remained about the same, the average for females increased to about 26, so only about one year younger than the males.

Figure 6.4 shows the average age at first marriage (SMAM) by sex and by division. The average age for males at first marriage was about 24.7 years and for females was 25.9, so males were about 1½ years older than the females at marriage. Tongatapu had the oldest persons at first marriage, probably because both males and females moved there from the other divisions seeking education or work, and so putting off marriage for a while. Only Ongo Niua had males younger than females at first marriage, but the difference was less than one year. The widest difference was in 'Eua where the males were more than 4 years older than the females at first marriage.

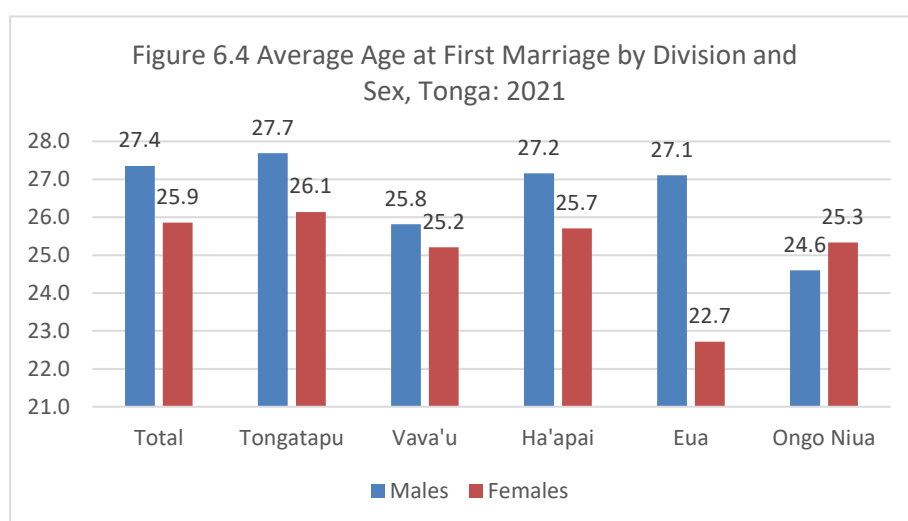


Figure 6.5 shows the average age at first marriage by the number of moves. The averages show both life term migration from birth and short-term migration by residence in 2016 compared to current residence. We discuss the moves in more detail in the chapter on internal migration. These current data help interpret the relationship

between getting married and moving for schooling and work. The results for the 2021 census were not intuitively obvious. The people who lived in the same division in 2016 and 2021 as where they were born got married later than those who moved once or twice. And those who moved only once got married later than those who had moved twice. People may marry before they take off for further education or to work in other divisions.

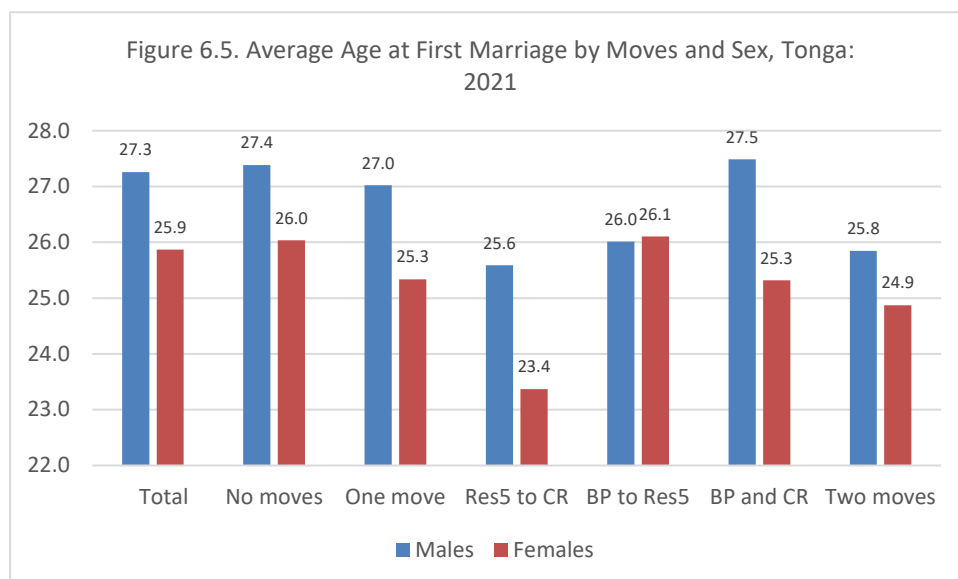
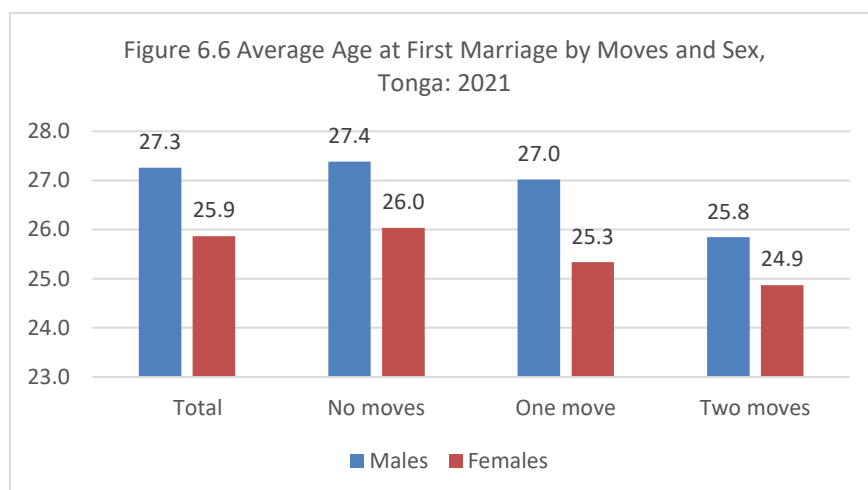


Figure 6.6 more clearly shows the differences by number of moves. Those persons who lived in the same division as where they were born and where they were in 2016 had the highest ages at first marriages. The census showed that those with one move were intermediate. Others moved twice. Those who were born in one division, lived in a different division in 2016 and were in yet another division in 2021, were married at the youngest ages. They may marry to prepare for their moves. While the SMAM is only a summary measure, the census showed the males who did not move were about 1½ years older than those who moved twice at their first marriage, and the females were about one year older.



The age at first marriage has been increasing in recent years as both men and especially women want to finish their education and start jobs or a career before settling down into a marriage. Females marry younger and so they are more likely to marry than the males at younger ages. Tonga has many widows as males have habits and accidents that are associated with earlier deaths.

CHAPTER 7: RELIGION

Table 7.1 shows the counts for the religions reported in the censuses from 1986 to 2021. The list of religions changed from census to census, which accounts for the expanding number of religions over time. In every census, the Free Wesleyan Church was the largest denomination, although it had fewer adherents in each census than the one before. On the other hand, the number affiliated with the Church of the Latter-Day Saints, the Mormons, increased in each census from the one before. Roman Catholics stayed at about the same level throughout the period, although they went down by about 5,500 people between the 2016 and 2021 censuses. And the Free Church of Tonga stayed at about 11,000 throughout the decades. No other religion had more than 7,000 adherents.

Table 7.1. Religions, Tonga: 1986 to 2021

Religion	1986	1996	2006	2011	2016	2021
Total	...	...	100,280	102,132	99,241	98,575
Free Wesleyan Church	40,371	39,703	38,052	36,592	35,082	33,953
Church of Latter-Day Saints	11,270	13,225	17,109	18,554	18,673	19,534
Roman Catholic	14,921	15,309	15,922	15,441	14,276	13,649
Free Church of Tonga	10,413	11,226	11,599	11,863	11,896	11,244
Church of Tonga	6,882	7,016	7,295	6,935	6,868	6,782
Seventh Day Adventist	2,143	2,381	2,282	2,331	2,249	2,461
Assembly of God	565	1,082	2,350	2,602	2,347	2,455
Other Pentecostal Denomination				1,034	1,593	1,904
Tokaikolo	3,047	2,919	2,597	2,533	1,562	1,455
Constitutional Church of Tonga			941	961	957	1,152
Bahai			686	777	755	730
Mo'ui Fo'ou 'ia Kalaisi					741	688
Anglican	563	720	765	728	697	590
Gospel			243	236	287	476
Jehovah's Witness				462	385	400
The Salvation Army				247	297	332
Hindu			104	100	-	78
Islam			47	24	-	60
Buddhist			71	183	60	58
No religious affiliation		61	28	288	516	574
Not stated			189	241	-	
Other	28,741	23,681	202	877	921	714
Refuse to answer		10	1,509	34	104	119

Sources: Tonga Censuses

¹ Includes Gospel, Baha'i Faith, Islam, The Salvation Army, and other religions.

^{1a} Includes Hindu and Islam and other religions.

² Tongan and part – Tongan population.

³ Total population of Tonga.

⁴ Population in private households and Tongan and part – Tongan population in institutions.

Note: 1986 and 1996 data refer to only the Tongan and part – Tongan population whiles 2006 refer to all population of Tonga, 2011 and 2016 refer to population in Private HH and Institution occupied by Tongan such as hospital, inmate peoples and Army Base.

MAP XX. Distribution of Free Wesleyan Church religion by District

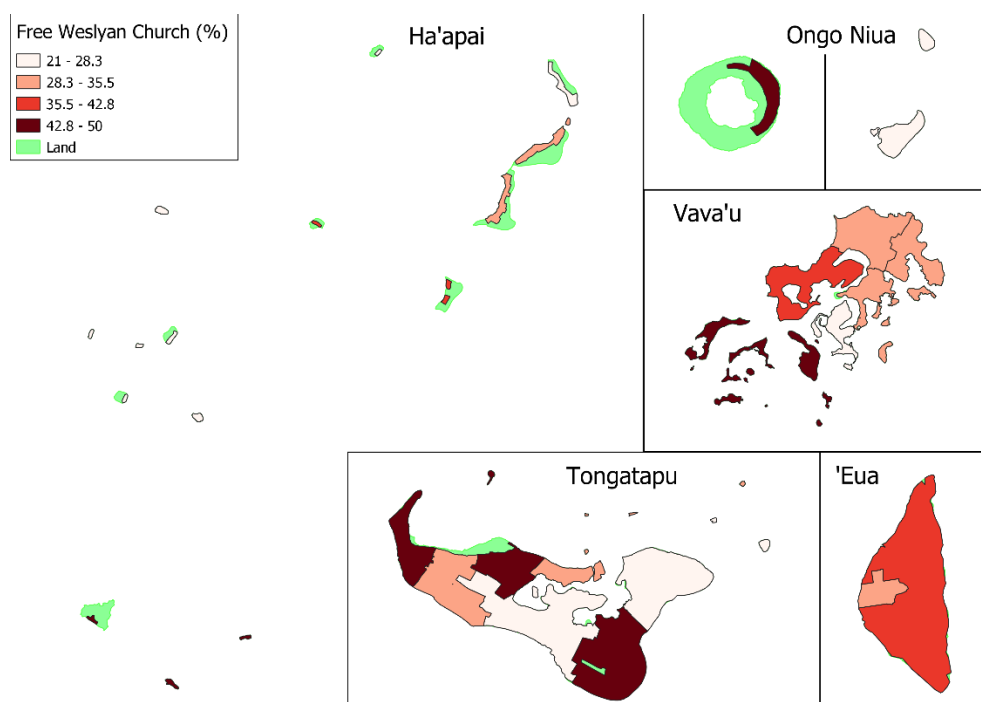


Figure 7.1 shows the percentages of the largest religions in the censuses from 1986 to 2021. The percents did not change much for the largest groups. The number and percent of the population in the Free Wesleyan Church decreased over the years, while the percentage being Church of Latter-Day Saints (Mormons) increased. Roman Catholics and those in Free Church of Tonga remained at about the same levels. Mormons made up less than 10 percent of Tonga's population in 1986, but they increased to 20 percent in 2021 – doubling their percentage in the country.

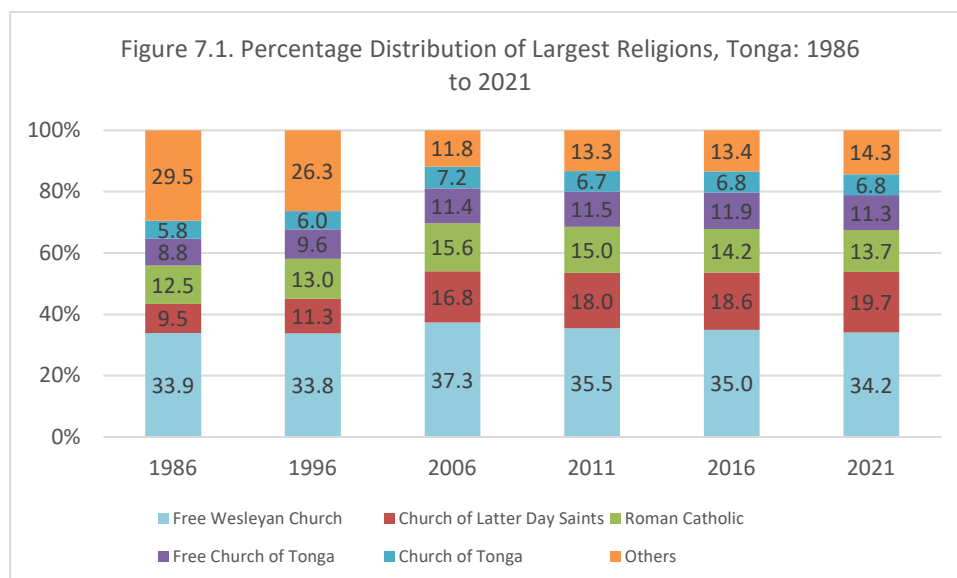


Figure 7.2 shows the distribution of the largest religions across the divisions based on each religion. Since Tongatapu had by far the largest population, it influenced the distributions of the religions. About 3 in 4 of each religion was resident on Tongatapu, the exceptions being the Free Church of Tonga and the Church of Tonga,

which were under 65 percent. About 20 percent that is 1 in 5 of the Free Church of Tonga congregants were in Vava'u. About 15 percent of those in the Church of Tonga were living in Ha'apai at the time of the census.

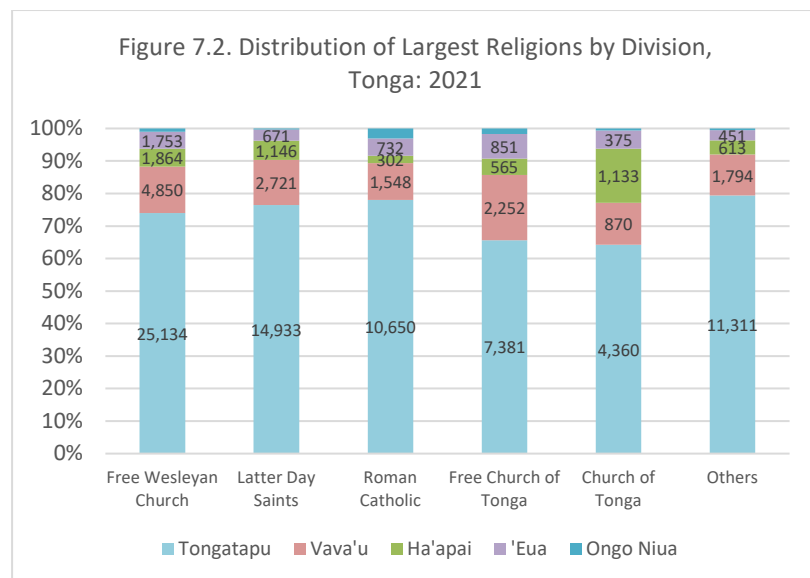
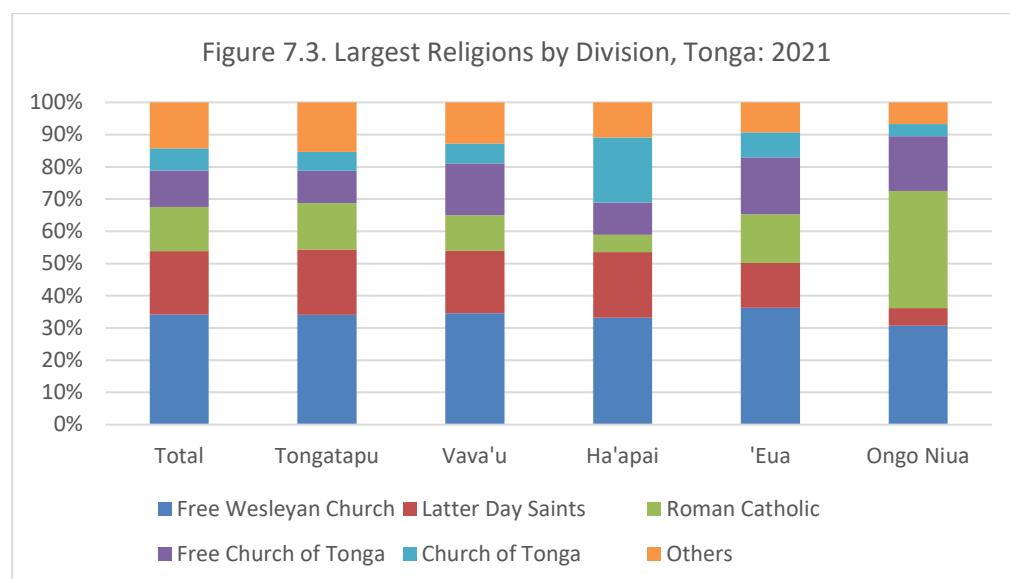


Figure 7.3 shows the religions present in each division in 2021. Except in Ongo Niua, the Free Wesleyan Church was the largest denomination; in Ongo Niua, Roman Catholics predominated. 'Eua and Ongo Niua had smaller percentages of Mormons, and Ha'apai had few Roman Catholics and Free Church of Tonga, but a larger percentage of Church of Tonga adherents.



CHAPTER 8: CITIZENSHIP AND ETHNICITY

Citizenship

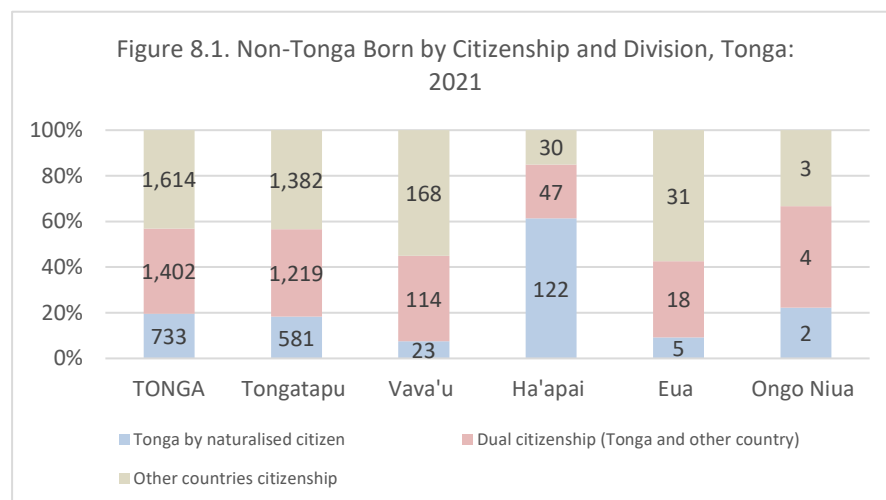
Most persons living in Tonga in the census were Tongan citizens. Table 8.1 shows the distribution of the Tonga population by citizenship for 2011, 2016, and 2021. The distribution has changed little over the decade, being about 96 percent Tongan citizen by birth in each of the three censuses. The number of Tonga citizens by naturalization decreased from census to census, from more than 1,000 in 2011 to 733 in 2021. Dual citizenship appeared only in 2016 and 2021, but the number increased from about 1,200 to 1,400 over the 5-year period, but still only one percent of the total population. And the number and percent of those with other citizenships decreased over the decade, from 3 percent in 2011 to about 1.6 percent in 2021.

Table 8.1. Citizenship, Tonga: 2011 to 2021

	Numbers			Percents		
	2011	2016	2021	2011	2016	2021
Total	103,252	100,651	100,179	100.0	100.0	100.0
Tonga by birth	99,073	96,545	96,430	96.0	95.9	96.3
Tonga by naturalization	1,048	770	733	1.0	0.8	0.7
Dual citizenship		1,203	1,402	0.0	1.2	1.4
Others	3,120	2,133	1,614	3.0	2.1	1.6

Sources: Tonga censuses

Figure 8.1 shows the numbers of persons by division who were not citizens whether born in Tonga. Ha'apai had the largest percentage of Tonga citizens by naturalization, although their numbers were smaller than those on Tongatapu. The percentages being dual citizens were about the same across the divisions, except for Ha'apai, which had a smaller percentage. And Vava'u and 'Eua had the highest percentages of "other country" citizens. As noted above, all the numbers are negligible compared to the numbers being citizens by Tonga birth.



Ethnic origin

Table 8.2 shows the distribution by ethnic origin for the population enumerated in the Tonga censuses from 1986 to 2021. The number of Tongans enumerated increased from census to census throughout the period, increasing from about 90,000 in 1986 to about 98,600 in 2021. The number of part-Tongans decreased from census to census; the 2021 census did not enumerate them. In 2021, the other ethnic groups included 875 Europeans, 834 Fijians, 635 Chinese, and 528 Samoans. The numbers of Europeans more than tripled from 2016 and the number of Fijians more than doubled, the number of Chinese decreased, and the 2016 publications did not report Samoans separately.

Table 8.2. Ethnicity by Division, Tonga: 1986 to 2021

	1986	1996	2006	2011	2016	2021
Total	94,649	97,784	101,991	103,252	100,625	102,186
Tongan	90,364	94,288	98,535	99,641	97,662	98,574
Part-Tongan	2,685	1,732	1,681	1,069	793	...
European	775	676	569	569	251	875
Fijian		223	198	304	306	834
Indian	98	85	112	133	117	224
Chinese		55	395	843	731	635
Other Pacific Is	327	256	216	236	201	310
Other Asian	150	354		186	192	187
Samoan		103				528
Other	50		285	259	372	19

Sources: Tonga Censuses

Figure 8.2 shows the percentage of the population reporting as Tongan in each census from 1986 to 2021. The percentages remain high throughout the period, with only small decreases in recent censuses. More than 98 percent of Tonga's population in 1986, 1996, and 2006 was Tongan, and although that decreased subsequently. In 2021, more than 96 percent of the population was still Tongan.

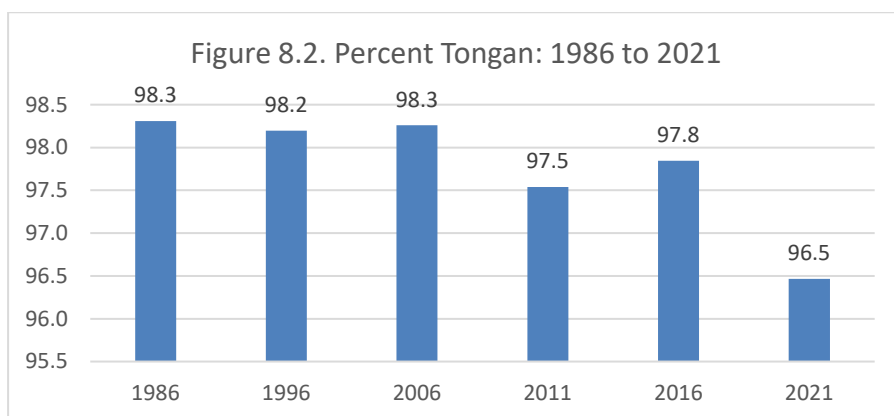
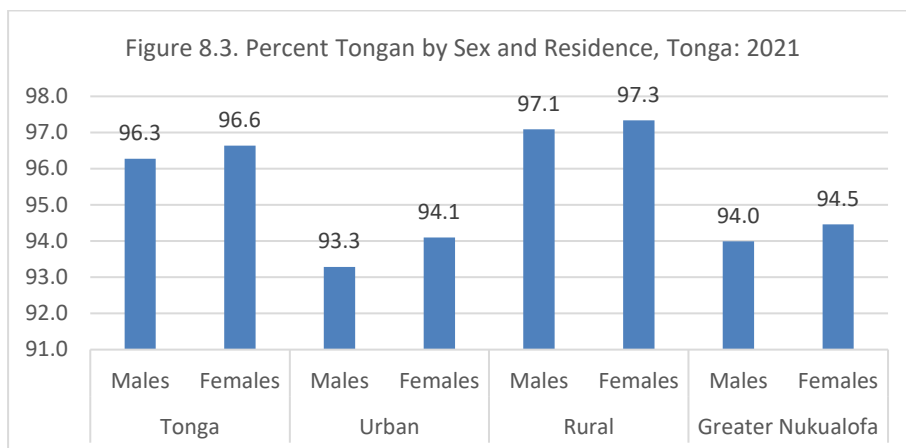


Figure 8.3 shows the distribution of Tongans in 2021 by urban/rural residence and by sex. The smallest percentages of Tongans were in the urban areas, including Greater Nukualofa, with Tongans still above 97 percent in rural areas.



Almost the entire population living in Tonga were Tongan citizens and all residents were Tongan. These percentages have changed little over the years.

CHAPTER 9: HEALTH AND DISABILITY

The 2021 Tonga census asked questions on health status and disabilities. The disabilities reflected the Washinton Convention. And, the non-communicable diseases and Covid reflected the current status of health in the Kingdom at the time of the census. The topics covered included mental illness, non-communicable diseases, attitudes about Covid-19, and current injuries and sickness.

Mental illness

Figure 9.1 shows the percentage of the population reporting a mental illness in the 2021 census. About 3.2 percent of the residents reported experiencing a mental illness, with the urban residents at 3.0 and rural residents at 3.2 reporting about the same percents. Vava'u and Ha'apai reported 3.7 percent and above, but the other divisions reported 3 percent or less. Reporting mental illness is subjective, whether the respondents report on themselves, or the enumerator makes an evaluation.

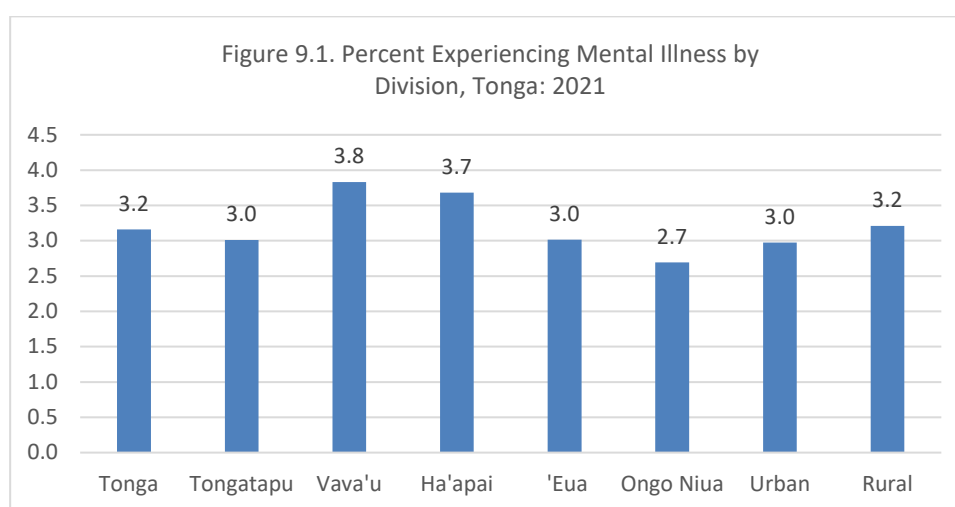
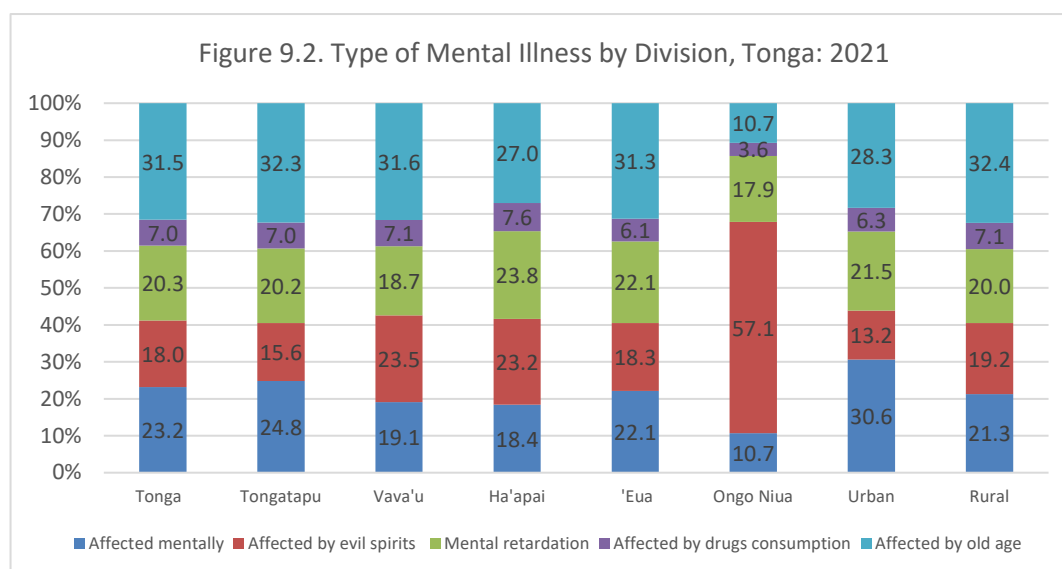


Figure 9.2 shows types of mental illness experienced by the Tongan population in 2021. The most prominent feature was the sizable percentage of those living in Ongo Niua where “evil spirits” influenced their mental state. Residents in Urban areas were more likely to have “mental” problems than those living in rural areas, but those in rural areas were more likely to feel “evil spirits” than those living in urban areas. Residents in rural areas were also more likely to feel old age as part of their mental condition.



Non-Communicable Diseases

Figure 9.3 shows the numbers of residents who reported having various non-communicable diseases. Almost 4,000 females reported having diabetes, as did more than 2,000 of the males. Similarly, about 3,700 females reported having high blood pressure compared to about 2,000 of the males. Smaller numbers of residents reported other non-communicable diseases.

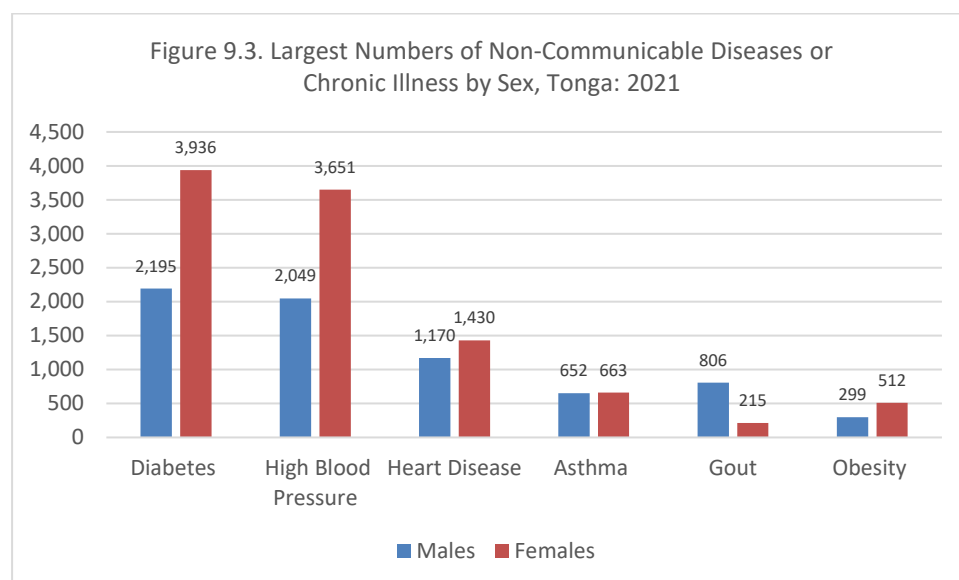


Table 9.1 shows some of the detail of the non-communicable diseases by age and sex in Tonga in 2021. While most of the incidences of the various non-communicable diseases was low, a few of them were prevalent in the population. Diabetes and high blood pressure were present in much larger incidence than most of the other communicable diseases.

Table 9.1. Non-Communicable Diseases by Sex and Age, Tonga: 2021

	Male						Female					
	Total	0-14	15-29	30-59	60-74	75+	Total	0-14	15-29	30-59	60-74	75+
Total	48,251	18,142	12,004	13,850	3,225	1,030	51,157	16,695	13,231	16,044	3,703	1,484
Cancer	0.1	0.0	0.0	0.1	0.6	0.6	0.3	0.0	0.1	0.4	0.9	1.3
Diabetes	4.5	0.1	0.3	8.3	24.1	21.3	7.7	0.1	0.6	12.4	38.0	29.0
Heart disease	2.4	0.9	3.2	2.1	6.8	10.1	2.8	1.4	4.3	2.0	5.4	7.9
Asthma	1.4	1.0	0.9	1.2	4.1	6.1	1.3	0.7	1.1	1.8	2.2	2.2
Chronic bronchitis	0.1	0.0	0.0	0.2	0.6	0.8	0.1	0.0	0.0	0.1	0.2	0.4
Liver disease	0.3	0.0	0.1	0.9	0.7	0.1	0.2	0.0	0.1	0.5	0.3	0.2
Kidney/renal disease	0.2	0.0	0.0	0.3	1.3	1.2	0.2	0.1	0.1	0.2	0.8	1.2
High blood pressure	4.2	0.0	0.2	6.8	24.9	28.1	7.1	0.0	0.3	9.4	41.2	39.1
Gout	1.7	0.0	0.2	3.8	6.0	5.8	0.4	0.0	0.1	0.5	2.2	2.7
Obesity	0.6	0.1	0.3	1.5	1.3	1.3	1.0	0.1	0.6	2.1	2.1	1.0
Mental disorder	0.5	0.2	0.4	0.8	0.9	1.0	0.3	0.2	0.2	0.4	0.6	1.1
Stroke	0.4	0.0	0.0	0.5	2.4	3.8	0.3	0.0	0.0	0.3	1.7	3.0

Note: 21 persons were nonresidents but were enumerated at the household during the census. They were not asked this question thus this total is different from the household population totals

Source: 2021 Tonga Census

We can look more closely at two of the most reported non-communicable diseases – diabetes and high blood pressure – more graphically. Figure 9.4 shows the percentage of the population by age and sex reporting having diabetes. As, with most of the communicable diseases, the incidence increases with age. About 1 in 4 of the Tongan males 60 to 74 years reported having diabetes, as did about 1 in every 5 of the males 75 years and older. For the females, the incidence of diabetes was even greater – 38 percent of the females 60 to 74 years (about 2 in every 5) reported having diabetes, as did about 3 in every 10 of the females 75 years and older.

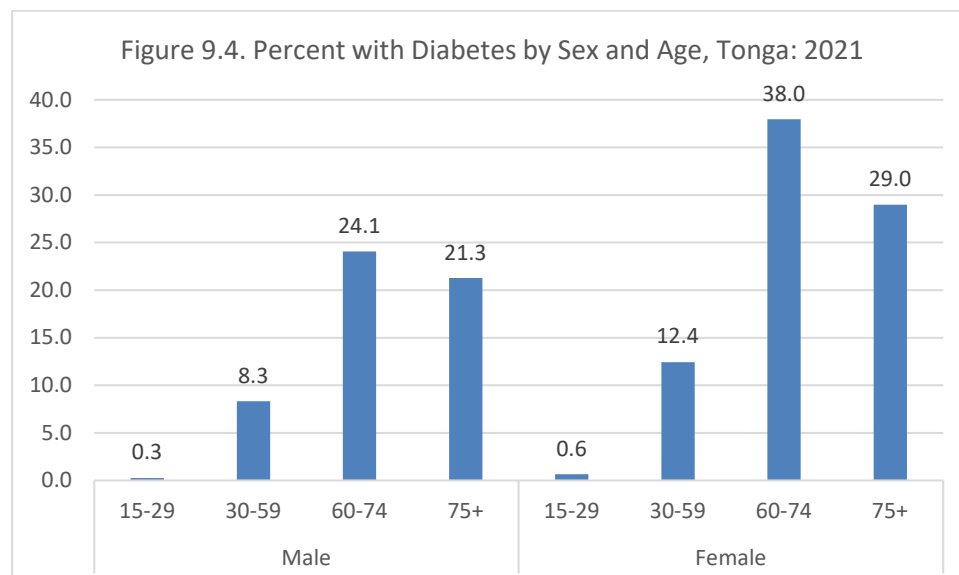
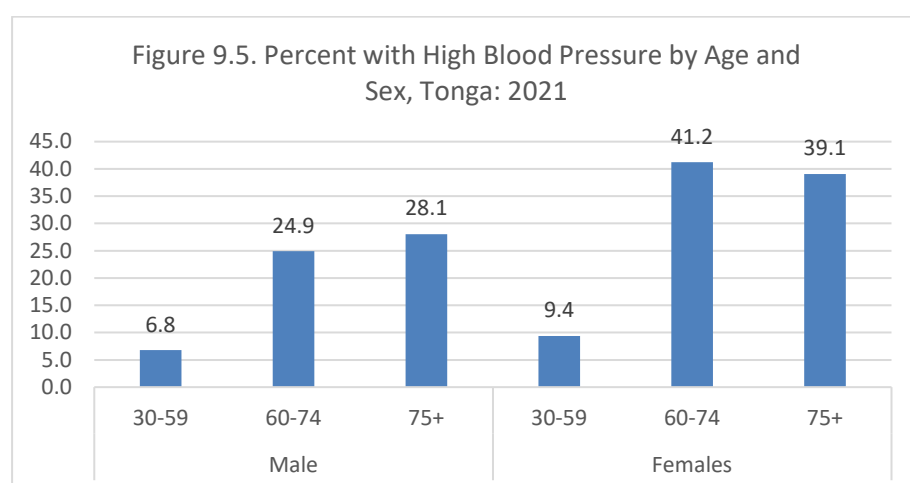
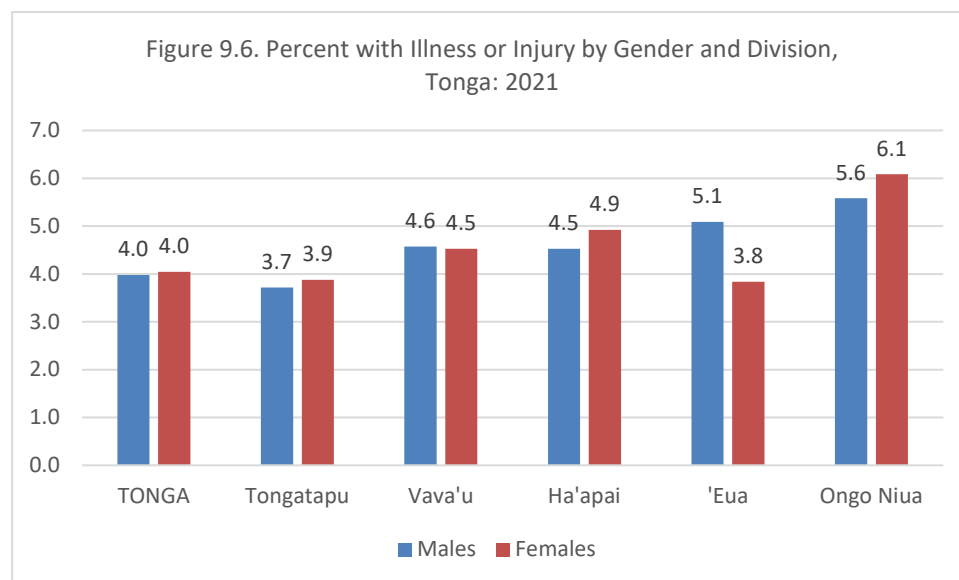


Figure 9.5 shows the percentage with high blood pressure by age and sex as self-reported in the 2021 Tonga census. About 1 in every 4 of the males 60 to 74 years reported high blood pressure compared to 2 out of every 5 of the females in that age group. Similarly, while 28 percent of the males 75 years and older reported high blood pressure, about 39 percent of the females in that age group reported having high blood pressure.



Illness, injury, or other health complaints

The census questionnaire asked whether a person suffered an illness, injury, or any health complaint during the two-week period prior to the interview. Figure 9.6 shows the percentage of the population reporting an illness or injury in the 2021 census by sex and division. About 4 percent of the population reported having an illness or injury, about the same percentage for males as females. Those on Tongatapu had the lowest rates of illness or injury because they were the closest to medical care. Those in Ongo Niua were the most likely to have an illness or injury because they were the farthest from medical care.



The proportion of people who suffered an illness, injury, or any health complaint increased with age, like the pattern with disability. Figure 9.7 shows the percent of the population who had an illness or injury in the two weeks before the census by age and sex. The percentages were low for young people until about age 30, then increased for both males and females by age group. At about 50 years old, the females had more illness or injury than males, but for the very oldest, males had a higher percentage at about 11 percent.

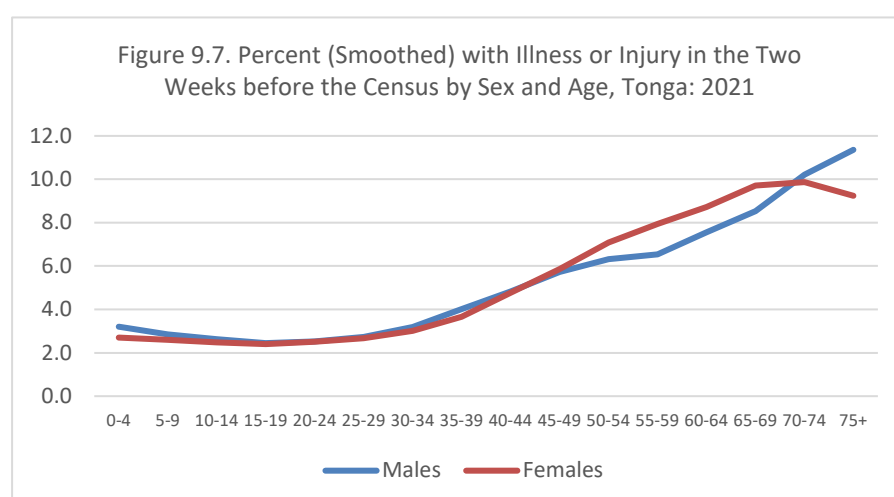


Table 9.2 shows the numbers of the population in the divisions seeking care for their injuries or sicknesses at the time of the 2021 census. Of the 4,000 responses, about 300 did not seek care for a current illness or sickness. About 2,500 went to a hospital with their injury or sickness, while about 500 self-treated their injury or illness with modern

medicine. About 400 self-treated with traditional medicine or went to a traditional healer, and about 300 went to a village health centre or to a private clinic.

Table 9.2. Place Care Sought for Injury or Sickness by Division, Tonga: 2021

	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
Total	3,991	2,804	639	266	215	67
Did not seek care	324	244	37	22	20	1
Hospital	2,464	1,649	452	161	154	48
Village Health Centre	109	97	1	11	0	0
Private Clinic	181	138	39	3	1	0
Traditional Healer	201	134	28	26	9	4
Self-treated with modern medicine	461	362	48	26	19	6
Self-treated with traditional medicine	236	168	32	16	12	8
Other	15	12	2	1	0	0

Source: 2021 Tonga Census

Figure 9.8 shows the place where an ill or injured person reported where they would go if they needed help. The largest proportion would go to a hospital. Smaller numbers reported self-treatment or traditional medicine or healer. Fewer would go to a private clinic or a village health clinic.

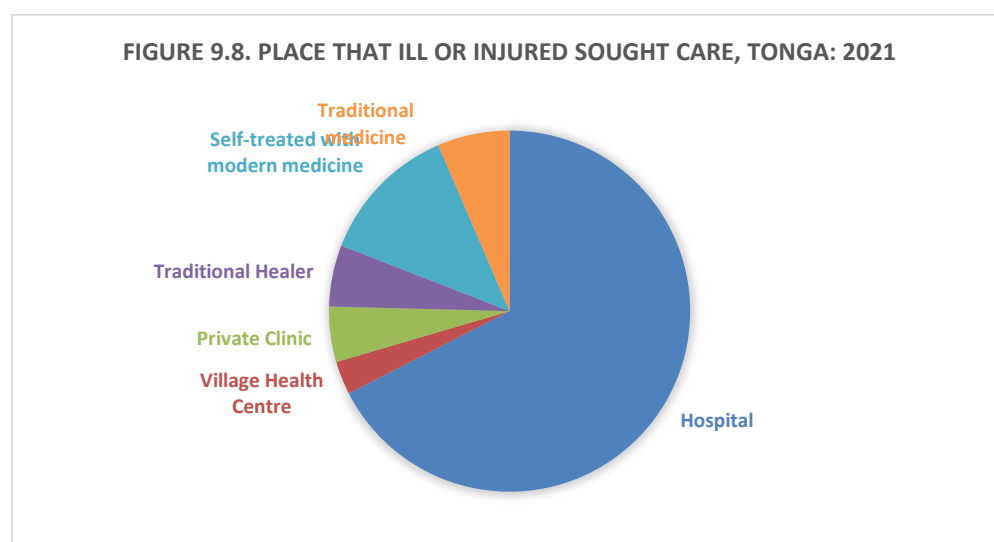


Figure 9.9 shows the percentages of places for health care used in the various divisions. More than 3 in every 5 went to a hospital (as shown above the 60 percent line). The next largest numbers went to a traditional healer or self-treated themselves using traditional methods. Except in 'Eua and Ongo Niua, some residents went to a village health centre or to a private clinic. And another group self-treated, particularly in Tongatapu.

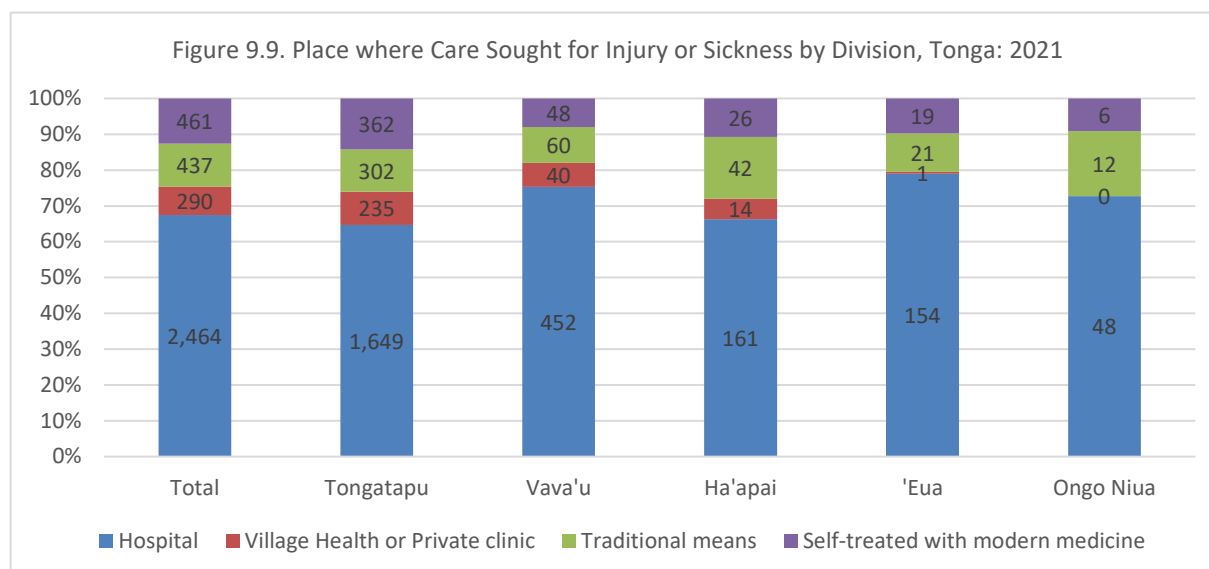
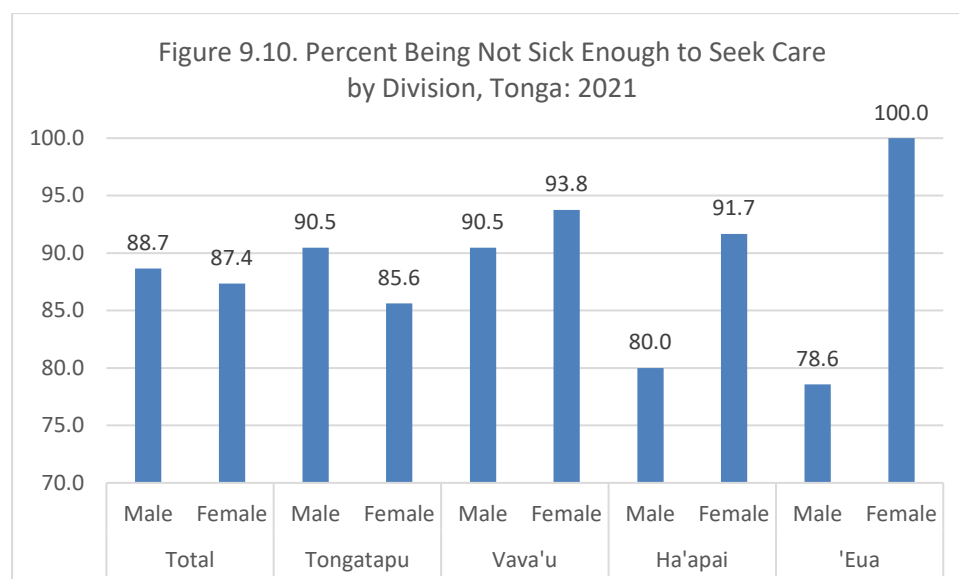


Figure 9.10 shows the distribution of the 300 persons who said they had an injury or sickness but did not seek care. The graph shows the distribution by division and sex. About 9 in 10 of those not seeking care for their injury or sickness reported that they did not think they were sick enough to seek care.



Types of Continuing Illnesses

Table 9.3 shows the persons 5 years and older reporting different types of continuing illnesses. As the table shows, Tonga had very few people self-reporting that they had continuing illnesses over the longer term. The most common reporting was for long term mental illness, but even that was less than 1 percent of the Tonga population in 2021.

Table 9.3. Types of Continuing Illnesses by Division, Tonga: 2021

	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
Total population	89,254	66,295	12,550	5,027	4,342	1,040
Percentage with:						
Mental illness	0.7	0.7	0.7	0.7	0.7	0.3
Spirits possessed	0.6	0.5	0.9	0.9	0.6	1.5
Intellectual disability	0.6	0.6	0.7	0.9	0.7	0.5
Drug related	0.2	0.2	0.3	0.3	0.2	0.1
Being elderly	1.0	1.0	1.2	1.0	0.9	0.3

Source: 2021 Tonga Census

Covid-19

The 2021 Census asked a series of questions about resident attitudes concerning Covid-19. The rest of the world was experiencing elevated levels of extreme sickness and Covid deaths. However, at the time of the census, Tonga did not yet have cases of Covid since it did not allow entry of non-residents.

The percentage of males experiencing “no stress at all” regarding Covid, at about 92 percent, was greater than the percent of females experiencing no stress, at about 90 percent. Females experienced more stress for “several days,” while neither males nor females experienced stress for half a week or daily (Figure 9.11).

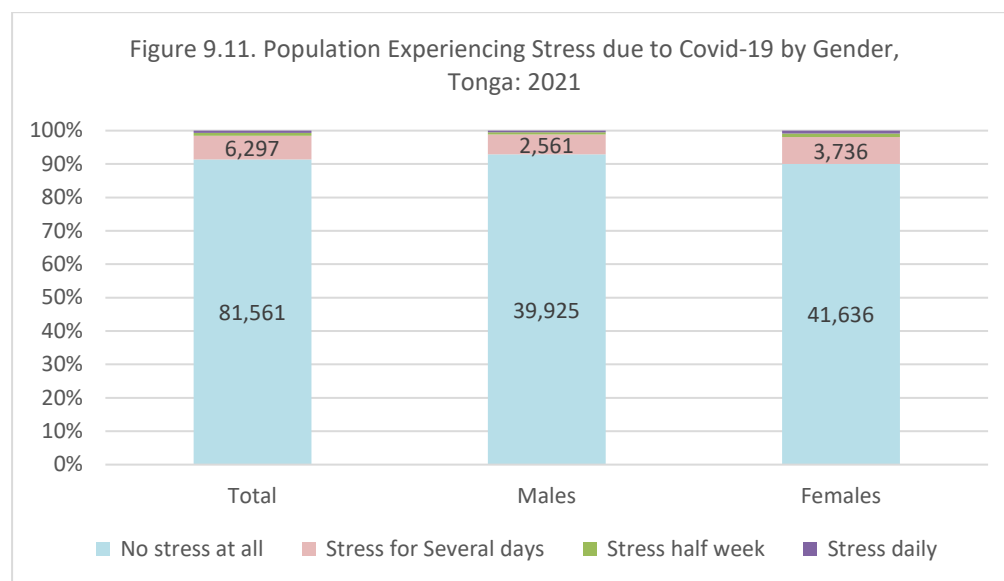
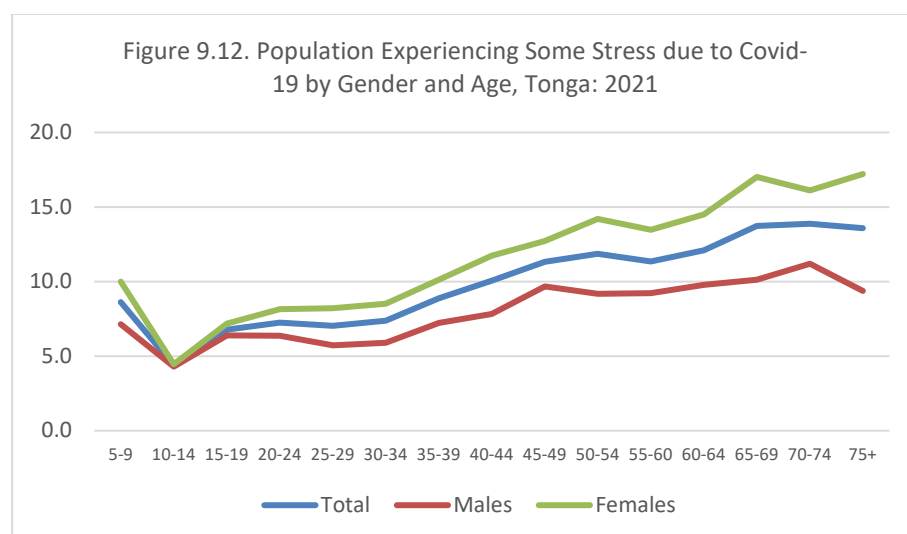
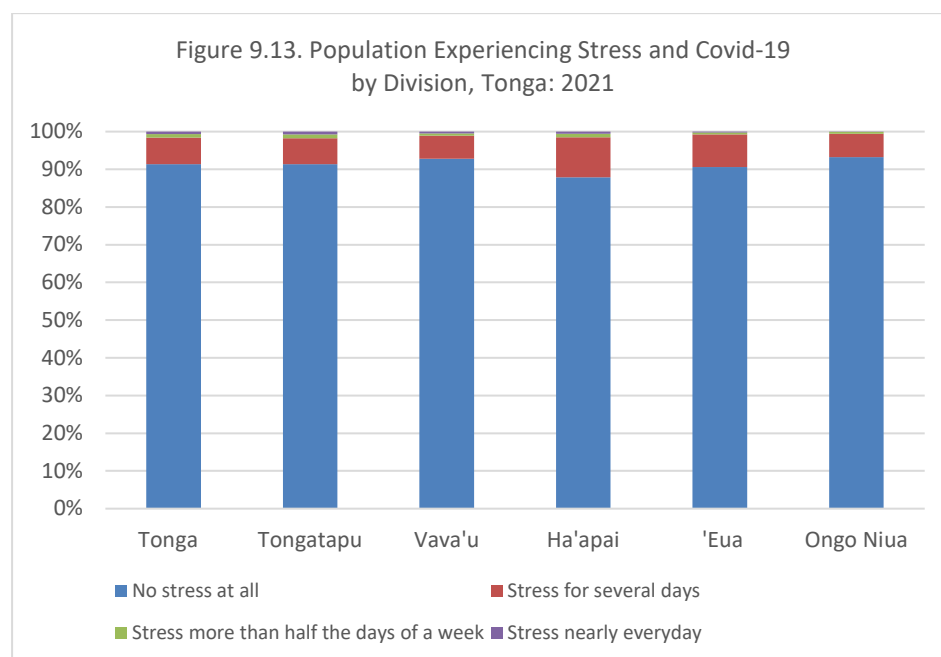


Figure 9.12 shows the percentage in each age group that experienced “some stress” related to Covid-19 at the time of the 2021 census. Those 10 to 14 – both males and females – showed the least stress, at 5 percent. From there, the older the residents, the more stress they experienced, with females experiencing more stress at all ages from 15 years and older.



Tonga residents did not experience stress concerning the Covid epidemic because Covid had not arrived in Tonga at the time of the census. Those in Vava'u and Ongo Niua experienced slightly more stress than the others, and those in Ha'apai experienced less stress (Figure 9.13). But those in Ha'apai who had stress were likely to have it for multiple days.



Almost everyone living in Tonga in 2021 had at least one dose of a Covid vaccine, and about age 25, about 4 out of every 5 residents had two doses. At the time of the census, subsequent doses were not yet available. As Figure 9.14 shows, the percentages having no vaccination were exceptionally low for all ages and remained at about the same level for all ages. The percentages having only one dose decreased rapidly with age, while those with two doses increased at about the same rate.

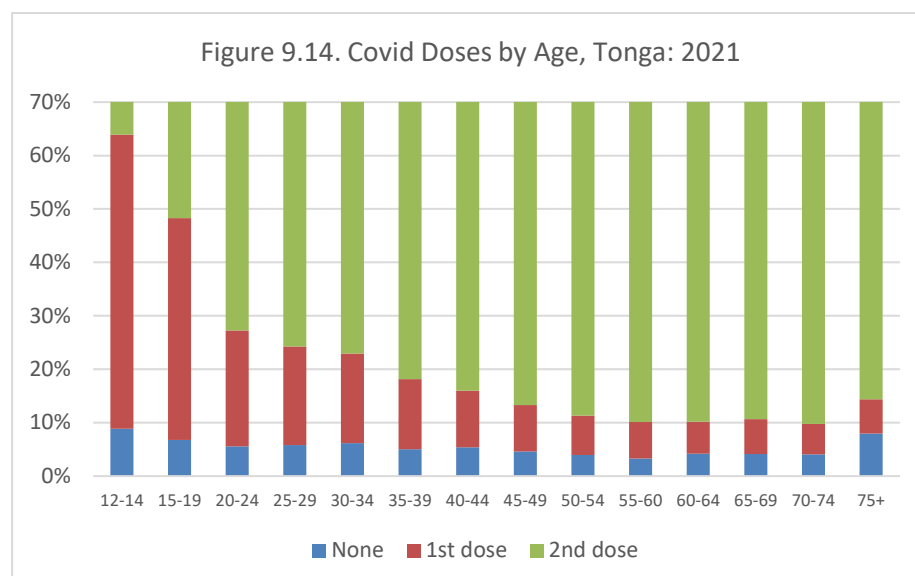


Figure 9.15 shows the doses of Covid vaccine received by Division. As noted, Tonga residents received at least one dose of the Covid vaccine. Except for Ongo Niua, about 1 in every 5 of the residents received one dose in the other 4 Divisions, with the rest receiving 2 doses. The residents of Ongo Niua had received only one dose of the vaccine because of their distance from the main island.

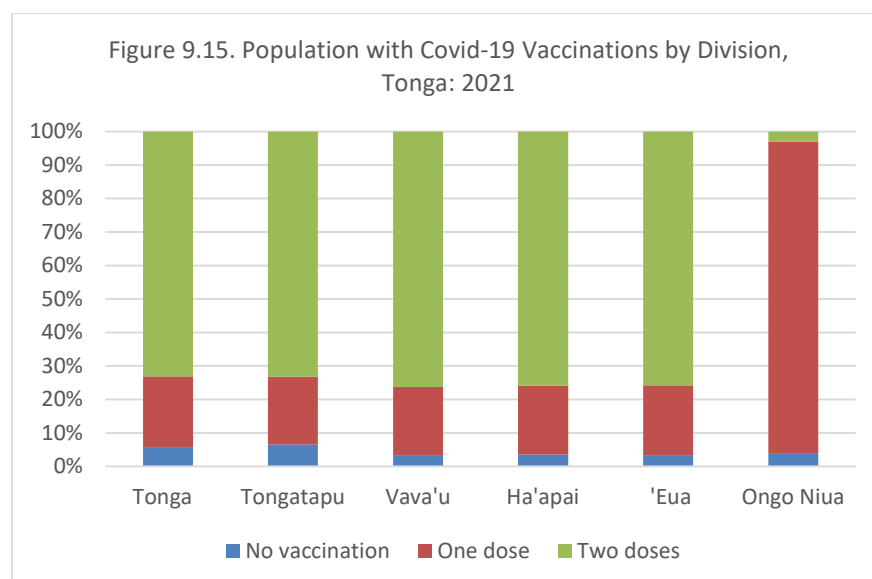
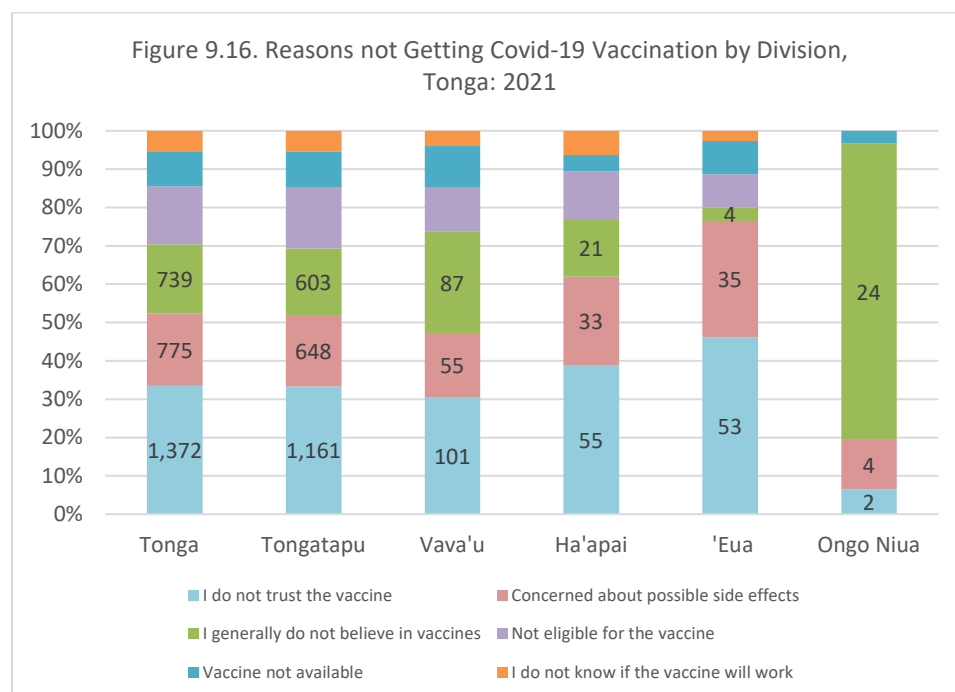


Figure 9.16 shows the reasons the residents gave for not getting Covid-19 vaccinations. The numbers for Ongo Niua were small, but the largest number responded that they did not believe in vaccines. For the other divisions, lack of trust in the vaccine was the largest reason the “refusers” did not take the vaccine with residents concerned about potential side effects.



Disability

The 2021 census questionnaire included questions on type of and level of difficulties within the population. The Washington Group (WG) developed a set of six questions based on self-reported difficulties in performing basic activities because of health problems. Six questions and domains were:

1. Do you have difficulty seeing, even if wearing glasses?
2. Do you have difficulty hearing, even if using a hearing aid?
3. Do you have difficulty walking or climbing steps?
4. Do you have difficulty remembering or concentrating?
5. Do you have difficulty (with self-care such as) washing all over or dressing?
6. Using your usual (customary) language, do you have difficulty communicating (for example, understanding or being understood by others)?

Each question had four response categories:

- (1) No – no difficulty.
- (2) Yes – some difficulty.
- (3) Yes – a lot of difficulty; and,
- (4) Cannot do it at all.

These four levels of difficulty capture the full range of functioning. The WG recommendation for international reporting is to use “a lot of difficulty” as a threshold: persons who reported “a lot of difficulty” or “unable to do” for at least one domain had a disability.

Table 9.4 shows the numbers and percentages of persons in Tonga in 2021 with some disability, as described above. Less than 8 percent of the population had a disability, but the proportion increased to more than 1 in 4 for those 45 to 59, more than half for those 60 to 74, and about 3 in every 4 for those 75 years and older. About 12 percent of the population declared at least one disability. The percentages across the divisions did not differ much and ranged from about 11.5 percent in Tongatapu to about 15 percent in Ha’apai.

Overall, a slight difference existed in the proportion of males and females with a disability. Increased reporting of difficulties comes with aging in the population (an actual increase in the number of people with disabilities associated with ageing), and, in part to an increase in perception amongst Tongan people regarding what makes up a disability. Similarly, while less than 12 percent of Tongatapu had a disability, about 14 percent of those in other rural areas (outside Tongatapu) had a disability.

Table 9.4. Demographic Characteristics for Population with Some Disability, Tonga: 2021

	Total			Males			Females		
	Total	With Some Disability		Total	With Some Disability		Total	With Some Disability	
		Numbers	Percent		Numbers	Percent		Numbers	Percent
AGE									
Total	100,179	12,224	12.2	48,749	5,499	11.3	51,430	6,725	13.1
0-14	34,873	803	2.3	18,165	441	2.4	16,708	362	2.2
15-29	25,588	827	3.2	12,218	390	3.2	13,370	437	3.3
30-44	16,671	1,271	7.6	7,403	549	7.4	9,268	722	7.8
45-59	13,547	3,764	27.8	6,679	1,746	26.1	6,868	2,018	29.4
60-74	6,976	3,702	53.1	3,254	1,619	49.8	3,722	2,083	56.0
75+	2,524	1,857	73.6	1,030	754	73.2	1,494	1,103	73.8
DIVISION									
Total	100,179	12,224	12.2	48,749	5,499	11.3	51,430	6,725	13.1
Tongatapu	74,320	8,580	11.5	35,959	3,828	10.6	38,361	4,752	12.4
Vava'u	14,182	2,022	14.3	7,044	914	13.0	7,138	1,108	15.5
Ha'apai	5,665	850	15.0	2,787	386	13.9	2,878	464	16.1
'Eua	4,864	589	12.1	2,386	277	11.6	2,478	312	12.6
Ongo Niua	1,148	183	15.9	573	94	16.4	575	89	15.5
URBAN/RURAL									
Total	100,179	12,224	12.2	48,749	5,499	11.3	51,430	6,725	13.1
Tongatapu Urban	34,142	3,953	11.6	16,463	1,765	10.7	17,679	2,188	12.4
Tongatapu Rural	40,178	4,627	11.5	19,496	2,063	10.6	20,682	2,564	12.4
Other Rural	25,859	3,644	14.1	12,790	1,671	13.1	13,069	1,973	15.1

Source: Tonga Population and Housing Census 2021

Table 9.5 shows the total population 5 years and older and the percentages who reported having one or more disabilities. About 8 percent of the residents reported having at least some disability related to seeing, followed by about 6 percent who had some difficulty walking (mobility). Those in Vava'u and Ha'apai were the most likely to have problems seeing; those in Ongo Niua were the most likely to report mobility problems.

Table 9.5. Percent Having Some Disability by Type and Division, Tonga: 2021

	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
Total	89,254	66,295	12,550	5,027	4,342	1,040
Seeing	8.1	7.5	10.0	10.5	8.1	8.9
Hearing	3.3	3.0	4.1	3.7	4.5	5.1
Walking	6.4	5.9	8.0	9.0	6.6	9.5
Remembering	2.7	2.5	3.2	3.0	3.9	3.3
Self-care	2.3	2.2	2.7	2.7	3.2	2.6
Communicating	1.3	1.2	1.4	1.6	2.3	1.3

Source: Tonga Population and Housing Census 2021

About 2 in every 4 of the respondents reporting a disability reported 2 or more types of disability (Table 9.6). Of those who reported only one, seeing only (at 30 percent of all those reporting at least one disability) was largest across all the divisions, with walking (mobility) only being second largest.

Table 9.6. Persons with Single Disabilities by Division, Tonga: 2021

	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
Total with a disability	12,244	8,597	2,022	852	590	183
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Seeing only	30.5	31.3	29.0	31.0	26.3	22.4
Hearing only	7.6	7.7	7.0	6.0	9.3	11.5
Walking only	14.7	14.5	15.0	16.1	12.2	18.6
Remembering only	2.8	3.0	2.5	2.0	3.1	1.6
Self-care only	1.9	2.2	1.5	0.6	1.0	1.1
Communicating only	1.5	1.8	1.0	1.2	0.3	0.5
More than one	40.9	39.4	44.0	43.0	47.6	44.3

Source: Tonga Population and Housing Census 2021

Map XXX. Percent with a Problem Seeing by District

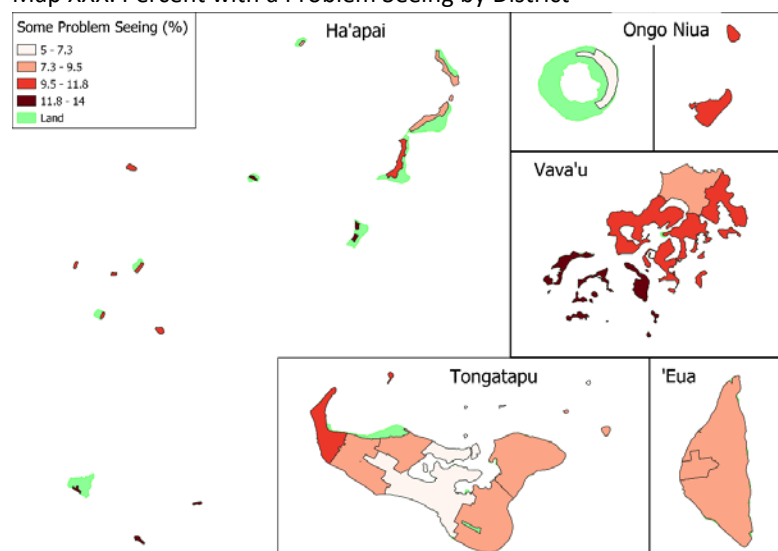


Figure 9.17 shows the percentage of persons with just one disability for the divisions. So, about 30 percent of the Tonga residents in 2021 had only problems seeing (and none of the other 5 disabilities reported). About 15 percent had only walking disabilities, and about 41 percent had more than one disability, whatever the combination. The other “single” disabilities were small. The percentages across the divisions were about the same.

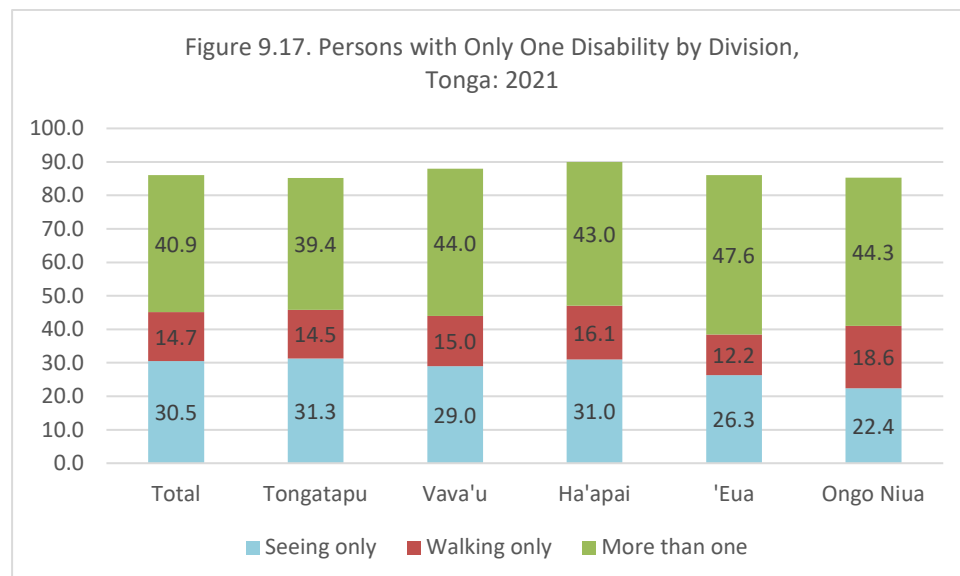


Table 9.7 shows the distribution of the 12,000 people with at least one disability for all disabilities. About 450 people reported disability, but not which type of disability. About 4,000 claimed they had only trouble seeing, but more than 300 had both seeing and hearing problems, and about 400 had seeing, hearing, and mobility problems. Looking at the other columns, we find further that about 600 people claimed problems with memory besides mobility, hearing and seeing. About 240 people claimed they had problems in all the areas of study.

Table 9.7. Disabilities by Type of Disability, Tonga: 2021

	Numbers					Percent				
	Total	See, Hear, Walk, Remember	And Self-care	And Communicating	And self-care & communication	Total	See, Hear, Walk, Remember	And Self-care	And Communicating	And self-care & communication
Total	12,224	9,664	1,391	480	689	100.0	79.1	11.4	3.9	5.6
None	451		230	185	36	3.7	0.0	1.9	1.5	0.3
Seeing only	3,788	3,735	26	24	3	31.0	30.6	0.2	0.2	0.0
Hearing only	990	930	12	47	1	8.1	7.6	0.1	0.4	0.0
Seeing and hearing	333	320	4	8	1	2.7	2.6	0.0	0.1	0.0
Walking	2,176	1,795	320	18	43	17.8	14.7	2.6	0.1	0.4
Walking and seeing	1,394	1,147	223	5	19	11.4	9.4	1.8	0.0	0.2
Walking and hearing	266	214	39	6	7	2.2	1.8	0.3	0.0	0.1
Walking seeing and hearing	419	287	99	13	20	3.4	2.3	0.8	0.1	0.2
Remember	503	342	34	55	72	4.1	2.8	0.3	0.4	0.6
Remember and seeing	215	191	8	9	7	1.8	1.6	0.1	0.1	0.1
Remember and hearing	98	64	4	13	17	0.8	0.5	0.0	0.1	0.1
Remember seeing and hearing	107	73	8	9	17	0.9	0.6	0.1	0.1	0.1
Remember and walking	350	135	96	26	93	2.9	1.1	0.8	0.2	0.8
Remember walking and seeing	389	215	113	12	49	3.2	1.8	0.9	0.1	0.4
Remember Walking and hearing	162	50	39	13	60	1.3	0.4	0.3	0.1	0.5
Remember walking hearing and seeing	583	166	136	37	244	4.8	1.4	1.1	0.3	2.0

Source: Tonga Population and Housing Census 2021

Table 9.8 shows the distribution of the population 5 years and older who had a moderate functional disability. These were people who reported having “some difficulty” with the disability. The largest percentages were for people who had trouble seeing – about 7 percent of those 5 years and older, including 6 percent of the males and 8 percent of the females.

Table 9.8. Population having Moderate Functional Limitations by Sex, Tonga: 2021

	Numbers			Percents		
	Total	Male	Female	Total	Male	Female
Total	89,254	42,991	46,263	100.0	100.0	100.0
Seeing	6,196	2,614	3,582	6.9	6.1	7.7
Hearing	2,262	1,126	1,136	2.5	2.6	2.5
Mobility	3,729	1,615	2,114	4.2	3.8	4.6
Remembering	1,814	840	974	2.0	2.0	2.1
Self-care	1,194	505	689	1.3	1.2	1.5
Communicating	711	368	343	0.8	0.9	0.7

Source: Tonga Population and Housing Census 2021

Table 9.9 shows the distribution of the population 5 years and older who had a severe functional disability. These were people who reported having “a lot of difficulty” or “could not do at all” with the disability. The largest percentages were for people who had trouble with mobility – about 2.3 percent of those 5 years and older, including 1.9 percent of the males and 2.6 percent of the females.

Table 9.9. Population having Severe Functional Limitations by Sex, Tonga: 2021

	Numbers			Percents		
	Total	Male	Female	Total	Male	Female
Total	89,254	42,991	46,263	100.0	100.0	100.0
Seeing	1,032	400	632	1.2	0.9	1.4
Hearing	696	318	378	0.8	0.7	0.8
Mobility	2,010	815	1,195	2.3	1.9	2.6
Remembering	593	274	319	0.7	0.6	0.7
Self-care	886	399	487	1.0	0.9	1.1
Communicating	458	252	206	0.5	0.6	0.4

Source: Tonga Population and Housing Census 2021

The census asked a series of items about behavioural and mental illnesses. The percentage of persons having any of these disabilities was exceedingly small. The largest category was “being elderly,” reported by about 1 percent of the population (Table 9.10). The percentages having limitations were about the same across the divisions.

Table 9.10. Behavioral and Mental Illnesses by Division, Tonga: 2021

	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
Total	89,254	66,295	12,550	5,027	4,342	1,040
Mental illness	0.7	0.7	0.7	0.7	0.7	0.3
Possessed by spirit	0.6	0.5	0.9	0.9	0.6	1.5
Intellectual disability	0.6	0.6	0.7	0.9	0.7	0.5
Drug consumption	0.2	0.2	0.3	0.3	0.2	0.1
Being elderly	1.0	1.0	1.2	1.0	0.9	0.3

Source: Tonga Population and Housing Census 2021

Conclusion

This chapter looked at health conditions throughout Tonga at the time of the 2021 Census. While Tonga did not yet have Covid at the time of the census, the population was very familiar with the disease and so were able to provide their thoughts on the virus. The census collected information on mental illness, non-communicable diseases, and current injuries and sicknesses at the time of the census.

CHAPTER 10: HABITS

Tonga's 2021 Census asked about habits of the population aged 10 years and older. The items included general smoking, "Tapaka Tonga" smoking, drinking alcohol, and drinking kava. Table 10.1 shows the percentage involved in each of the habits by sex and age.

Smoking

About 15 percent of Tonga's population smoked tobacco, including 23 percent of the males and 9 percent of the females (Table 10.1). The 18 percent smoking Tapaka Tonga tobacco included 30 percent of the males and 7 percent of the females. About 17 percent of the population 10 years and older drank alcohol, including 27 percent of the males and 9 percent of the females. And about 19 percent were kava drinkers – 38 percent of the males and 1 percent of the females.

Table 10.1. Percent with Various Habits by Sex and Age, Tonga: 2021

	Smokers			Tapaka Tonga Smokers			Alcohol drinkers			Kava drinkers		
	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females
Total	15.3	23.1	8.9	17.9	30.3	6.7	17.4	26.8	8.9	18.4	37.5	1.1
10-14	0.4	0.6	0.2	0.5	0.8	0.2	0.2	0.3	0.1	0.5	0.8	0.1
15-19	9.2	16.2	2.0	12.1	22.1	1.9	10.4	17.9	2.7	10.3	19.6	0.7
20-24	20.6	34.1	8.6	23.6	42.3	7.0	29.0	46.4	13.5	20.5	41.7	1.7
25-29	22.2	35.3	12.2	24.7	43.8	10.3	30.3	45.4	18.9	21.9	47.9	2.3
30-34	23.0	31.7	16.3	26.3	42.8	13.6	28.1	42.9	16.7	23.1	50.9	1.7
35-39	24.9	35.2	17.1	27.6	45.9	13.9	27.4	40.6	17.4	24.4	54.0	2.1
40-44	23.1	32.8	14.9	27.3	44.9	12.5	24.9	37.4	14.3	28.3	59.8	1.7
45-49	20.8	29.3	13.3	23.7	39.4	9.9	21.9	33.3	11.8	27.1	56.4	1.3
50-54	17.8	27.2	8.5	21.9	37.4	6.5	19.4	30.9	7.9	30.2	59.7	0.8
55-59	18.0	28.0	7.5	21.3	36.2	5.8	17.6	29.3	5.4	30.8	59.3	1.1
60-64	16.2	27.7	5.7	18.7	35.0	3.9	14.3	25.7	4.0	25.7	53.6	0.5
65-69	13.7	25.6	3.8	17.3	33.7	3.7	10.5	19.9	2.6	23.7	51.6	0.4
70-74	11.6	21.7	2.9	15.2	30.6	1.9	8.9	17.7	1.2	19.1	41.1	0.1
75+	8.3	15.8	3.1	9.9	20.5	2.6	5.1	11.5	0.6	9.9	23.9	0.2

Source: Tonga Population and Housing Census 2021

Figure 10.1 shows the percentage of people smoking in 2021 by age and sex. Although the 10 to 14 years olds were about the same – they did not smoke – by 15 to 19, the percentage of males who smoked was already larger than the percentage of females. And males had higher percentages than females at all subsequent ages, with the males reaching about 35 percent while the females maximum was just above 15 percent for those in their 30s.

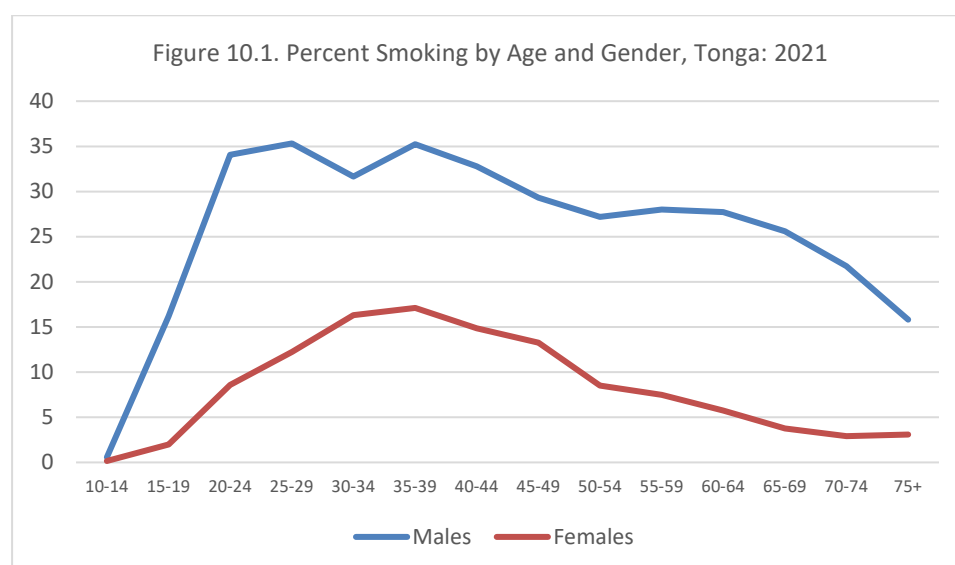
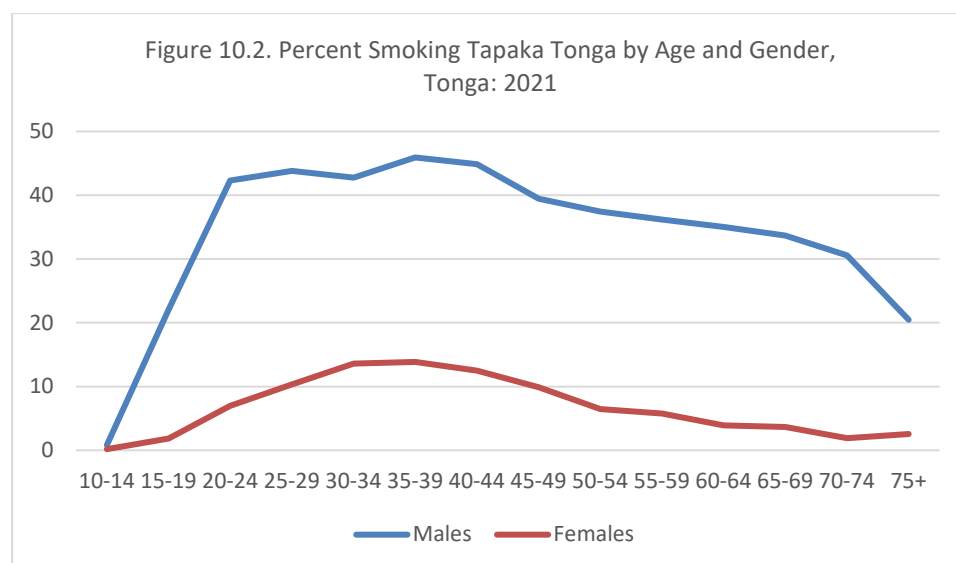
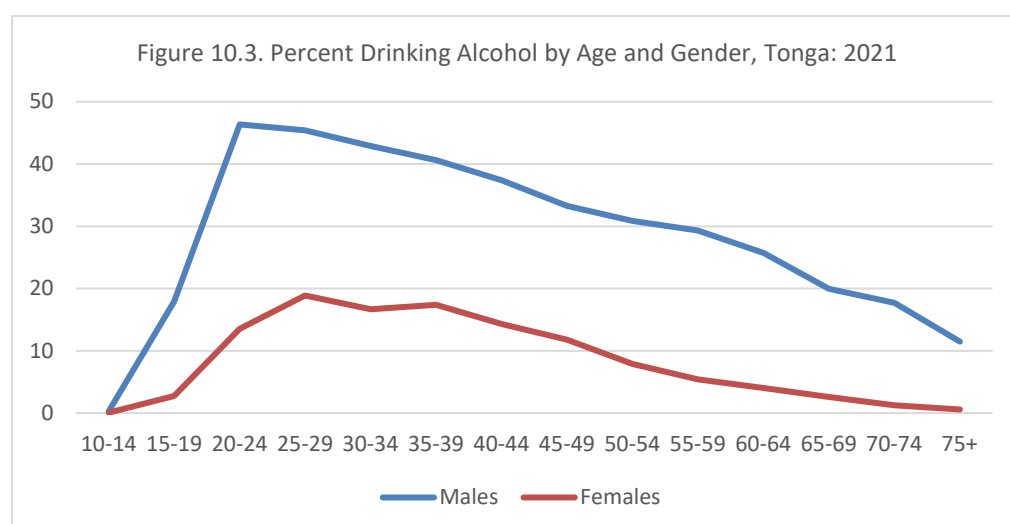


Figure 10.2 shows the graph of the “Tapaka Tonga” smokers in 2021 by sex. The females peaked at about age 35 at about 12 percent while the males peaked a little older and at about 45 percent using this form of tobacco.



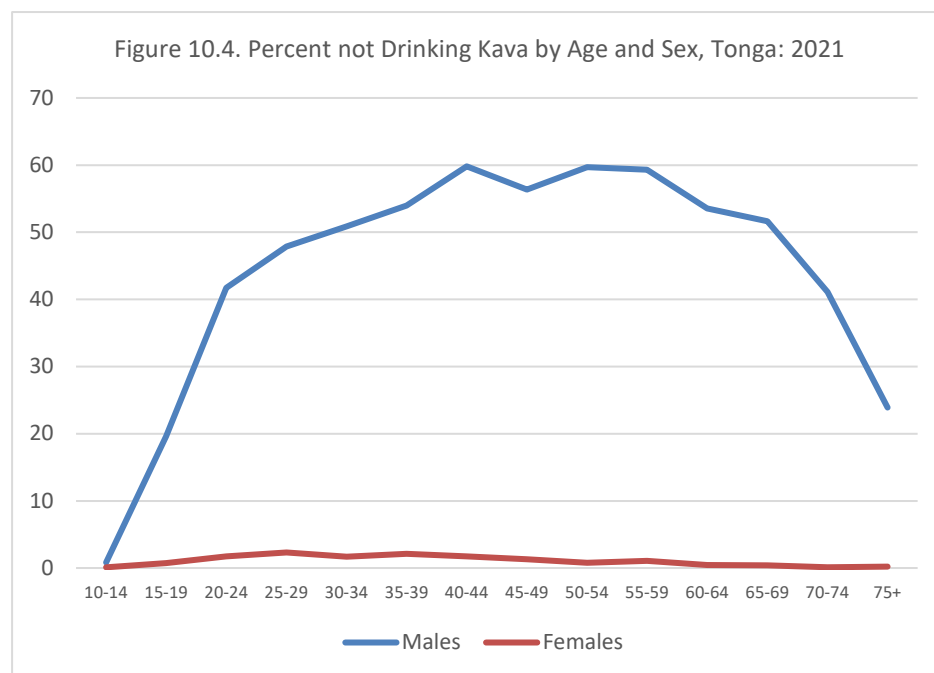
Alcohol

Figure 10.3 shows alcohol consumption by sex. The peaks for alcohol were lower than for smoking cigarettes. The figure shows the percent of the population 10 years and older who were not drinking alcohol by age and sex. For the females, almost no young women were drinking alcohol. The percentage increased to about 20 percent of those 25 to 29 years old, but then decreased continuously after that. For the males, the peak was at 20 to 24 years at about 45 percent, and then their participation in drinking alcohol also decreased with age, and much more steeply. However, even at age 75, about 10 percent of the males were still drinking alcohol compared to almost none of the females.



Kava

Kava is a type of drink made from the ground roots of the plant *Piper methysticum*. Long-term kava use is associated with a range of health issues, including apathy, skin ulcers and liver damage. Figure 10.4 shows that almost none of the females in Tonga were drinking kava. However, by ages 20 to 24, about 40 percent of the males, about 2 in every 5, were drinking kava, and the percentage increased to about age 45, where it stayed. At about ages 60 to 64, the percentage drinking kava decreased, and continued, ending at about 20 percent (1 in 5) for the males 75 years and older.



The residents of Tonga did not pursue these habits in large percentages. Fewer than 1 in every 5 of Tonga's residents used any of the four types of tobacco or drinking. Males used each of the four habits over females.

CHAPTER 11: EDUCATION AND LITERACY

School enrolment

In Tonga, it is compulsory for children to be in school from ages 4 to 18. The formal education system has four stages: Early childhood (2 years), Primary (six years), Secondary (seven years) and post-secondary (six months to three years depending on type of training). Secondary education covers years 7 to 13 (students aged 13 to 17). Secondary students in Tonga can attend government funded, mission, or non- government private schools.

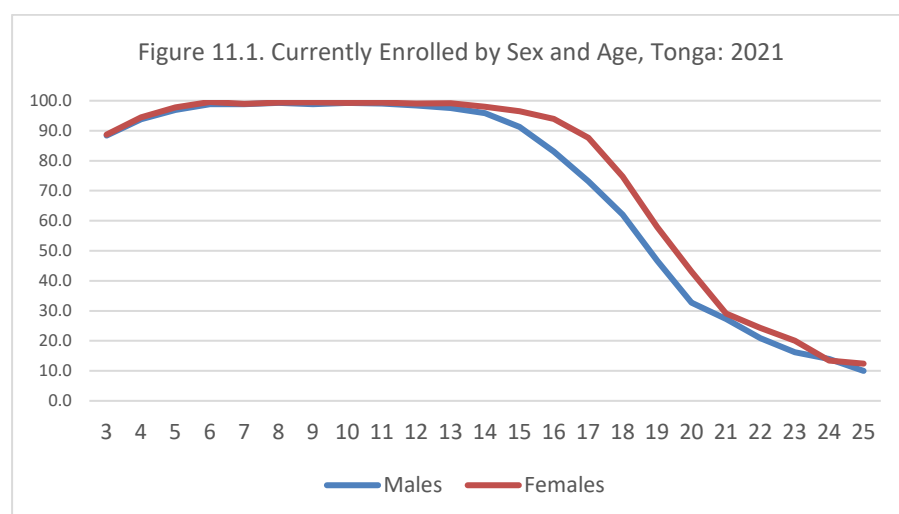
Tonga has achieved near full enrolment in the compulsory Primary and Lower Secondary levels. Table 11.1 shows the percentage enrolled by age for each grade and for males and females. Enrolment rates declined among children aged 16 years and older. Age-specific enrolment rates among females were higher than those of males in these older age groups.

Table 11.1. Percent Attending School by Age and Sex, Tonga: 2021

Age	Total			Attending			Percent Attending			Sex ratio
	Total	Males	Females	Total	Males	Females	Total	Males	Females	
3	439	199	240	389	176	213	88.6	88.4	88.8	82.6
4	1,155	596	559	1,087	559	528	94.1	93.8	94.5	105.9
5	1,956	988	968	1,904	958	946	97.3	97.0	97.7	101.3
6	2,526	1,336	1,190	2,505	1,320	1,185	99.2	98.8	99.6	111.4
7	2,543	1,349	1,194	2,515	1,334	1,181	98.9	98.9	98.9	113.0
8	2,457	1,267	1,190	2,440	1,258	1,182	99.3	99.3	99.3	106.4
9	2,457	1,246	1,211	2,436	1,231	1,205	99.1	98.8	99.5	102.2
10	2,390	1,242	1,148	2,373	1,233	1,140	99.3	99.3	99.3	108.2
11	2,625	1,426	1,199	2,604	1,413	1,191	99.2	99.1	99.3	118.6
12	2,259	1,224	1,035	2,229	1,204	1,025	98.7	98.4	99.0	117.5
13	2,291	1,147	1,144	2,254	1,119	1,135	98.4	97.6	99.2	98.6
14	2,261	1,144	1,117	2,192	1,097	1,095	96.9	95.9	98.0	100.2
15	2,300	1,198	1,102	2,156	1,093	1,063	93.7	91.2	96.5	102.8
16	2,190	1,108	1,082	1,936	920	1,016	88.4	83.0	93.9	90.6
17	2,223	1,112	1,111	1,787	813	974	80.4	73.1	87.7	83.5
18	2,195	1,099	1,096	1,501	682	819	68.4	62.1	74.7	83.3
19	1,985	981	1,004	1,039	458	581	52.3	46.7	57.9	78.8
20	1,784	897	887	676	294	382	37.9	32.8	43.1	77.0
21	1,721	847	874	485	231	254	28.2	27.3	29.1	90.9
22	1,474	685	789	335	143	192	22.7	20.9	24.3	74.5

Source: Tonga Population and Housing Census 2021

Figure 11.1 shows the percentage of children and young people enrolled in school by sex and single year of age. Most children enrolled from ages 6 to about 15 and then began leaving school. Males left school sooner than the females, but by about age 22, the percentages were about the same.



The census found older people continuing in school as young adults. About 1 in every 5 persons 20 to 24 still enrolled in school, as were over 1 in 20 of those 25 to 29 years old (Figure 11.2). But, after that age group, very few people still enrolled in school.

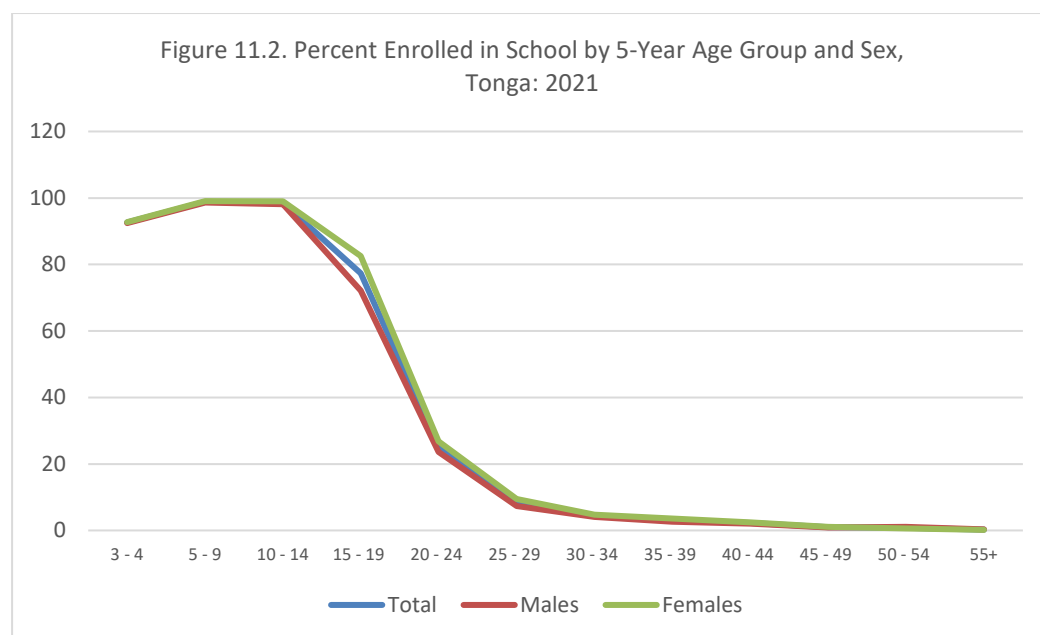


Figure 11.3 shows the young population finishing or dropping out of school. Most 14-year-olds attended school, but after that male, especially, started leaving school. Fewer than 3 in every 4 males 17 years old were attending school, and that figure dropped to about 3 in 5 for those 18, and less than half of those 19 years old. Females stayed in school longer. At age 18, about 3 in every 4 were still in school; the percentage decreased to over half at age 19 and less than half at age 20. About 3 in every 10 persons 21 years old were still attending some level of schooling.

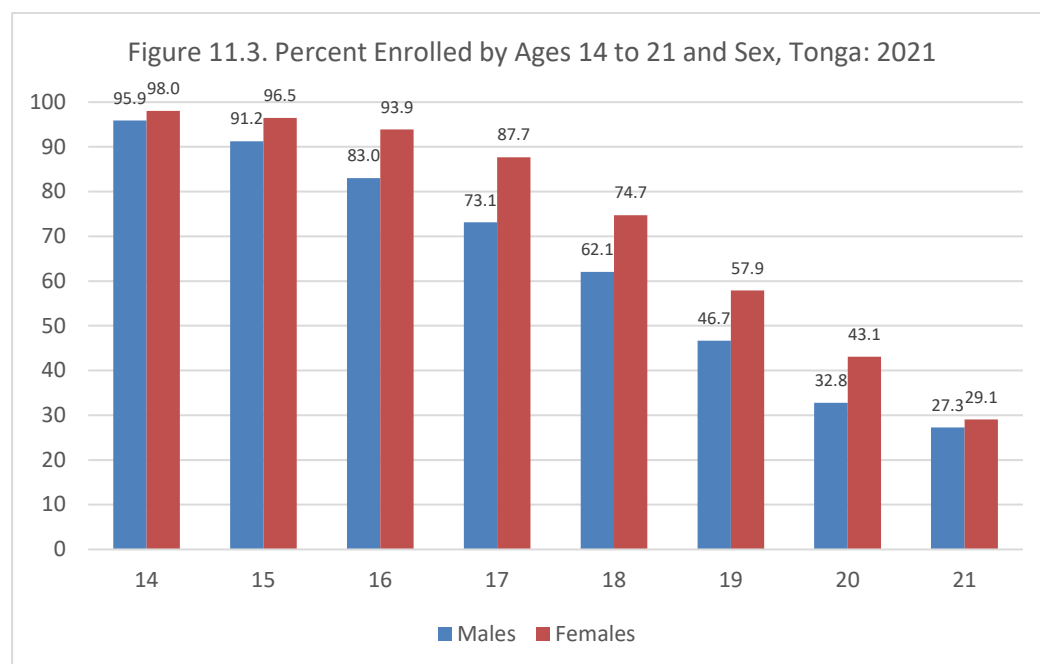


Figure 11.4 shows the percentage not enrolled for the singles of age when students start dropping out of school, having finished their education prematurely. At age 14, most students still enrolled in 2021. But the percentage not enrolled increased with each age, with males always more likely to have left school than females. By age 19, over half the males and 2 out of every 5 females had left school, and at age 21, only 27 percent of the males and 29 percent of the females were still in school, while others had left to get on with their lives.

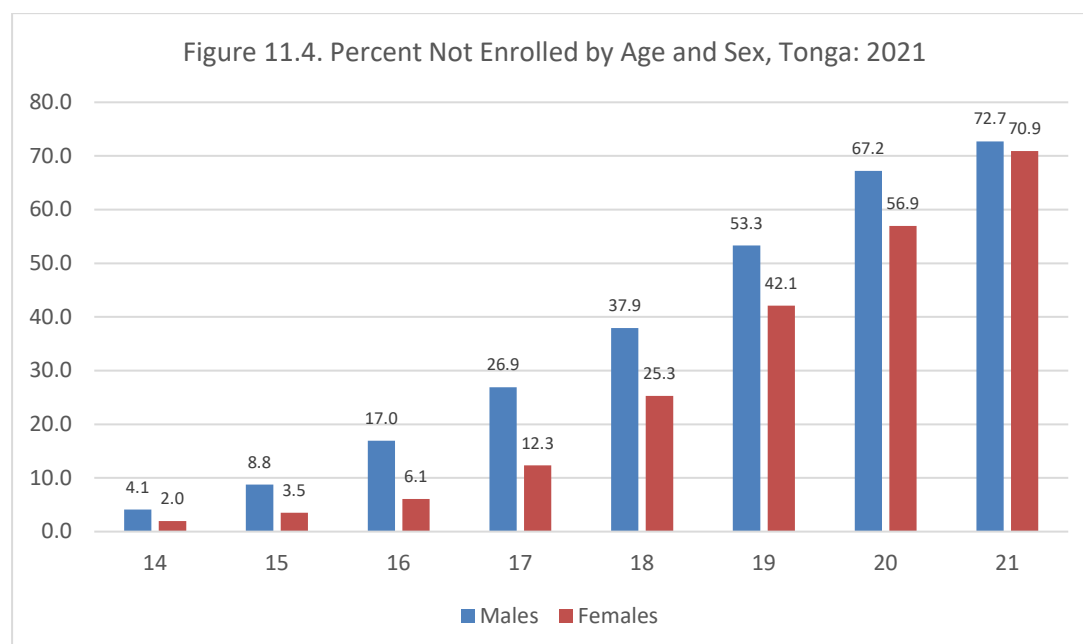
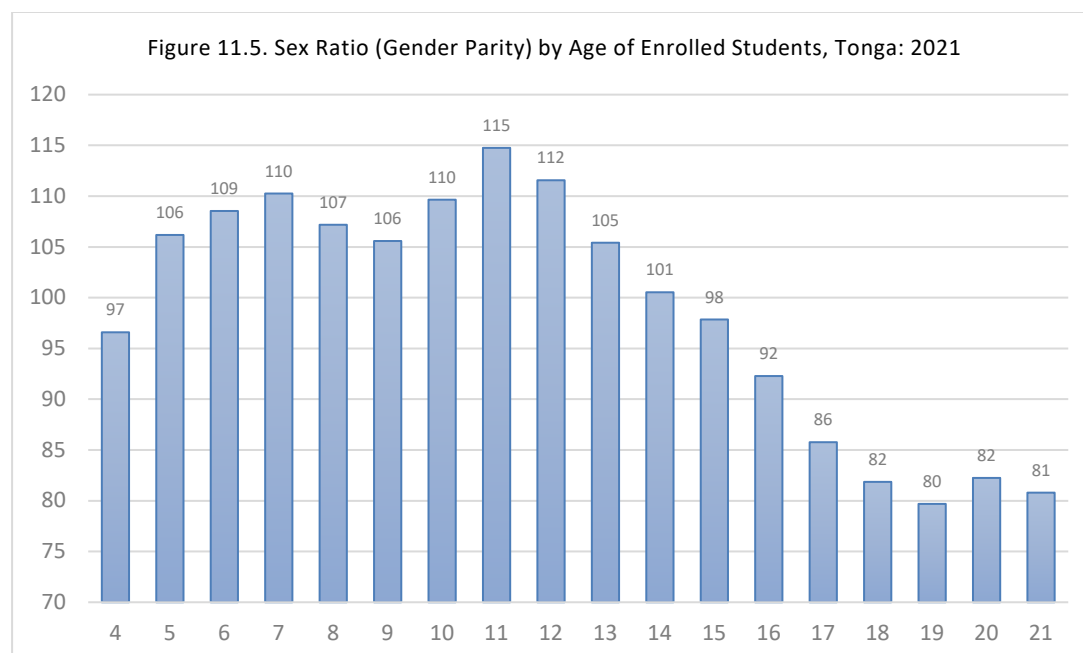


Figure 11.5 shows the sex ratio by age of the enrolled students in 2021. From age 5 to 14 more males than females enrolled at each age. At age 14 about equal numbers of males and females enrolled, but in ages older than 14, more females than males enrolled, and by age 18 about 5 females enrolled for each 4 males.



The gender parity index measures the ratio of females to males in school in the different school levels. The 2021 census data shows that more boys than girls were attending primary school in Tonga (as in the 2016 census and previously) but gender parity occurred at secondary level (Figure 11.6). Each division showed that same pattern. 'Eua secondary enrolment was the most skewed, with about 5 males for every 4 females. Vava'u and Ha'apai Primary enrolment showed 86 males for every 100 females.

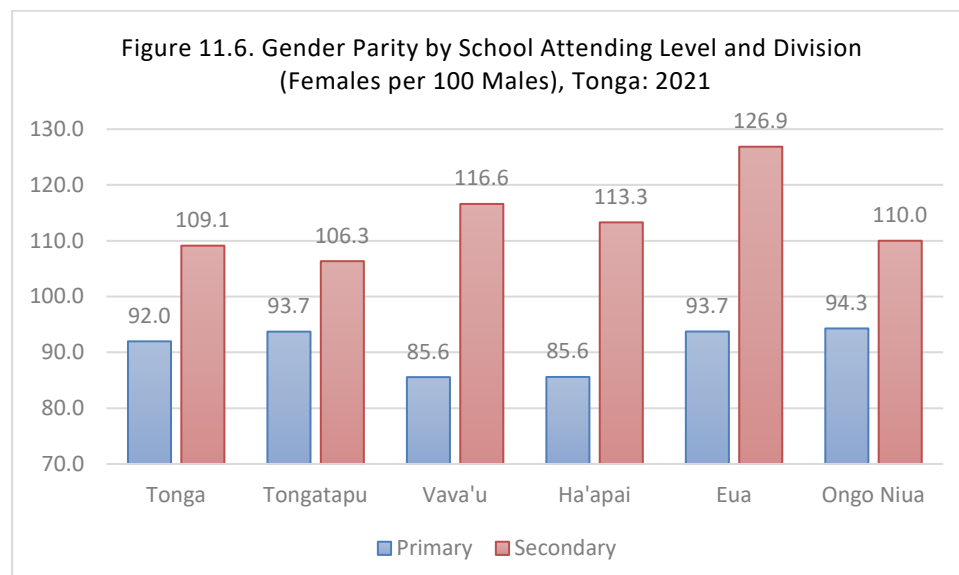


Table 11.2 shows the reasons for not attending school by broad age groups in 2021. About 6,000 students were not enrolled for ages 3 to 18. The largest percentage did not enroll because their parents thought they were too young for enrollment.

Table 11.2. Reason for not attending school by Age, Tonga: 2021

	Numbers					Percents				
	Total	3-4	5-9	10-14	15-18	Total	3-4	5-9	10-14	15-18
Total	5,780	2,818	844	387	1,731	100.0	100.0	100.0	100.0	100.0
Too young (parents view)	3,360	2,639	576	73	72	58.1	93.6	68.2	18.9	4.2
No interest in school	932	37	43	72	780	16.1	1.3	5.1	18.6	45.1
Family problems	328	18	42	32	236	5.7	0.6	5.0	8.3	13.6
Dismissed from school	228	5	23	35	165	3.9	0.2	2.7	9.0	9.5
Financial reasons	219	19	29	29	142	3.8	0.7	3.4	7.5	8.2
Other	165	9	32	30	94	2.9	0.3	3.8	7.8	5.4
Disability	145	13	34	56	42	2.5	0.5	4.0	14.5	2.4
Medical reason	127	6	12	29	80	2.2	0.2	1.4	7.5	4.6
Other	441	81	85	61	214	7.6	2.9	10.1	15.8	12.4

Source: Tonga Population and Housing Census 2021

Educational attainment

Almost 70 percent of Tongans 18 years and older not attending school attained at least Forms 5 to 7. In Tongatapu, 75 percent of females and 70 percent of males 18 and over were in this category. Ongo Niua, with the lowest population, had about 50 percent females and 45 percent males that attained Forms 5 - 7.

Table 11.3. Population 18 years and Older and Not Enrolled in School by Level of School, Sex, and Division, Tonga: 2021

	Numbers						Percent					
	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
Total	49,296	36,549	7,032	2,673	2,442	600						
Pre & primary	2,682	1,700	459	253	186	84	100.0	100.0	100.0	100.0	100.0	100.0
Form 1 - 4	12,294	8,240	2,102	890	832	230	94.6	95.3	93.5	90.5	92.4	86.0
Form 5 - 7	22,118	16,576	3,269	1,102	1,001	170	69.6	72.8	63.6	57.2	58.3	47.7
Tech/Vied	3,722	3,034	387	143	126	32	24.8	27.5	17.1	16.0	17.3	19.3
Tertiary	8,480	6,999	815	285	297	84	17.2	19.1	11.6	10.7	12.2	14.0
Male												
Total	22,814	16,745	3,383	1,220	1,161	305						
Pre & primary	1,246	788	209	117	88	44	100.0	100.0	100.0	100.0	100.0	100.0
Form 1 - 4	6,349	4,201	1,155	429	441	123	94.5	95.3	93.8	90.4	92.4	85.6
Form 5 - 7	9,562	7,108	1,457	485	431	81	66.7	70.2	59.7	55.2	54.4	45.2
Tech/Vied	2,216	1,798	243	85	72	18	24.8	27.8	16.6	15.5	17.3	18.7
Tertiary	3,441	2,850	319	104	129	39	15.1	17.0	9.4	8.5	11.1	12.8
Female												
Total	26,482	19,804	3,649	1,453	1,281	295						
Pre & primary	1,436	912	250	136	98	40	100.0	100.0	100.0	100.0	100.0	100.0
Form 1 - 4	5,945	4,039	947	461	391	107	94.6	95.4	93.1	90.6	92.3	86.4
Form 5 - 7	12,556	9,468	1,812	617	570	89	72.1	75.0	67.2	58.9	61.8	50.2
Tech/Vied	1,506	1,236	144	58	54	14	24.7	27.2	17.5	16.4	17.3	20.0
Tertiary	5,039	4,149	496	181	168	45	19.0	21.0	13.6	12.5	13.1	15.3

Source: Tonga Population and Housing Census 2021

Figure 11.7 shows the population 18 years and older not enrolled in school but have attained Forms 5 to 7 by Division and sex graphically. Females have higher percentages than male across the divisions with Tongatapu being the highest and Ongo Niua the lowest percentages but over half of females at that age group.

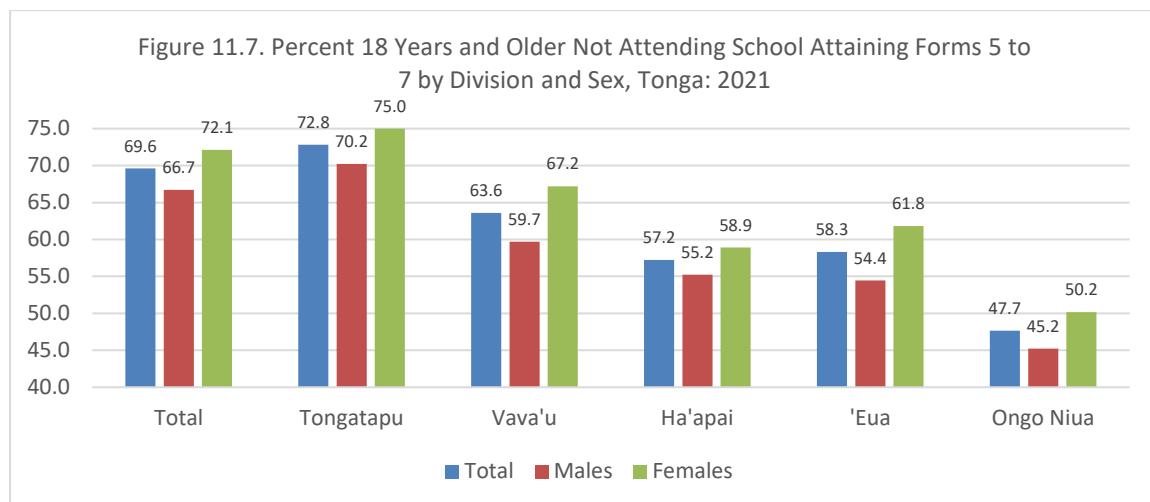
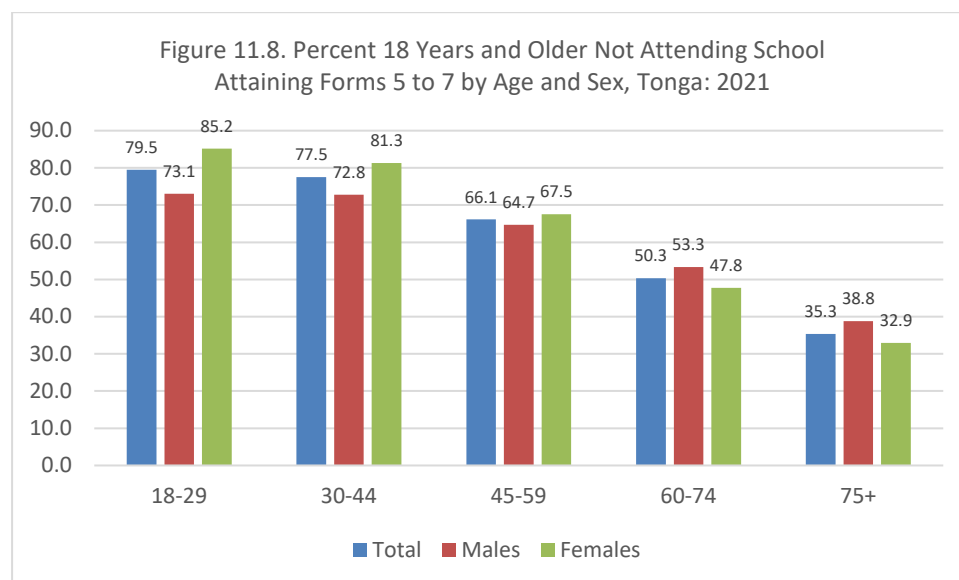


Table 11.4. Population 18 Years and Older and Not Attending School by Level of Education, Age and Sex, Tonga: 2021

	Numbers						Percents				
	Total	Pre & primary	Form 1 - 4	Form 5 - 7	Tech/Vied	Tertiary	Pre & primary	Form 1 - 4	Form 5 - 7	Tech/Vied	Tertiary
Total											
Total	49,296	2,682	12,294	22,118	3,722	8,480	100.0	94.6	69.6	24.8	17.2
18-29	12,845	220	2,417	6,458	1,590	2,160	100.0	98.3	79.5	29.2	16.8
30-44	15,179	332	3,076	7,184	1,266	3,321	100.0	97.8	77.5	30.2	21.9
45-59	12,529	582	3,661	5,757	610	1,919	100.0	95.4	66.1	20.2	15.3
60-74	6,442	900	2,300	2,125	213	904	100.0	86.0	50.3	17.3	14.0
75+	2,301	648	840	594	43	176	100.0	71.8	35.3	9.5	7.6
Median	41.7	63.5	47.7	39.6	33.2	39.4					
Male											
Total	22,814	1,246	6,349	9,562	2,216	3,441	100.0	94.5	66.7	24.8	15.1
18-29	6,056	132	1,500	2,810	955	659	100.0	97.8	73.1	26.7	10.9
30-44	6,670	197	1,618	2,908	735	1,212	100.0	97.0	72.8	29.2	18.2
45-59	6,154	287	1,886	2,632	367	982	100.0	95.3	64.7	21.9	16.0
60-74	2,987	380	1,015	968	131	493	100.0	87.3	53.3	20.9	16.5
75+	947	250	330	244	28	95	100.0	73.6	38.8	13.0	10.0
Median	42.0	60.3	45.4	40.2	33.1	43.1					
Female											
Total	26,482	1,436	5,945	12,556	1,506	5,039	100.0	94.6	72.1	24.7	19.0
18-29	6,789	88	917	3,648	635	1,501	100.0	98.7	85.2	31.5	22.1
30-44	8,509	135	1,458	4,276	531	2,109	100.0	98.4	81.3	31.0	24.8
45-59	6,375	295	1,775	3,125	243	937	100.0	95.4	67.5	18.5	14.7
60-74	3,455	520	1,285	1,157	82	411	100.0	84.9	47.8	14.3	11.9
75+	1,354	398	510	350	15	81	100.0	70.6	32.9	7.1	6.0
Median	41.4	65.8	50.0	39.2	33.3	37.2					

Source: Tonga Population and Housing Census 2021

Almost 80 percent of Tongans 18 to 29 years old were not attending school and had attained forms 5 to 7 or more. The percentages decreased as the age groups got older ending at 35 percent for 75 years and older.



Educational qualifications

Table 11.5 shows educational qualifications for persons 18 years and older and not attending school. The table shows percents both in the distribution by level and as cumulative percents. While 34 percent of the population had high school qualification, 59 percent had qualifications of high school or more. About 56 percent of the males and 61 percent of the females had qualifications of high school or above. Bachelor's degrees or more were about the same – 6.2 percent for the males and 5.6 for the females.

Table 11.5. Educational Qualification for Population 18 years and older Not Attending School, Tonga: 2021

	Numbers			Percents			Cumulative Percents		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Total	49,296	22,814	26,482	100.0	100.0	100.0	...	...	...
No Qualification	20,238	10,005	10,233	41.1	43.9	38.6	100.0	100.0	100.0
High school Qualification	16,856	7,152	9,704	34.2	31.3	36.6	58.9	56.1	61.4
Certificate	4,034	2,095	1,939	8.2	9.2	7.3	24.8	24.8	24.7
Diploma	5,270	2,155	3,115	10.7	9.4	11.8	16.6	15.6	17.4
Bachelor's degree	1,815	859	956	3.7	3.8	3.6	5.9	6.2	5.6
Postgraduate certificate/diploma	213	87	126	0.4	0.4	0.5	2.2	2.4	2.0
Master's degree	674	338	336	1.4	1.5	1.3	1.8	2.0	1.5
Doctorate degree	122	80	42	0.2	0.4	0.2	0.4	0.5	0.3
Other professional degree	74	43	31	0.2	0.2	0.1	0.2	0.2	0.1

Source: Tonga Population and Housing Census 2021

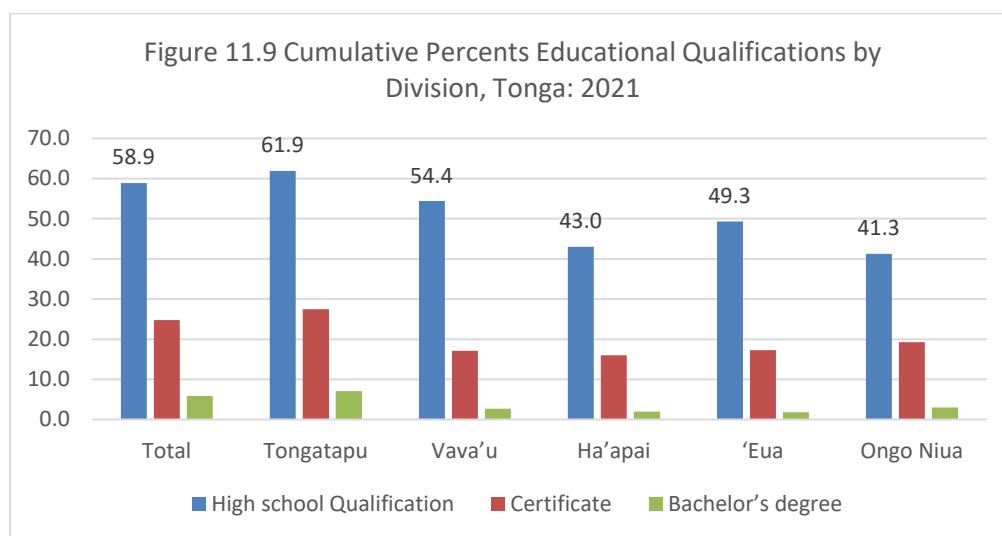
About 59 percent of persons 18 years and older had at least a high school qualification with Tongatapu's population having the most at 62 percent, and Ongo Niua at 41 percent. Ongo Niua had a higher percentage of people with Certificates, Diplomas and Bachelor's degrees than the other divisions except for Tongatapu.

Table 11.6. Cumulative Percent Educational Qualification for Population 18 years and older Not Attending School, Tonga: 2021

	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
No Qualification	100.0	100.0	100.0	100.0	100.0	100.0
High school Qualification	58.9	61.9	54.4	43.0	49.3	41.3
Certificate	24.8	27.5	17.1	16.0	17.3	19.3
Diploma	16.6	18.5	10.8	10.8	11.8	13.8
Bachelor's degree	5.9	7.1	2.7	2.0	1.8	3.0
Postgraduate certificate/diploma	2.2	2.7	0.8	0.6	0.4	0.7
Master's degree	1.8	2.2	0.5	0.6	0.3	0.2
Doctorate degree	0.4	0.5	0.1	0.1	0.1	0.0
Other professional degree	0.2	0.2	0.0	0.1	0.0	0.0

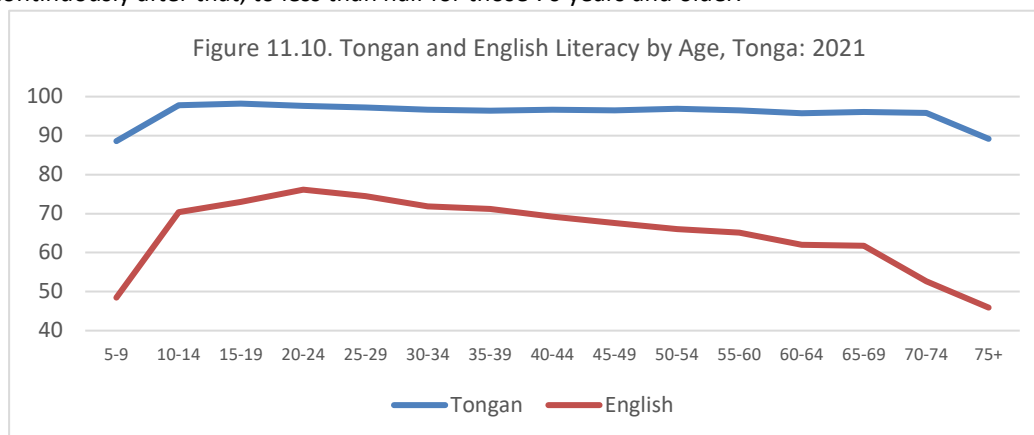
Source: Tonga Population and Housing Census 2021

Figure 11.9 shows the cumulative percents graphically. Note That these percents will not total to 100 percent. More than half of the adult population has at least high school qualification, about 1 in 4 had a certificate or more education, and about 6 percent had a Bachelor's degree or more.



Literacy

The Census measured literacy by asking people to rate their ability to read and write in Tongan and English. Figure 11.10 shows the percentage of the population aged 5 years and older who were literate in Tongan and in English. Most residents 10 years and older were literate in Tongan. But for English, about half of the youngest children were literate in English. The percentage increased to about 3 in 4 at ages 20 to 24 before decreasing continuously after that, to less than half for those 70 years and older.



For ages 20 to 70, females were more likely to be literate in Tongan than males (Figure 11.11). But, as the figure shows, almost all residents were literate in the Tongan language.

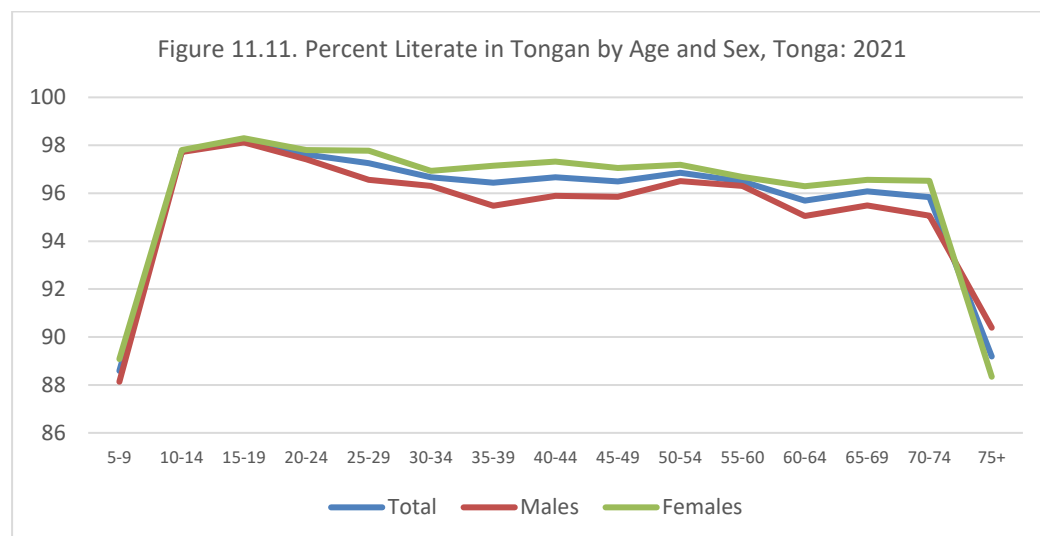


Figure 11.12 shows the percentages of persons who spoke Tongan only, spoke Tongan and another language, or spoke another language only. About 85 percent of the population spoke only Tonga, and including 94 percent of those in Ongo Niua, 93 percent of those in Ha'apai, and 90 percent of those in Vava'u. About 16 percent of Tongatapu's population and 14 percent of 'Eua's spoke Tongan and another language (usually English). Very few people spoke only another language; most Tongans in Tonga spoke Tongan.

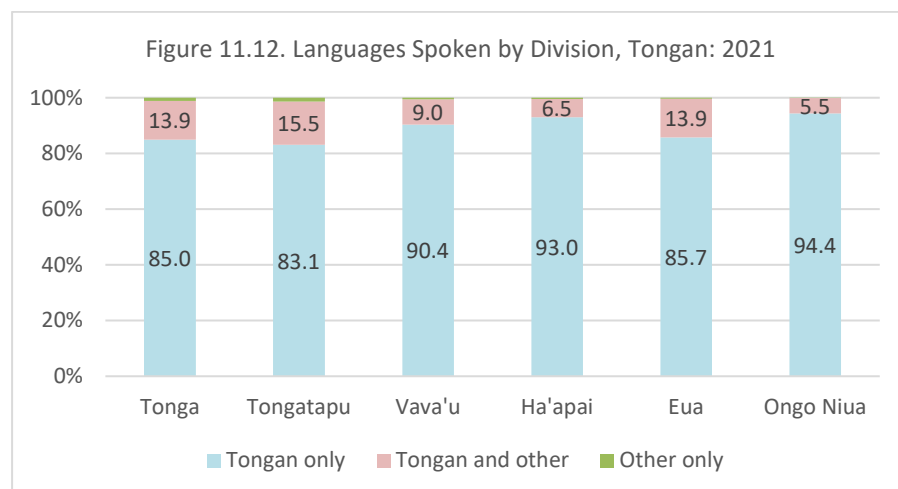
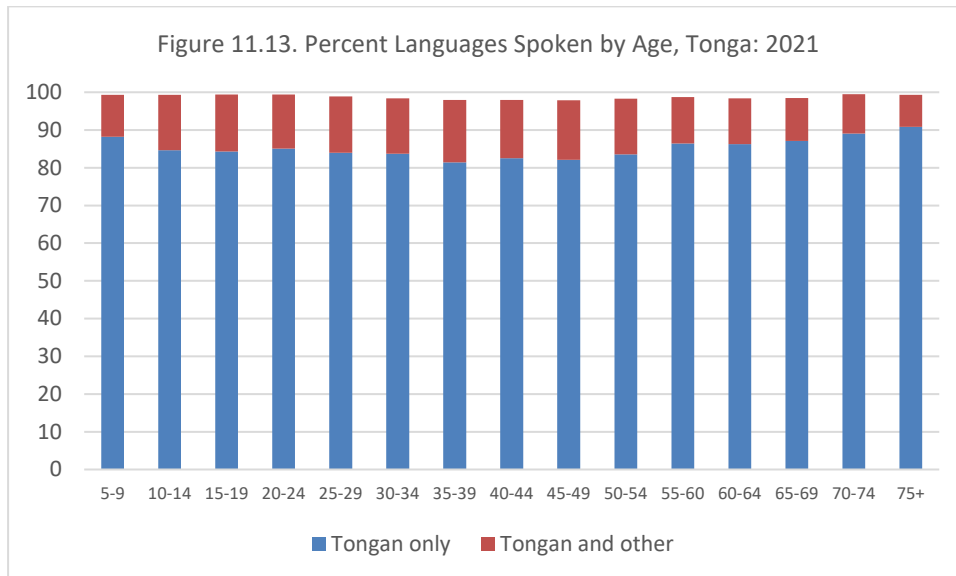


Figure 11.13 shows Tongan language speaking by age. The figure shows a curve, where the percentage speaking Tongan only decreased from 88 percent for those 5 to 9 to about 81 percent of those 35 to 39 and then increasing age by age to about 90 percent – about 9 in every 10 – for those residents 75 years and older.



Conclusions

Tonga has almost universal education – all children go to school, at least until age 14. Tonga has a well-educated population, better educated than in most other Pacific countries. And, while almost everyone speaks Tongan, increasing numbers also speak English.



CHAPTER 12: COMMUNICATION AND VOTING

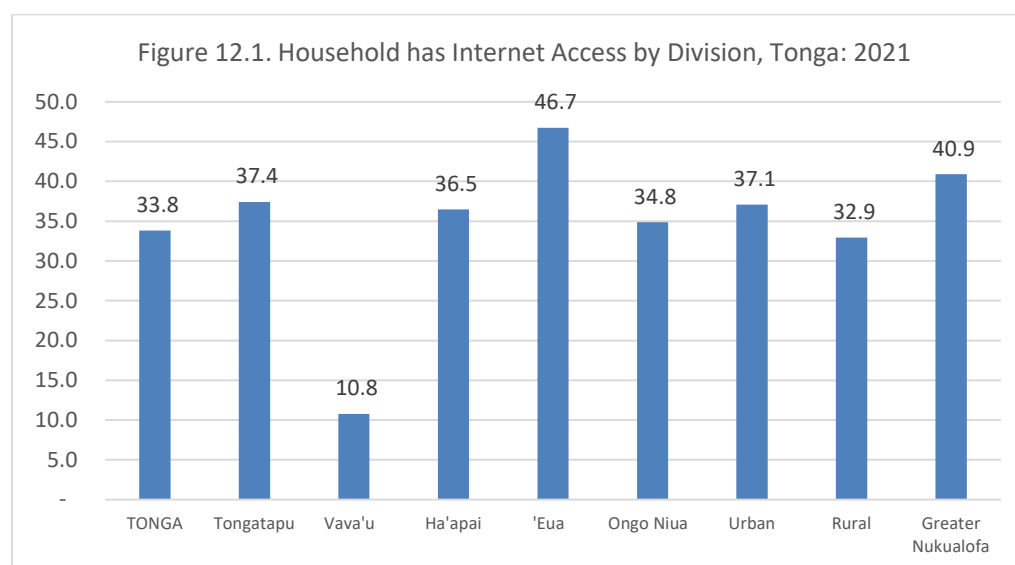
The 2021 Census asked respondents a series of questions about their:

1. Access to, and use of, the internet.
2. Mobile phone ownership and data usage and
3. The purpose of using mobile data for the internet.

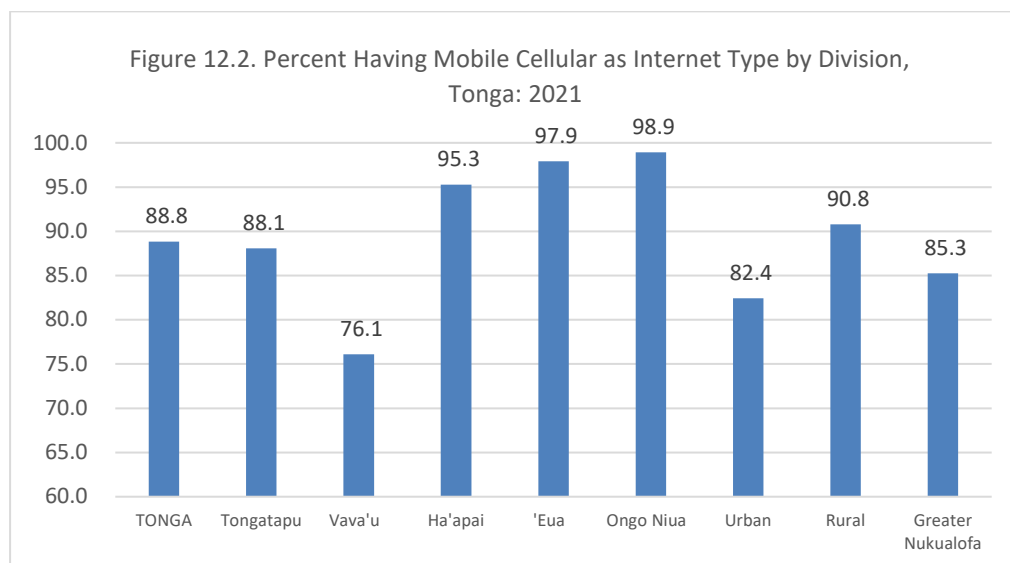
These data are useful in monitoring key SDG indicators for Tonga and informing the government about which segments of the population require investment in ICT connectivity. The 2021 Census asked about cell phones and the internet in two places. The census asked each person in Tonga about their access to a cell phone and to the internet. But the census also asked whether the entire household had access to cell phones and the internet. So, we show the results here.

Household internet use

About 1 in every 3 private households in Tonga in 2021 had internet access (Figure 12.1). Almost all the households in 'Eua had access to the internet, the highest proportion of the divisions. But only 1 in every 10 of the households in Vava'u had internet access. The others were close to the total for Tonga. As expected, urban households were more likely to have access to the internet than rural households.

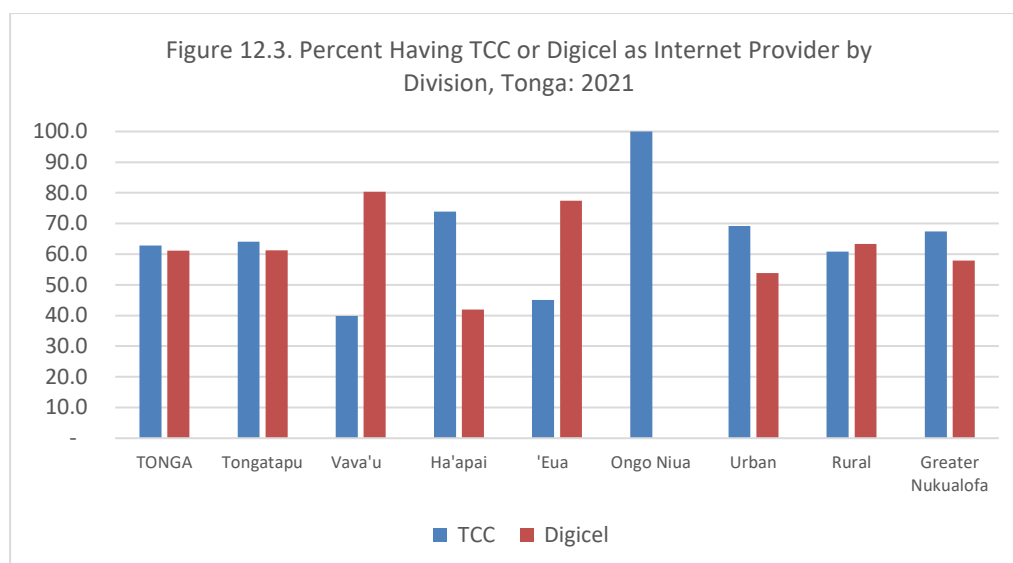


Of those who had internet access, some households had at least one person with access to the internet through a mobile cell phone (Figure 12.2). About 7 in every 8 households had this type of access, and the percentage jumped to over 95 percent for Ha'apai, 'Eua, and Ongo Niua. Altogether, about 82 percent of the urban households had access to the internet through a cell phone compared to 91 percent of those in rural areas.



Household mobile phone providers

Figure 12.3 shows the division between TCC and Digicel as the providers of the internet in Tonga in 2021. About 3 in every 5 households in Tonga had either TCC or Digicel as providers of their internet. Ongo Niua did not have Digicel as a provider, and, with Ha'apai, had TCC as their primary provider. Digicel was the primary provider for Vava'u and 'Eua and Tongatapu had about an equal division between the two. TCC predominated in urban areas, but slightly more households in rural areas used Digicel over TCC.



Individual internet use

The 2021 Tonga census also collected individual use of the internet besides the household use described above. Table 12.1 and Figure 12.4 show the percentage of persons using the internet by age and sex in 2016 and 2021.

Table 12.1. Percent People Using the Internet by Age and Sex, Tonga: 2016 and 2021

	2016			2021		
	Total	Males	Females	Total	Males	Females
10-14	5.6	5.2	6.1	10.9	11.0	10.8
15-19	35.1	32.3	38.1	54.7	56.9	52.3
20-24	53.3	48.3	58.2	84.4	82.3	86.2
25-29	52.5	48.6	56.1	86.5	82.7	89.3
30-34	50.2	45.2	54.5	84.4	80.4	87.5
35-39	43.3	39.4	46.9	83.4	78.7	87.0
40-44	37.2	34.1	40.0	80.2	77.2	82.7
45-49	27.7	26.2	29.3	72.3	68.1	75.9
50-54	23.2	23.5	22.8	64.3	62.7	65.9
55-60	16.7	18.5	15.0	52.5	51.2	53.9
60-64	10.7	12.4	9.2	42.5	41.9	43.1
65-69	6.9	9.8	4.2	29.4	31.1	28.0
70-74	4.5	5.2	3.8	18.8	22.9	15.3
75+	1.8	2.3	1.4	9.1	9.9	8.5

Source: Tonga 2016 and 2021 Censuses

Internet use by age and sex changed little between 2016 and 2021, although it increased for each sex and each age group over the 5-year period.

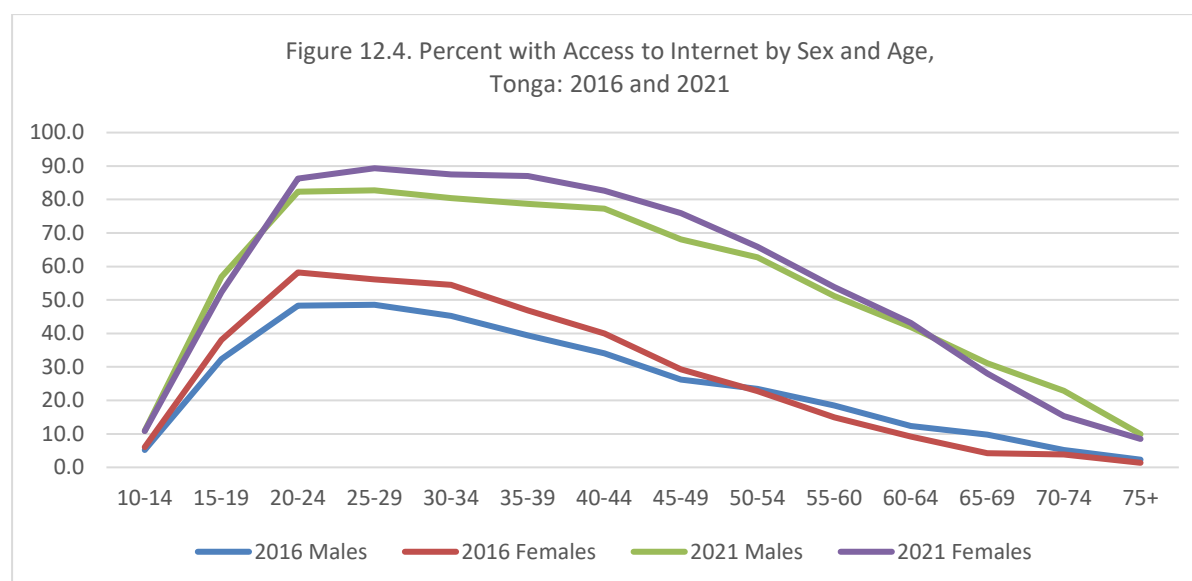
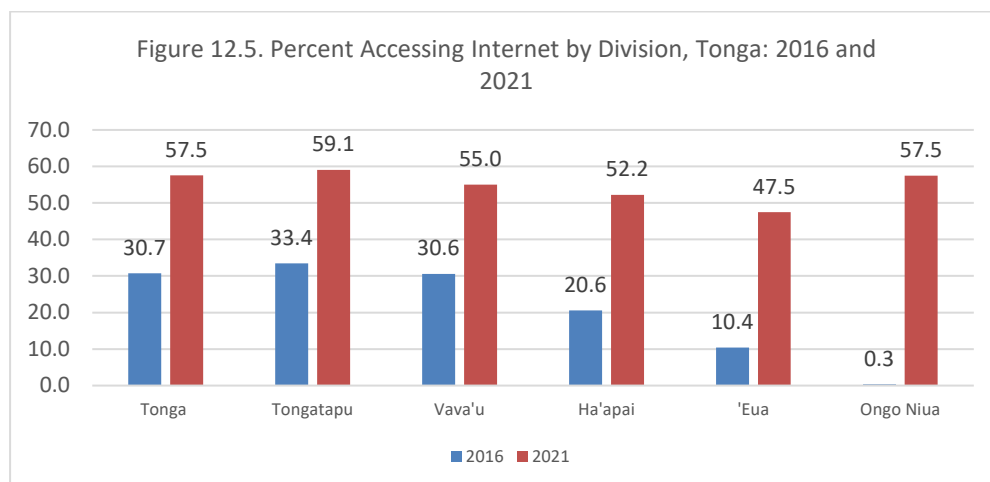


Figure 12.5 shows the percentage of each division being able to access the internet in 2016 compared to 2021. In all cases, the percentage of being able to access the internet increased during the 5 years, as expected. About 3 in 10 of the population 10 years and older accessed the internet in Tonga in 2016, but this number increased to about 58 percent – over half – in 2021. All the divisions saw large increases as well. While less than 1 percent of the residents of Ongo Niua could access the internet in 2016, about 58 percent had access in 2021. The proportions for Tongatapu were about 1 in 3 in 2016 but 3 in 5 in 2021. About 63 percent of those living in urban areas had access to the internet compared to about 56 percent of those in rural areas in 2021.



About 3 out of every 4 residents accessed the internet from home (Figure 12.6). The percentage was highest in Ha'apai at 80 percent – 4 of every 5 accessing the internet). About 70 percent of those in urban areas accessed the internet at home compared to about 76 percent if those in rural areas. About 11 percent of those accessing the internet did so at work, with Tongatapu at 12 percent, the largest proportion. But, about 16 percent of those living in urban areas accessed the internet to work, compared to 10 percent of those living in rural areas.

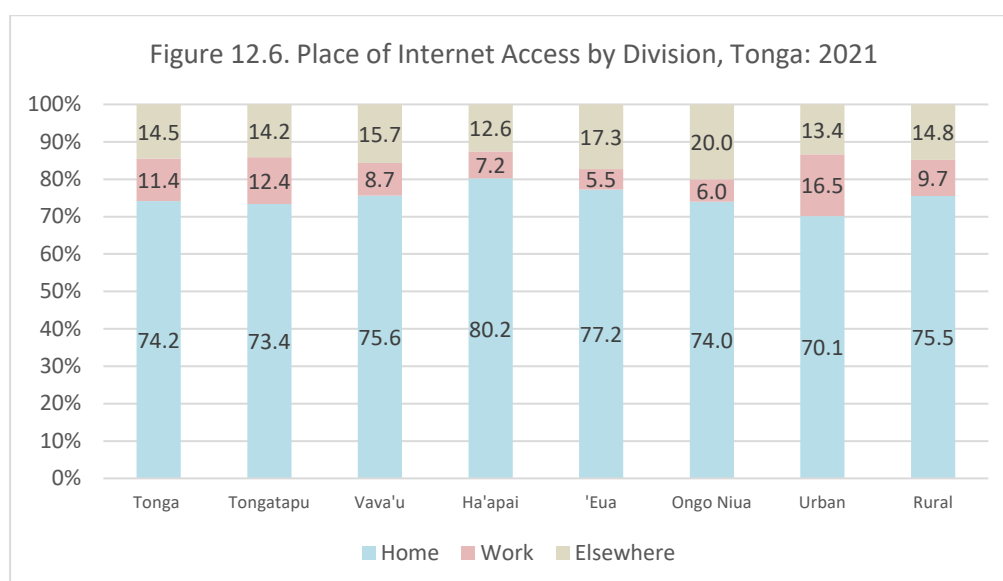
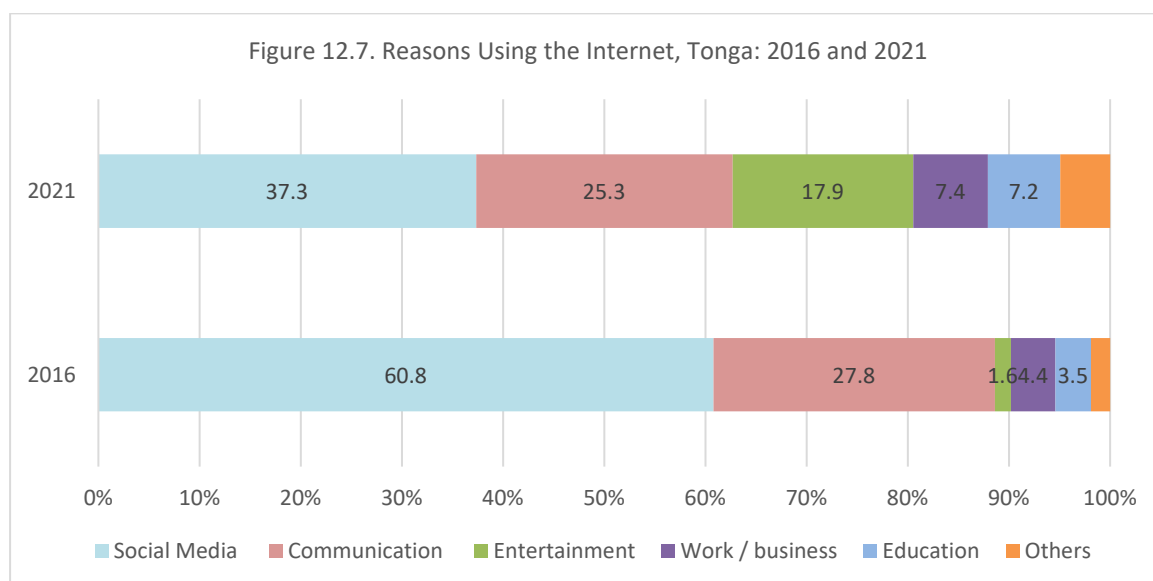
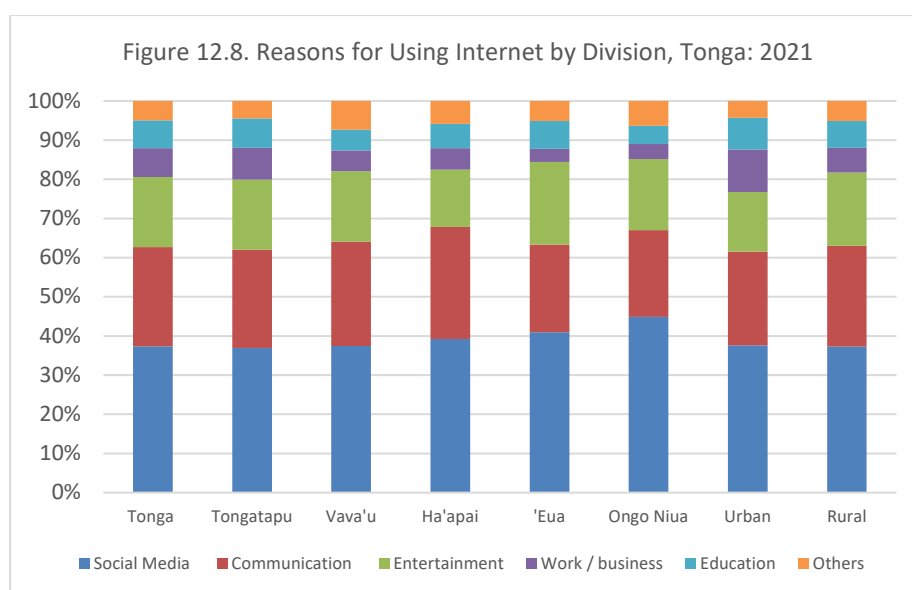


Figure 12.7 shows the change in usage of the internet between 2016 and 2021. About 61 percent of the users in 2016 were on social media, and 28 percent used the internet for communication, with the other reasons used only in lesser amounts. By 2021, the landscape had changed about 37 percent of the usage was for social media, and 25 percent was for communication (only a small decrease). But in 2021, 18 percent of the usage was for entertainment, 7 percent was for work, and 7 percent was for education.



The percentages of usage across the divisions and by urban/rural residence were not vastly different (Figure 12.8). Respondents used the internet for work more in urban areas than in rural areas, but the rural areas were more likely to use the internet for entertainment than the urban areas.



Individual mobile phone use

Figure 12.9 shows the percent of households with at least one mobile phone by division. About 62 percent of the households had at least one mobile phone. Those on Tongatapu, at 64 percent – almost 2 out of every 3 – were the most likely to have a mobile phone available. Those in Ongo Niua were the least likely to have one, at 56 percent, with the others in between. Over 2 out of every 3 households in urban areas had a mobile phone, compared to about 3 out of 5 in rural areas.

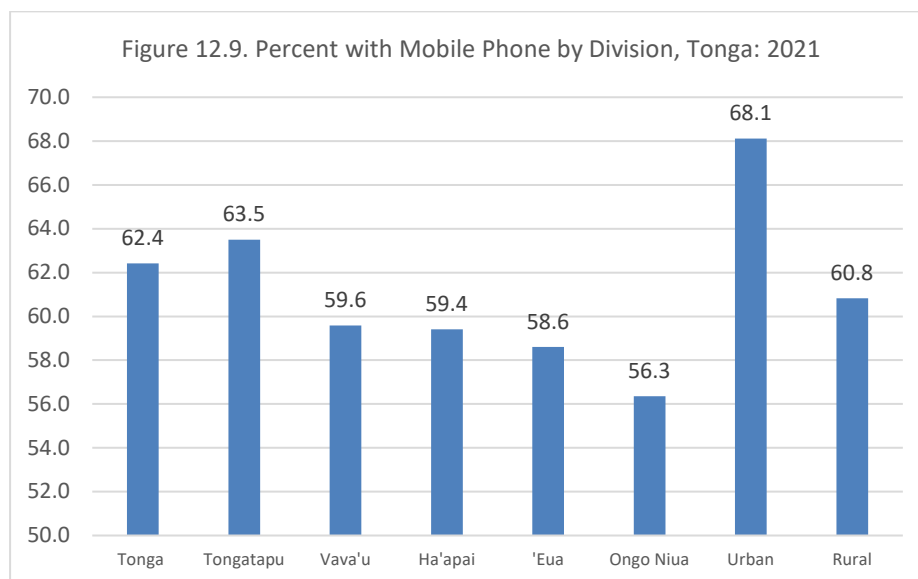


Figure 12.10 shows the mobile phone providers in the divisions. Ongo Niua had only TCC as its provider, but the others had amounts of each, and many households had both services. About 55 percent of the households in urban areas subscribed to TCC and 32 percent to Digicel (and 13 percent to both) compared the rural areas where about 41 percent used TCC, 47 percent used Digicel, and about 12 percent used both services, like the urban areas.

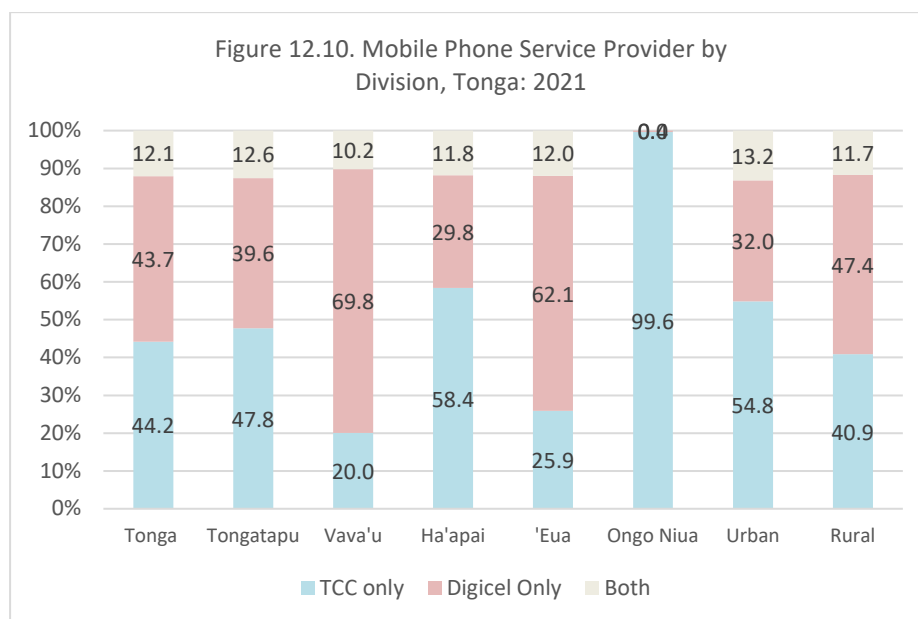


Figure 12.11 shows the remarkable way mobile phones had become universal in Tonga. While the percentage of the population having a mobile phone increased continuously from age 10 to about age 25, about 9 out of every 10 adults to about age 45 had a mobile phone, and then the percentage decreased for the elderly. Males and females had mobile phones in about the same percentages.

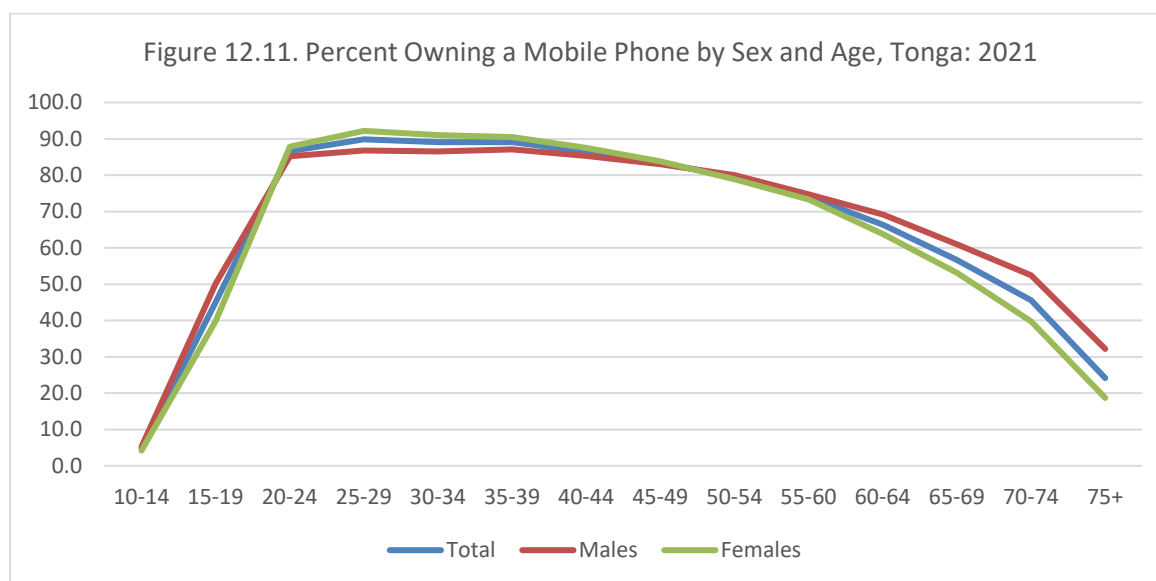
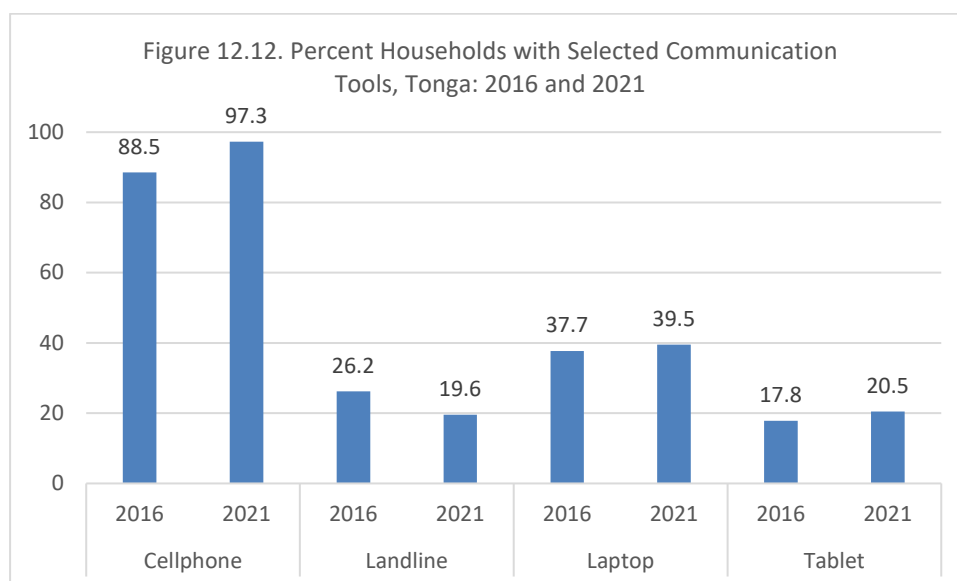
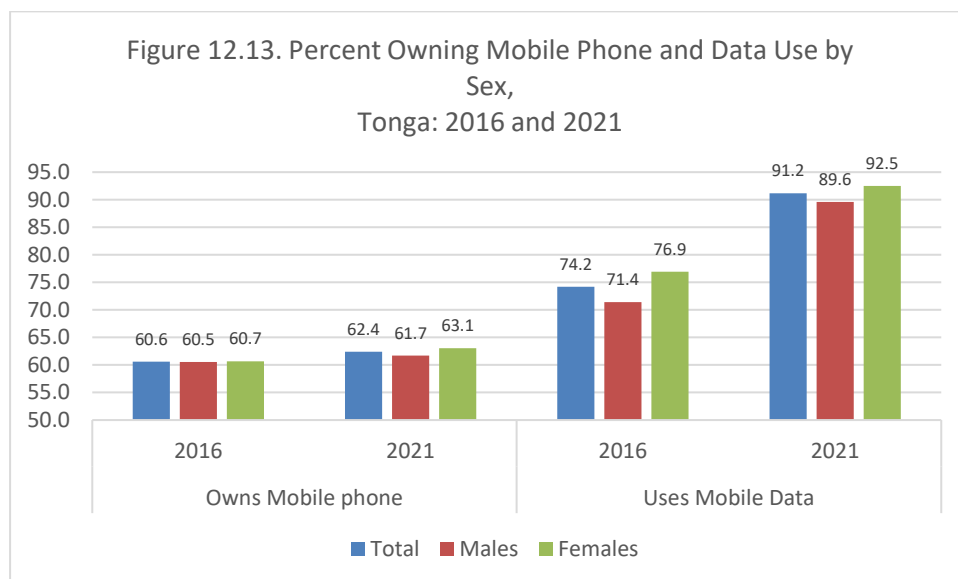


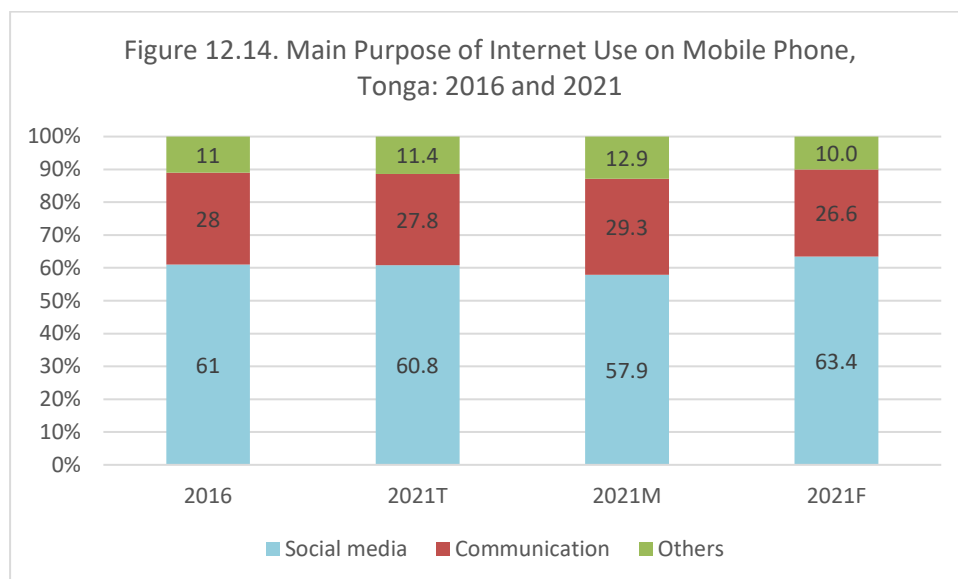
Figure 12.12 shows communication tools used in 2016 and 2021 to see the changes. The percentage with a cell phone increased from 88 percent in 2016 to 97 percent in 2021. Note that cell phones appear on both the population and housing forms and so the numbers of users will vary. While the percentage with a cell phone went up, the percentage of households with a landline decreased, from about 1 in 4 households to about 1 in 5. The percentages of laptops remained about the same, at 2 in 5, and the percentage of tablets increased to 1 in 5 as well.



In 2016, about 61 percent of the population aged 10 years and over had a working mobile phone, with no difference in ownership rates between males and females (Figure 12.13). The percentages increased very little in 2021, males by one percentage point and females by about 1 ½ points. But the use of data on the mobile phone increased considerably. About 3 out of every 4 Tonga residents used data on the mobile phone in 2016, with females about 5 points over the males. But, in 2021, about 9 in every 10 mobile phone users used data supplied on the phone. Again, females, at 92 percent, used data over males (90 percent).



The primary use of mobile data for the internet were to access social media (61 percent of those using mobile data). The second place was communicating (28 percent) as shown in Figure 12.14. The percentages did not change between 2016 and 2021. But, in 2021, females used social media about 6 percentage points more than the males.



Voting

The 2021 Census asked questions on voting registration and on recent voting patterns. The census asked these items only to persons 21 years and older. Figure 12.15 shows that about 86 percent of the eligible voters registered to vote in a recent election. Ongo Niua had the highest percentage of registered voters at 94 percent, Tongatapu had the lowest percentage at 85 percent. Urban potential voters registered in smaller numbers than rural voters.

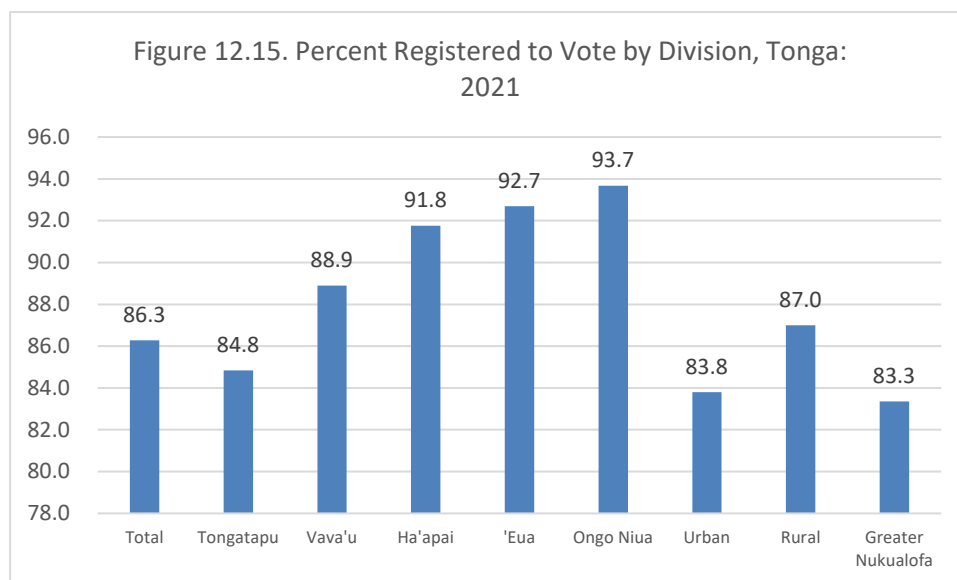
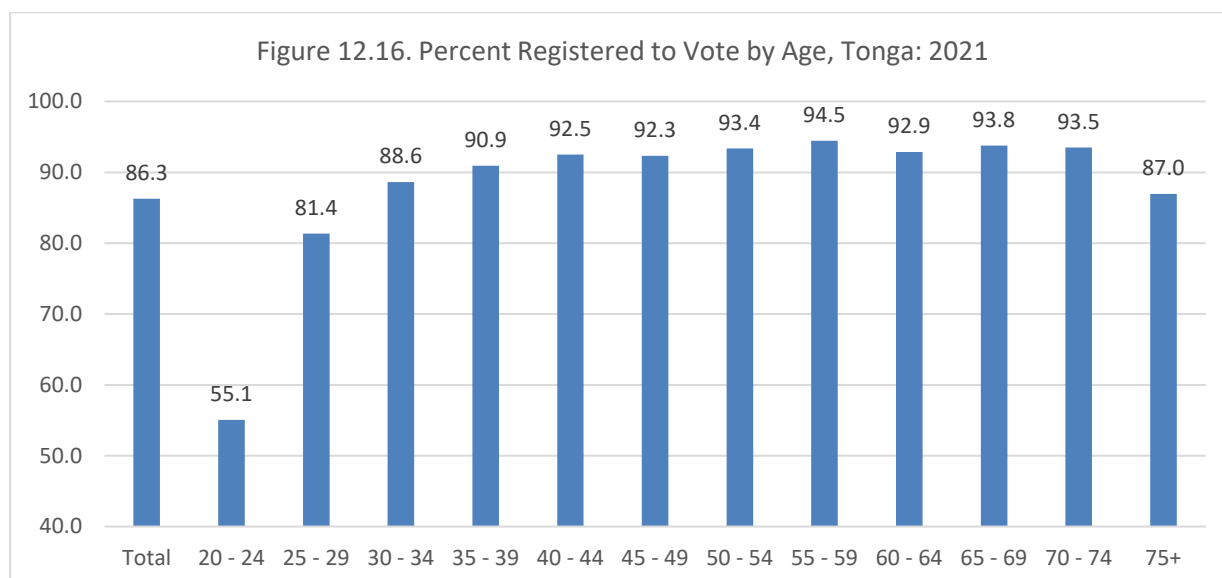


Figure 12.16 shows the percent registered to vote in Tonga in 2021 by age. Only about 55 percent of those 21 to 24 registered to vote, but that increased to 81 percent for those 25 to 29, and over 90 percent for those between 35 and 74, before decreasing to about 7 of every 8 who were 75 years and older at the time of the census.



Few residents reported not registering because they were abroad during the period of registration. About 1 in 5 reported that they were too old or sick and did not register, except in Ongo Niua where the percentage was much higher, at about 1 in 3 (Figure 12.17). About 3 in 10 were not interested in voting so did not register, about 1 in 5 did not know where to register, about 1 in 10 were not citizens, and about 15 percent had another excuse.

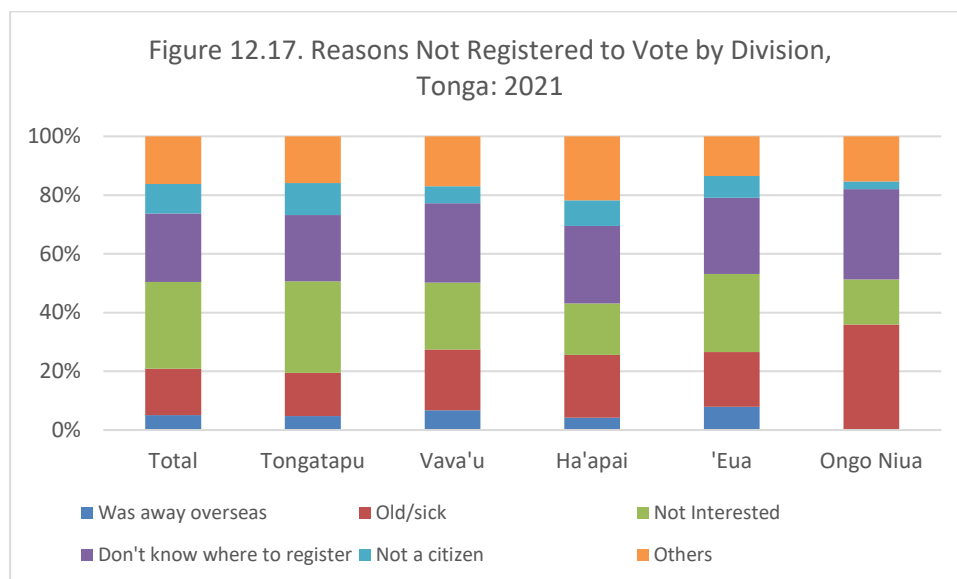
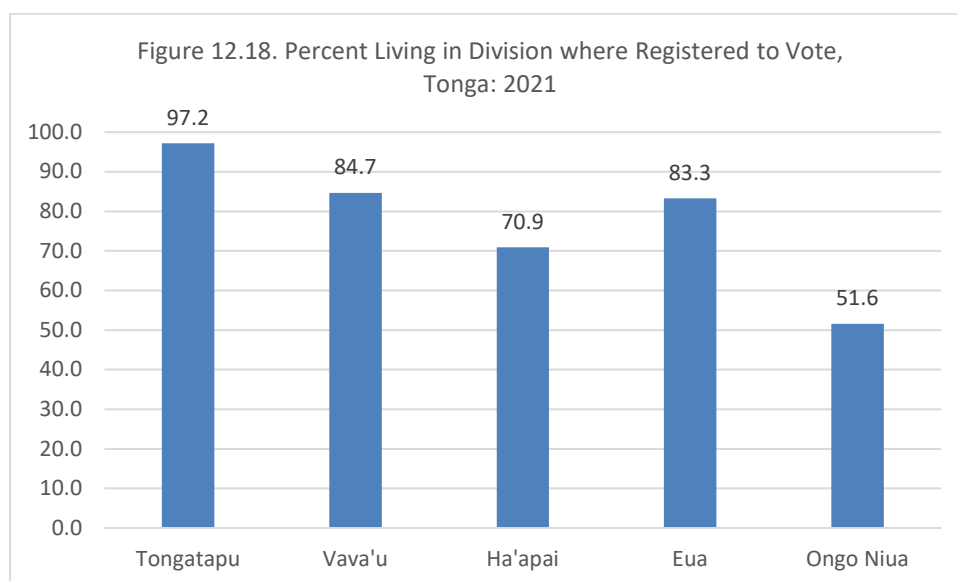
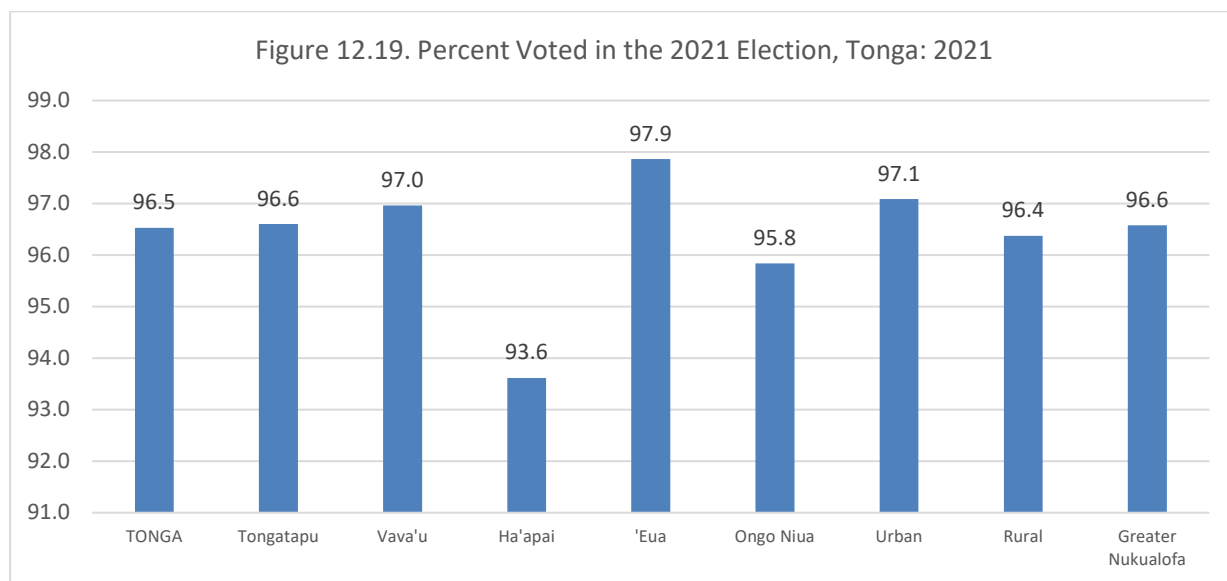


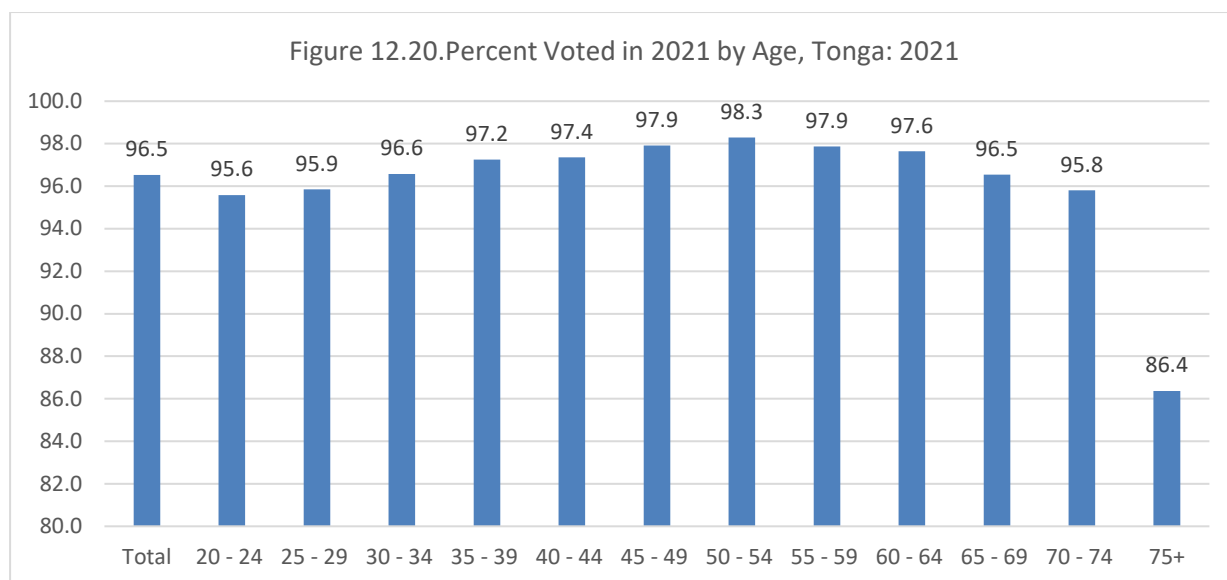
Figure 12.18 shows the percentage of persons 21 years and older who registered to vote in the Division where they were living at the time of the 2021 census. About 97 percent of those registered to vote in one of the 10 constituencies on Tongatapu were living there at the time of the census. About 85 percent of those voting in Vava'u and 83 percent of those voting in 'Eua were living in those specific Divisions. Only about 7 in 10 of those voting in Ha'apai and only about half of those voting in Ongo Niua were living in their division at the time of the census.



About 96 percent of the Tongans who could vote in the 2021 election did vote in that election (Figure 12.19). Those in 'Eua Division had the highest percentage voting, at about 98 percent. Ha'apai had the lowest percentage of voting, at 94 percent, but this was still an extremely high percentage by Pacific Islands and world standards.



About 96 percent of the population voted in the 2021 election (Figure 12.20). The highest was 98 percent for those 45 to 64, the lowest was 86 percent for the elderly, those 75 years and over. Most Tongans eligible to vote in the election voted.



Conclusion

Mobile phones with mobile phone service is universal in Tonga. The Internet presence and use continues to expand both in geography and power. And most Tongan adults register and vote.

CHAPTER 13: LABOUR MARKET ACTIVITY

Introduction

The 2021 census individual questionnaire included a "Labor Market Activity" section. The Census instructed enumerators to ask each respondent 15 years of age and over the question: "During last week, which of the following did you mainly do?"

Enumerators reported the primary activity during the reference week, or the last week, if the person had a job and was paid for whatever they did. The enumerators coded respondents on the questionnaire into the mutually exclusive categories of:

- 1) Working for pay
- 2) Working in any kind of business activity
- 3) Working in own farming or gardening, raising animals or livestock, fishing and handicrafts
- 4) Studying
- 5) Household duties
- 6) Working without pay in family business
- 7) Working apprenticeships internships
- 8) Working voluntary without pay, Community, charity work
- 9) Looking for work
- 10) Retired or pensioner (too old)
- 11) With long-term illness, injury or disability

A person that is **"Working for pay"** is an employee working for someone else as a salary/wage earner.

"Working in any kind of business activity" suggests that the person is self-employed or an employer who owns a business.

A person **"Working in own farming or gardening, raising animals or livestock, fishing and handicrafts"** is involved in agriculture, livestock (cows, pigs, chicken, etc.) and handicraftmaking of traditional tapa (ngatu, fala, kiekie, etc.) or fishing for sale or own consumption.

"Studying" refers to those who are doing full-time or part-time studies as their main activity.

"Household duties" refers to those who do not have any work and are mainly involved in household duties and chores, eg. Washing, cooking, cleaning, gardening, fetching firewood, cutting grass etc.

"Working in family business without pay" - persons working in a family business without getting paid. For example, the household owns a shop and members of the household work as shopkeepers. Individually they are not getting paid for their work.

"Working apprenticeship, internship" – the position of a student or trainee who works in an organization, in order to gain work experience or satisfy requirements for a qualification.

"Working voluntary without pay, community, charity work" - person doing charity work without pay, or doing community work or voluntary work at religious organization for no pay.

"Looking for Work" – person not working but currently looking for work. This does not apply to those that are currently working but also looking for other work.

"Retired or pensioner/ Old age" – persons who have retired or pensioners (old aged) and are not involved in any work mentioned above.

"With long-term illness, injury or disability" – persons with long-term illness, injury or disability and currently not working.

People classified as *unemployed*:

- 1) they did not work in the previous week (other than those who had a job but were not at work during the reference week) i.e. they are not in employment, but
- 2) spent some time looking for work, and
- 3) were available to work if offered a job.

A person did not work and was not available for work if offered a job, and/or did not spend time looking, was then classified as **economically inactive** (not in the labour force).

The following analysis of Tonga's unemployment level provides an alternative approach to include subsistence workers as part of the unemployed, because these people would look for work if they believed cash work was available in their labour market community. Those indicating that they had a job but were not at work during the reference week were "employed".

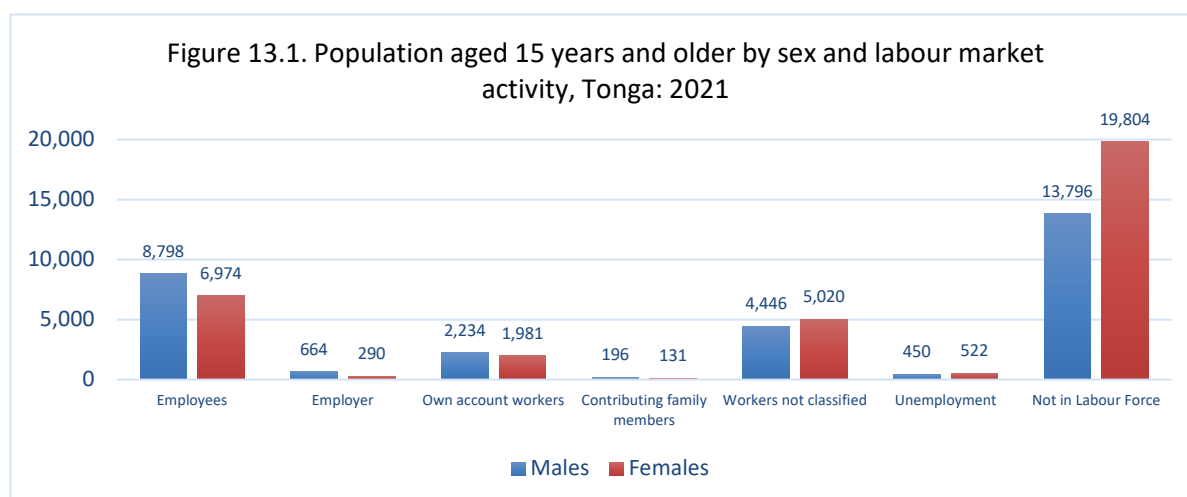
Three categories of labour market activities are used in the analysis:

- **employment** is defined as those above 15 years of age who, during a last week, were engaged in any activity to produce goods or provide services for pay or profit, including those at work (worked for at least one hour) and those not at work due to temporary absence or working-time arrangements. This includes various forms of employment, such as training, apprenticeships, self-employment, and even includes those temporarily absent from work but with an expected return, with exclusions for certain conditions like indefinite lay-offs. According to the Census, this includes: Working for pay; Working in any kind of business activity; Working **for sale** in own farming or gardening, raising animals or livestock, fishing and Handicrafts; Working in family business without pay; Working apprenticeship, internship; Do any (other) work to generate an income; Help without pay in a family business; Have a paid job or business activity, but (were/was) temporarily absent);
- **unemployment** (see definition above);
- **not in the labour force** (those not in employment or unemployment). Optional definitions of unemployment are also provided below.

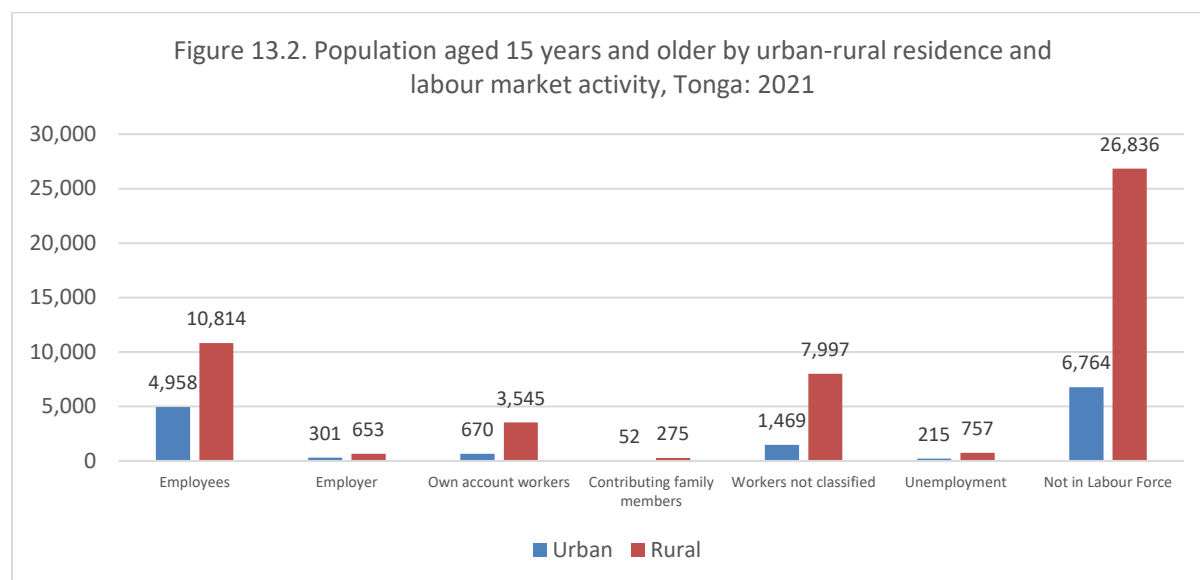
Employment

As indicated, those people who are defined as being in employment (30,734 people) included 15,772 (51 percent) Employees (including paid apprentices, internship, etc.), 954 (3 percent) Employers, 4,215 (14 percent) Own-account workers, 327 (1 percent) Contributing family workers, and 9,466 (31 percent) are workers that are not classifiable.

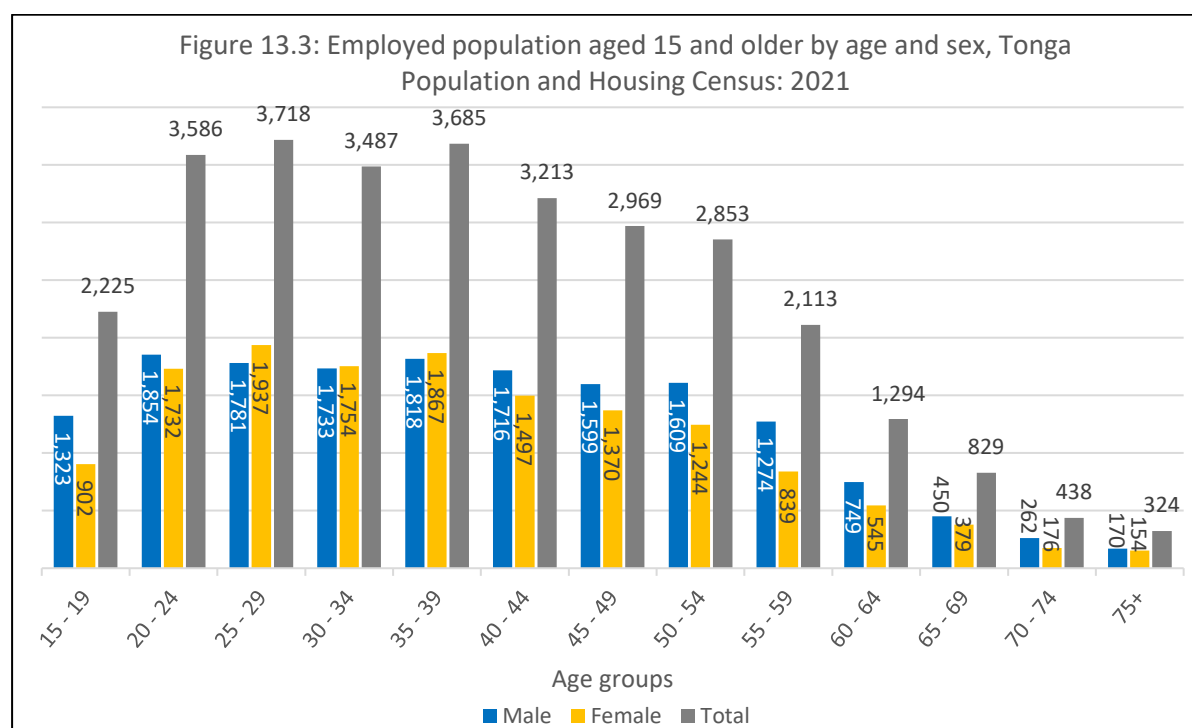
The total number of people in employment consisted of 16,338 (53 percent) males and 14,396 (47 percent) females (Figure 13.1). Of these, 7,450 (24 percent) lived in the urban area, and 23,284 (76 percent) in rural areas (Figure 13.2).



The total number of Employees was 15,772 of which, 8,798 (56 percent) were males and 6,974 (44 percent) were females. This is consistent with the overall gender distribution of people in employment, indicating that there is equal opportunity for females to obtain paid positions as employees. From an urban-rural perspective, 4,958 (31 percent) of the Employees were in the urban area, and 10,814 (69 percent) held paying jobs in the rural areas.



Looking at employed people by age group, there were 5,811 people in the 15–24-year-old age group, 22,038 in the 25–59-year-old age group, and 2,885 in the 60 years and over age group (Figure 13.3). The difference between males and female numbers is greatest in 15–24 year age group, and this may reflect women not entering the workforce until a later age due to study and/or childbearing.



Labour force participation rate and employment - population ratio

The labour force participation rate is the number of people in the labour force divided by the corresponding total population with the same characteristics, multiplied by 100. The employment-population ratio is the number of people employed in cash work divided by the corresponding total population with the same characteristics, multiplied by 100.

Figure 13.4 provides an overview of the labour force participation rate and the employment-population ratio for the total population aged 15 years and older by sex. Table 13.1 breaks the same indicators further down to urban and rural areas.

The labour force participation rates were higher for males than for females, and also higher for rural than urban populations. In contrast, the employment-population ratio was higher for the urban than the rural population.

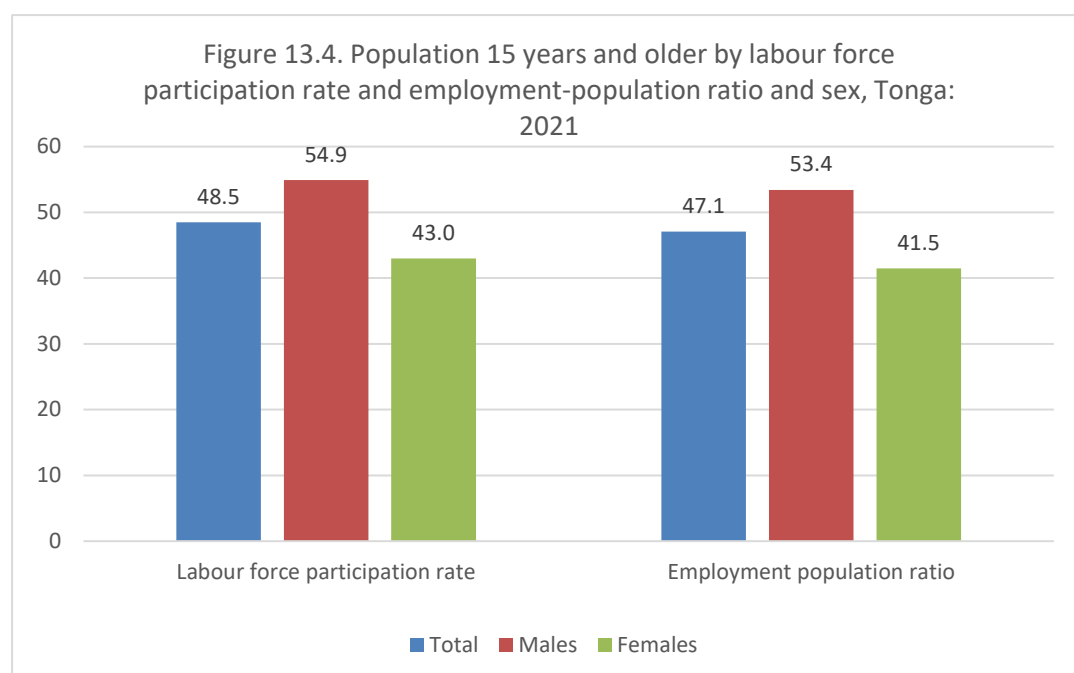


Table 13.1. Population aged 15 years and older by sex, urban-rural residence, labour force participation rate, and employment-population ratio

	Labour Force participation rate	Employment-population ratio
TONGA	48.5	47.1
Male	54.9	53.4
Female	43.0	41.5
Urban	53.1	51.6
Male	60.1	58.6
Female	47.1	45.6
Rural	47.3	45.8
Male	53.4	52.0
Female	41.8	40.3

Source: 2021 Tonga Census

The labour force participation rate and the employment-population ratio were higher for males than for females at all ages (Figure 13.4A and 13.5).

The labour force participation rate for females did not exceed 60 percent at any age, while that of males was over 70 percent at ages 30–49.

Figure 13.4A: Population aged 15 and older by age, sex and labour force participation rate, Tonga: 2021

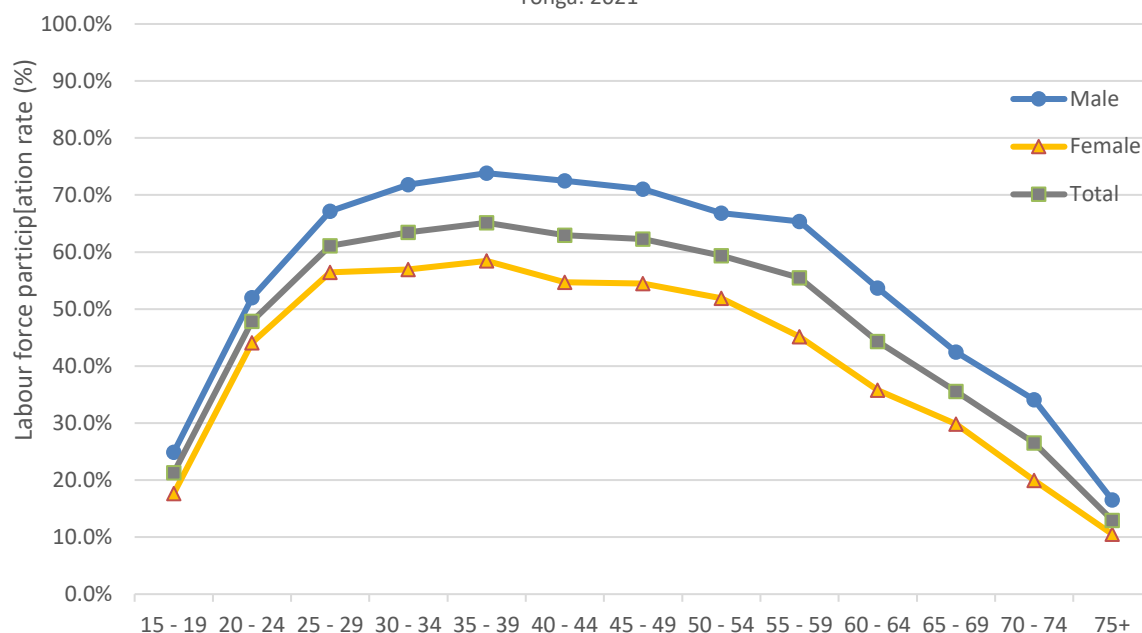
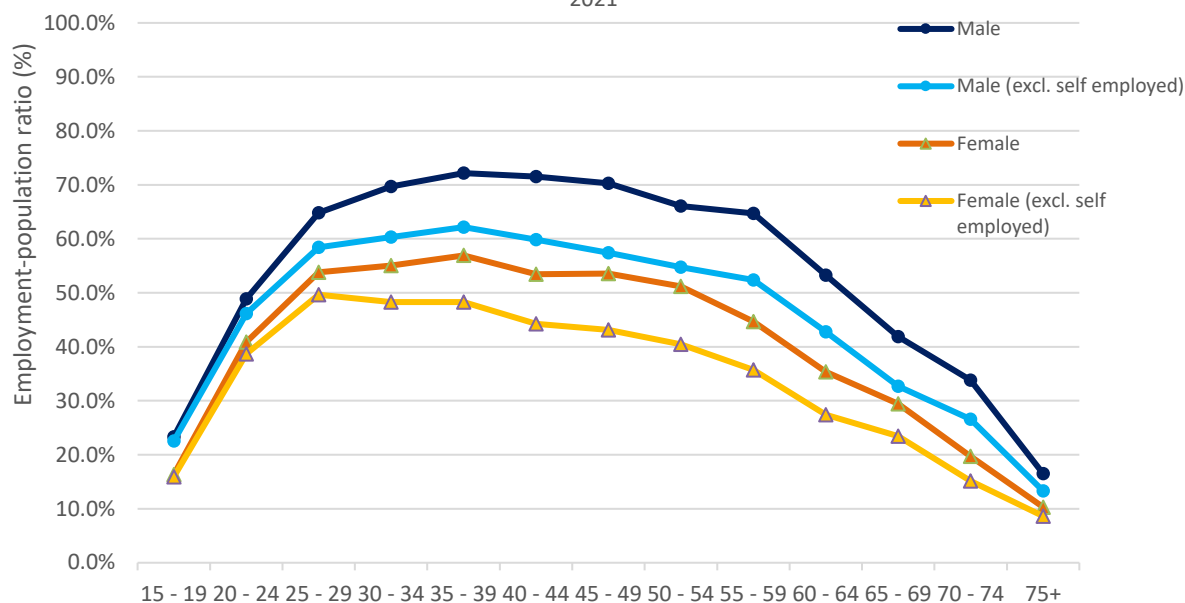


Figure 13.5: Population aged 15 and older by age, sex and employment-population ratio, Tonga: 2021



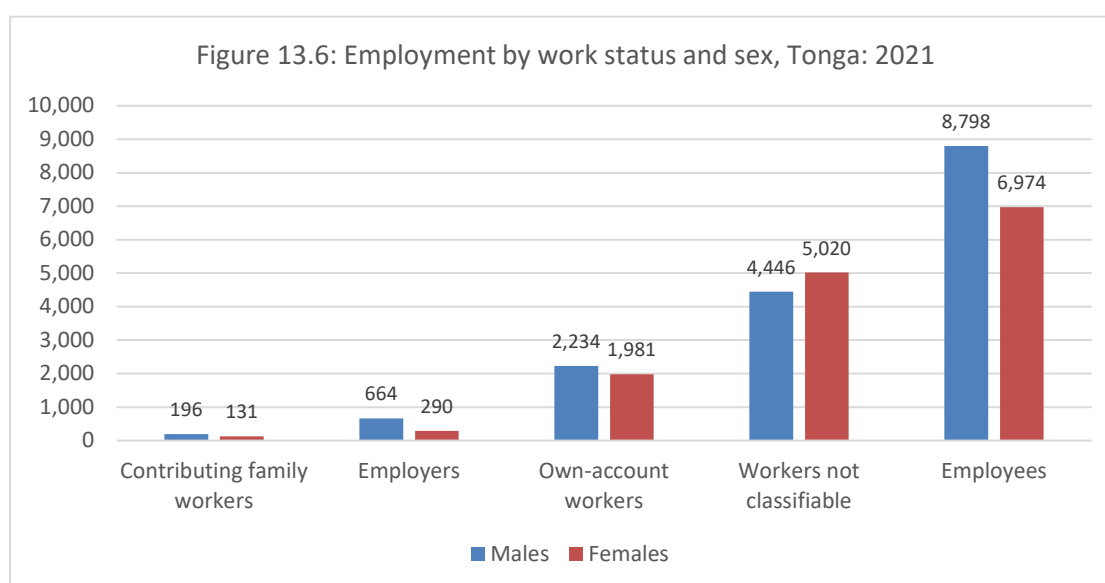
The employment-population ratio is categorized as either: *all* people that work for cash (whether contract worker or self-employed); or *excluding* self-employed people that farm, fish or produce handicrafts for sale.

About seventy percent of all males aged 45–49 years were employed as cash workers while slightly greater than 50 percent of females aged 45–49 years were employed as cash workers. The highest percentage of female cash workers were aged 35–39 years (57 percent).

A general pattern of low participation rates at ages 15–19 years, and relatively high participation rates at ages 60–70 years was observed, indicating that many older people keep providing economically for themselves and their household/families.

Employment by work status

About 51 percent of all employment were employees (employee – working for someone else for paid, including paid apprentices and internships etc.): 8,798 males and 6,974 females (Figure 13.6).



There were only 954 employers, which is 3 percent of all employment. Another 4,215 people (14 percent of all cash workers) were self-employed; 2,234 males and 1,981 females.

Thirty one percent of employment did not indicate their status in employment; hence they are considered as workers that are not classifiable; 4,446 males and 5,020 females.

In every work status category aside from “Workers Not Classifiable”, there were considerably more males than females.

Employment by industry group

The main industry groups of employed workers in Tonga were *Public Administration* (3,295), *Manufacturing* (2,843), *Agriculture & Fishing* (2,435) and *Education* (2,393) which together is slightly over 35 percent of the total employed workers (Table 13.2). While *Manufacturing* and *Education* was dominated by females, employees in *Agriculture Forestry and Fishing* were almost all men.

The other sizeable industry groups with a significant proportion of the employed people were: *Trade (wholesale, retail or any other form of business)* – 1,960 (6.4 percent); and *Construction* – 1,845 (6 percent). Employment levels in the remaining industry groups all represent less than 5 percent of the total.

Table 13.2. Total Employment by Industry Group and Sex, Tonga: 2021

	Number of people			Percents			Males per 100 Females
	Total	Male	Female	Total	Male	Female	
Total Employment	30,734	16,338	14,396	100	100	100	113
Agriculture and fishing	2,435	2,102	333	7.9	12.9	2.3	631
Mining and quarrying	107	83	24	0.3	0.5	0.2	346
Manufacturing	2,843	1,032	1,811	9.3	6.3	12.6	57
Utilities, except water	166	133	33	0.5	0.8	0.2	403
Eater supply and waste	179	149	30	0.6	0.9	0.2	497
Construction	1,845	1,765	80	6	10.8	0.6	2206
Wholesale and retail	1,960	943	1,017	6.4	5.8	7.1	93
Transportation and storage	698	545	153	2.3	3.3	1.1	356
Accommodation and food service	596	181	415	1.9	1.1	2.9	44
Information and communication	518	276	242	1.7	1.7	1.7	114
Financial and insurance activities	824	287	537	2.7	1.8	3.7	53
Real estate activities	19	12	7	0.1	0.1	0	171
Professional scientific and technical	616	318	298	2	1.9	2.1	107
Administrative and support service	980	524	456	3.2	3.2	3.2	115
Public administration	3,295	1,892	1,403	10.7	11.6	9.7	135
Education	2,393	789	1,604	7.8	4.8	11.1	49
Human health and social work	717	202	515	2.3	1.2	3.6	39
Arts entertainment and recreation	126	65	61	0.4	0.4	0.4	107
Other service activities	749	538	211	2.4	3.3	1.5	255
Households as employers	184	48	136	0.6	0.3	0.9	35
Extraterritorial	18	8	10	0.1	0	0.1	80
Not elsewhere classified	9,466	4,446	5,020	30.8	27.2	34.9	89

Source: 2021 Tonga Census

Note: Not elsewhere classified consists of workers that are not classifiable

Non-classifiable workers are quite high. As the name suggests, most cases did not get to classify their employment nor their employment sectors. However, Table 13.3 shows the distribution of these workers by their activity during the reference period (last week). Referring to the definition and classification of employment, they are part of the employment population.

Table 13.3: Not elsewhere classified employment by activity and sex, Tonga Census 2021.

Not elsewhere classified Employment	Total	Male	Female	Males per 100 Females
Total	9,466	4,446	5,020	89
Do any (other) work to generate an income	4,882	2,242	2,640	85
Help without pay in a family business	4,178	1,935	2,243	86
Working in family business without pay	287	171	116	147
Working apprenticeship internship	119	98	21	467

Employed workers by occupational group.

Apart from the “Not elsewhere classified / Not stated” category, the largest number of employed workers were found in the Professional workers– 4,748 (15 percent), followed closely by Craft and related trades workers – 3,569 (11.6 percent) (Tables 13.4 and 13.5). While the Craft and related trades workers were dominated by females (67 percent), the skilled agricultural & fishery category was dominated by males (98 percent).

Table 13.4: Total Employment by occupational group from 2006 to 2021, Tonga Census 2006-21.

	Numbers				Number Change		Percent Change	
	2006	2011	2016	2021	2011-16	2016-21	2011-16	2016-21
Total Employment	35,290	33,422	33,973	30,734	551	-3,239	1.6	-9.5
Armed Forces	520	445	412	375	-33	-37	-7.4	-9.0
Managers	699	1,079	2,128	1,783	1,049	-345	97.2	-16.2
Professionals	2,954	3,881	4,736	4,748	855	12	22.0	0.3
Techs & Asso Professionals	2,007	1,588	2,216	2,115	628	-101	39.5	-4.6
Clerical Support	1,832	1,765	1,420	1,592	-345	172	-19.5	12.1
Services and Sales	3,012	3,380	4,476	3,018	1,096	-1,458	32.4	-32.6
Skilled Agricultural/Fishery	10,268	9,470	8,080	1,918	-1,390	-6,162	-14.7	-76.3
Craft and Related Trades	11,644	9,662	7,537	3,569	-2,125	-3,968	-22.0	-52.6
Machine Operators	0	908	1,257	868	349	-389	38.4	-30.9
Elementary Occupations	882	1,244	1,711	1,282	467	-429	37.5	-25.1
Not stated	1,472	0	0	9,466	0	9,466	0.0	

The next most prominent occupational groups were Service works & Market sales workers (9.8 percent of all employed workers), Technician & associate professionals (6.9 percent), Skilled agricultural & fishery (6.2 percent), Manager (5.8 percent), and Clerical Support (5.2 percent). All other groups had less than 1,500 workers.

Table 13.5: Total Employment by sex and occupational group, Tonga Population and Housing Census 2021.

	Numbers			Percents			Males per 100 Females
	Total	Male	Female	Total	Male	Female	
Total Employment	30,734	16,338	14,396	100.0	100.0	100.0	113.5
Armed Forces	375	334	41	1.2	2.0	0.3	814.6
Managers	1,783	993	790	5.8	6.1	5.5	125.7
Professionals	4,748	2,207	2,541	15.4	13.5	17.7	86.9
Techs & Asso Professionals	2,115	1,203	912	6.9	7.4	6.3	131.9
Clerical Support	1,592	355	1,237	5.2	2.2	8.6	28.7
Services and Sales	3,018	1,520	1,498	9.8	9.3	10.4	101.5
Skilled Agricultural & Fishery	1,918	1,759	159	6.2	10.8	1.1	1106.3
Craft and Related Trades	3,569	1,933	1,636	11.6	11.8	11.4	118.2
Machine Operators	868	608	260	2.8	3.7	1.8	233.8
Elementary Occupations	1,282	980	302	4.2	6.0	2.1	324.5
Not elsewhere classified	9,466	4,446	5,020	30.8	27.2	34.9	88.6

Unemployed

A number of ways of defining unemployment exist in the Pacific context, and these are described below in Table 13.6.

1. The total unemployment, for those who did not work but spent time looking for work, and were available and willing to start work if a job was offered to them, was only 972 people (450 males and 522 females). Note that this "standard" definition of unemployment gives a low unemployment rate of only 3.1 percent of the total labour force.
2. The number of people aged 15 years of age and older who did not work, but were available and willing to start work if a job was offered to them, was 3,783 people (1,564 males and 2,219 females). This is aimed primarily to developing countries including Tonga, where the criterion does not capture the extent of unemployment in its totality. With this relaxation of the criterion of seeking work, which permits in extreme cases the criterion's complete suppression, the two basic criteria that remain applicable are

“without work” and “currently available for work”. This level of unemployment represents 11 percent of the total labour force.

3. The total unemployed, that is the standard unemployment including subsistence workers, was 5,398 people, which equates to an unemployment rate of 14.9 percent. Broken down by urban and rural areas, this amounts to 493 people (6.2 percent) in the urban area, and 4,905 people (17.4 percent) in rural areas.

Table 13.6: Population aged 15 and older and unemployment status according to various unemployment concepts, Tonga: 2021

Unemployment Concepts	Number of Unemployed			Unemployment rate (%)		
	Male	Female	Total	Male	Female	Total
Standard Definition *						
TONGA	450	522	972	2.7	3.5	3.1
Urban	98	117	215	2.4	3.2	2.8
Rural	352	405	757	2.8	3.6	3.1
Relaxed Definition **						
TONGA	1,564	2,219	3,783	8.7	13.4	11.0
Urban	266	363	629	6.4	9.3	7.8
Rural	1,298	1,856	3,154	9.5	14.6	11.9
Standard Definition + Subsistence Workers***						
TONGA	3,697	1,701	5,398	18.5	10.6	14.9
Urban	308	185	493	7.3	5.0	6.2
Rural	3,389	1,516	4,905	21.4	12.2	17.4

Note: the following states the derivation of the Unemployment Concepts shown in Table 13.6 above.

* Equates from the total unemployment (972 people) – people who **did not work during the reference week** but were **looking for a work** and were **available and willing to start work**.

** Equates from the total employment (3,783 people) – people who **did not work during the reference week** but were **available and willing to start work**. This is the National Unemployment definition which is comparable to definition used in Census 2016.

*** Equates from the total unemployment (5,398 people) – if subsistence workers were also included as unemployed.

Youth NEET

The term "NEET" refers to young individuals who are not engaged in employment, education, or training. The NEET rate is a critical indicator of youth disengagement from both the labor market and educational opportunities. It encompasses a broad spectrum of youth vulnerabilities, including unemployment, early school leaving, and labor market discouragement. The NEET concept is being emphasized to address these issues and promote decent work opportunities for youth.

Generally, in most countries, youths are defined as persons between the ages of 15 and 24 years. In Tonga, youth are between the ages of 15 and 34 years. Table 13.7 summarizes the information from the 2021 Census.

Table 13.7. Youth not in education, employment or training by age and sex, Tonga: 2021

Age group	TONGA			Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Youth NEET - Youth who are not in education, employment, nor training.									
Total	9,355	3,929	5,426	1,633	628	1,005	7,722	3,301	4,421
15-19	1,749	990	759	279	156	123	1,470	834	636
20-24	3,125	1,352	1,773	533	215	318	2,592	1,137	1,455
25-29	2,380	864	1,516	445	145	300	1,935	719	1,216
30-34	2,101	723	1,378	376	112	264	1,725	611	1,114
Youth working-age population									
Total	31,262	14,704	16,558	6,942	3,271	3,671	24,320	11,433	12,887
15-19	11,209	5,678	5,531	2,298	1,159	1,139	8,911	4,519	4,392
20-24	8,030	3,792	4,238	1,820	869	951	6,210	2,923	3,287
25-29	6,349	2,748	3,601	1,529	660	869	4,820	2,088	2,732
30-34	5,674	2,486	3,188	1,295	583	712	4,379	1,903	2,476
Youth NEET Rate - Percentage of youth who are not in education, employment, nor training.									

Total	29.9	26.7	32.8	23.5	19.2	27.4	31.8	28.9	34.3
15-19	15.6	17.4	13.7	12.1	13.5	10.8	16.5	18.5	14.5
20-24	38.9	35.7	41.8	29.3	24.7	33.4	41.7	38.9	44.3
25-29	37.5	31.4	42.1	29.1	22.0	34.5	40.1	34.4	44.5
30-34	37.0	29.1	43.2	29.0	19.2	37.1	39.4	32.1	45.0

Not in labour force

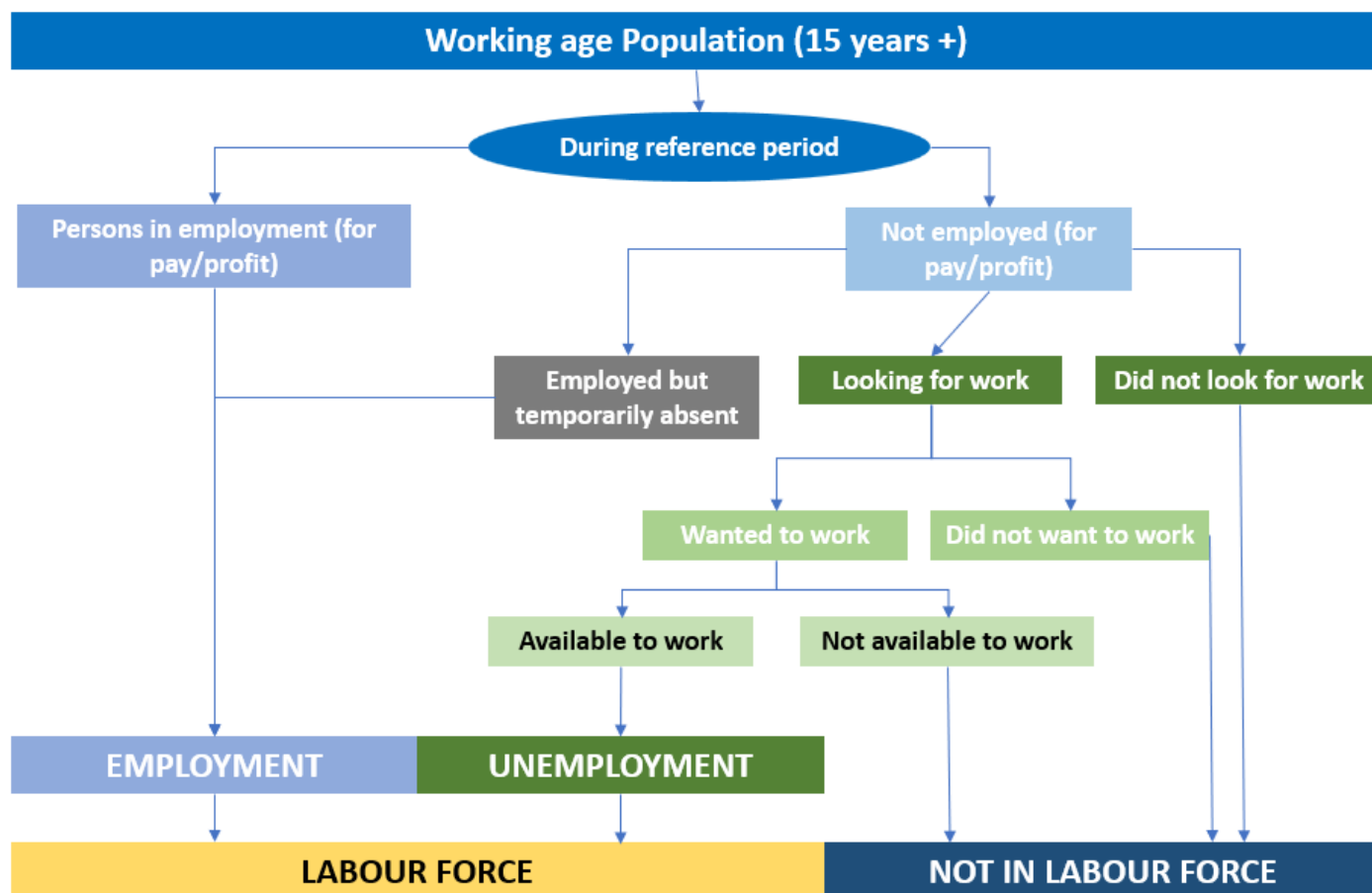
The total number of people classified as not in the labour force in the 2021 Tonga census was 33,600 (Table 13.8). The distribution of these individuals was as follows.

Not in Labour Force	Total	Male	Female
Total	33,600	13,796	19,804
Subsistence Workers	4,426	3,247	1,179
Studying	9,118	4,202	4,916
Household duties	16,226	4,187	12,039
Working voluntary without pay community charity work	264	193	71
Looking for Work	384	255	129
Retired or pensioner (Too old)	1,463	695	768
With long-term illness injury or disability	978	538	440
Missing	741	479	262

Source: 2021 Tonga Census

Of the population aged 15 years and older and not in the labour force, 59 percent were females (19,804), and 41 percent (13,796) males. This compares with 61 percent (14,190) females and 39 percent (8,939) males in 2016.

The following schematic describes how the labour force analysis was done for the 2021 Census. All based on the standard definitions of the International Labour Organization (ILO).



CHAPTER 14: HOUSEHOLD CHARACTERISTICS

Household size

Most chapters in this report concern various population characteristics of Tonga's population in 2021. This chapter and the next one look at Tonga's households – their number and their characteristics.

Table 14.1 shows the changes in the number of households and population in the households from 2011 to 2021 for the divisions and districts. The average household size decreased from 5.7 persons in 2011 to 5.5 in 2016 and then to 5.3 in 2021.

Table 14.1. Persons per Private Household by District, Tonga: 2011 to 2021

	Number of Private HHs			Number of persons in Private HHs			Average HH size		
	2011	2016	2021	2011	2016	2021	2011	2016	2021
Tonga	18,033	18,005	18,847	101,969	99,600	99,429	5.7	5.5	5.3
Tongatapu	12,818	12,953	13,705	74,327	73,750	73,787	5.8	5.7	5.4
Vava'u	2,813	2,715	2,790	14,825	13,632	14,035	5.3	5.0	5.0
Ha'apai	1,258	1,179	1,157	6,577	6,085	5,625	5.2	5.2	4.9
'Eua	862	885	931	4,958	4,918	4,834	5.8	5.6	5.2
Ongo Niua	282	273	264	1,282	1,215	1,148	4.5	4.5	4.3

Sources: Tonga Censuses

The average household size of 5.7 people in Tonga in 2011 decreased to 5.5 persons per household in 2016 and then further to 5.3 persons per household in 2021 (Figure 14.1). All the Divisions showed similar decreases, that is, all the Divisions also decreased in household size between 2011 and 2021.

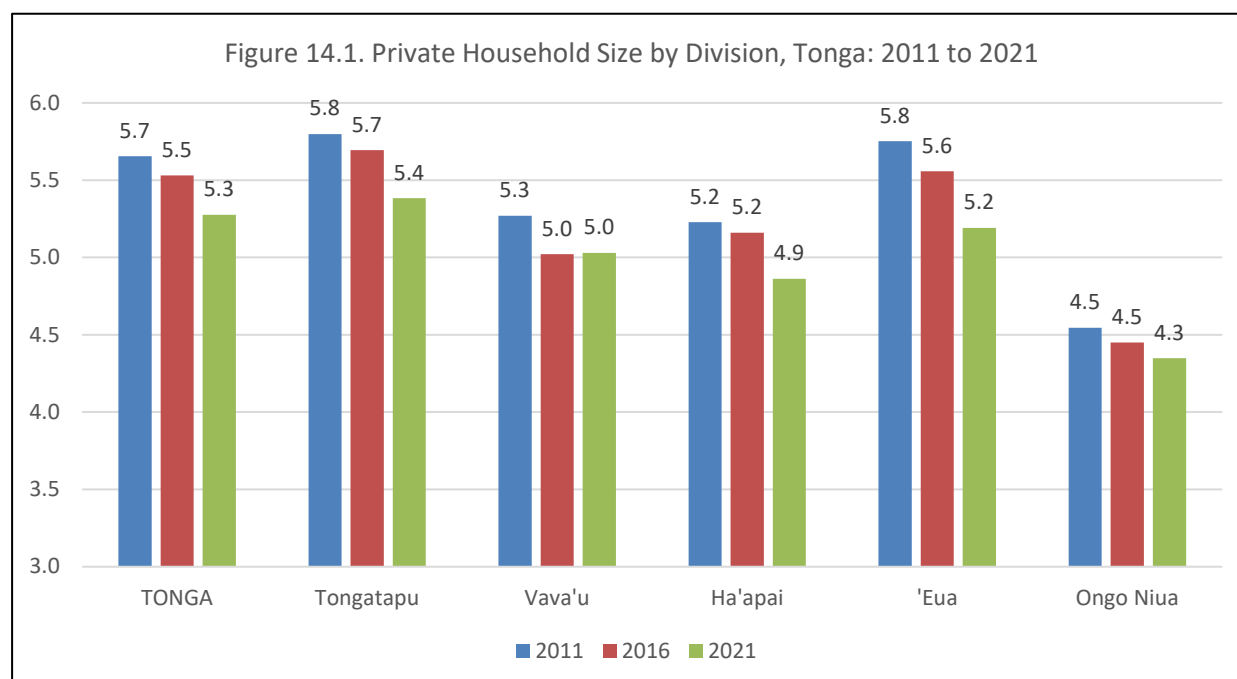


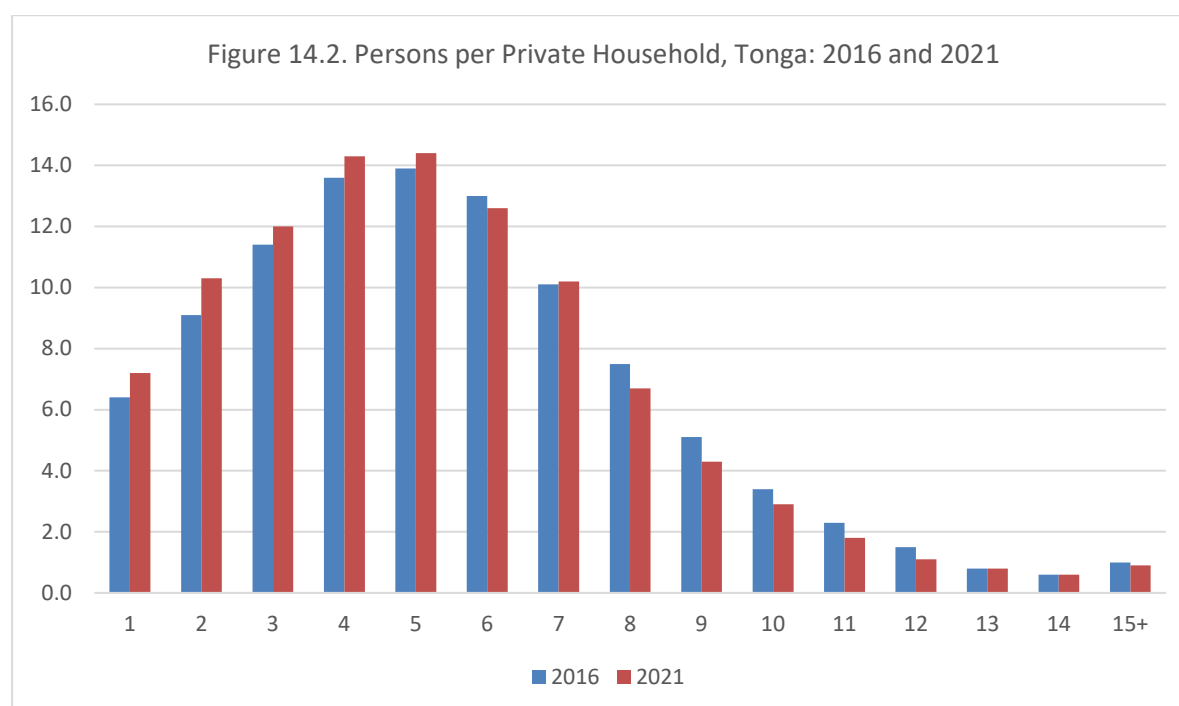
Table 14.2 shows the household size of the private households by division in the 2021 census. The average household size for the 18,847 private households was 5.3 persons per household. The median household size was slightly higher, at 5.4. For mean household size, those on Tongatapu were the largest, at 5.4 persons, while the households in Ongo Niua were the smallest, at 4.4 persons per household. The large household size indicates that other relatives besides the nuclear family were there since the total fertility had decreased in the last decades.

Table 14.2. Household Size by Division, Tonga: 2021

	Numbers						Numbers					
	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
Total	18,847	13,705	2,790	1,157	931	264	100.0	100.0	100.0	100.0	100.0	100.0
1 person	1,350	963	196	90	68	33	7.2	7.0	7.0	7.8	7.3	12.5
2 persons	1,942	1,397	299	126	85	35	10.3	10.2	10.7	10.9	9.1	13.3
3 persons	2,269	1,557	381	157	130	44	12.0	11.4	13.7	13.6	14.0	16.7
4 persons	2,689	1,901	433	178	137	40	14.3	13.9	15.5	15.4	14.7	15.2
5 persons	2,705	1,907	437	190	136	35	14.4	13.9	15.7	16.4	14.6	13.3
6 persons	2,373	1,745	319	154	130	25	12.6	12.7	11.4	13.3	14.0	9.5
7 persons	1,923	1,438	273	113	75	24	10.2	10.5	9.8	9.8	8.1	9.1
8 persons	1,257	959	173	47	65	13	6.7	7.0	6.2	4.1	7.0	4.9
9 persons	813	635	102	44	28	4	4.3	4.6	3.7	3.8	3.0	1.5
10 persons	544	413	66	22	36	7	2.9	3.0	2.4	1.9	3.9	2.7
11 persons	347	267	50	14	14	2	1.8	1.9	1.8	1.2	1.5	0.8
12 persons	205	170	19	7	8	1	1.1	1.2	0.7	0.6	0.9	0.4
13 persons	154	125	14	9	6	0	0.8	0.9	0.5	0.8	0.6	0.0
14 persons	107	92	12	2	1	0	0.6	0.7	0.4	0.2	0.1	0.0
15+ persons	169	136	16	4	12	1	0.9	1.0	0.6	0.3	1.3	0.4
Mean	5.3	5.9	5.0	4.9	5.2	4.4	...	...	...	...	...	...
Median	5.4	5.5	5.2	5.1	5.3	4.5	...	...	...	...	...	...

Source: Tonga Population and Housing Census 2021

Figure 14.2 shows the change in household size between the 2016 and the 2021 censuses. The 2021 census counted more households with 5 or fewer people, while the 2016 census counted more households with 7 or more persons. The structure of the graph was similar for the two censuses, with those households with 4 or 5 people occurring most often.



Household composition

Data on household composition identified a head of household who served as a reference person for the relationships of all other people in the household, in terms of family and household membership. The number of heads of household (and so the number of households) increased from about 18,000 in both 2011 and 2016 to almost 19,000 in 2021 (Table 14.3). At the same time, the percentage being heads of households increased from about 17 percent in 2011 to 18 percent in 2016 and 19 percent in 2021. About 1 in every 5 persons were heads of household, coinciding with the household size.

Table 14.3. Relationship, Tonga: 2011 to 2021

	Numbers			Percents		
	2011	2016	2021	2011	2016	2021
Total	101,969	99,600	99,408	100.0	100.0	100.0
Head	18,033	18,005	18,847	17.7	18.1	19.0
Spouse	11,681	11,588	11,405	11.5	11.6	11.5
Biological child	40,784	39,184	37,205	40.0	39.3	37.4
Adopted child	2,166	3,153	3,003	2.1	3.2	3.0
Brother/sister	1,627	1,867	2,041	1.6	1.9	2.1
Grandchild	13,069	13,044	13,992	12.8	13.1	14.1
Parent of head/spouse	931	1,320	1,339	0.9	1.3	1.3
Stepchild	439	704	581	0.4	0.7	0.6
Other relation	11,426	9,209	9,191	11.2	9.2	9.2
Nonrelative	1,813	1,526	1,693	1.8	1.5	1.7

Note: 21 persons were enumerated at the household during the census were nonresidents. They were not asked this question thus this total is different from the household population totals

Source: Tonga Censuses

The percentage of the population being spouses did not change during the decade, but the percentage being biological children did decrease because of decreased fertility, from 40 percent in 2011 to 37 percent in 2021. The percentage being grandchildren increased from 13 percent in 2011 and 2016 to 14 percent in 2021. And, the percent of “other relatives” decreased from about 11 percent in 2011 to 9 percent in 2016 and 2021, showing increasing nuclear families, with fewer other relatives to care for.

Table 14.4 shows the distribution of relationships by sex for 2016 and 2021. While the percentage of heads was about 19 percent in 2021, about 1 in every 3 males were heads of household compared to about 1 in 10 of the females. Very few of the males reported as “spouse” of a female head.

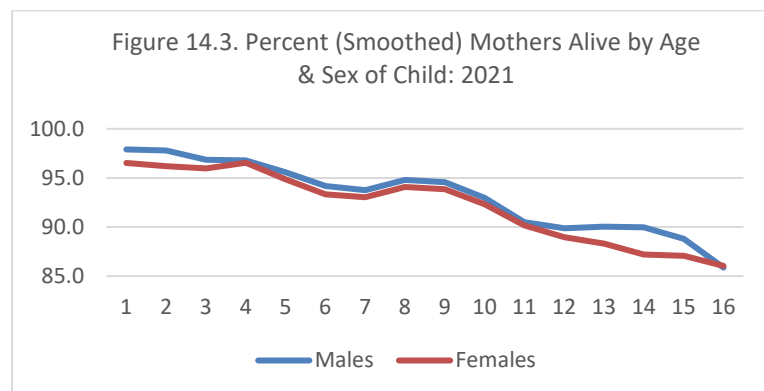
Table 14.4. Relationship to Head of Household by Sex, Tonga: 2016 and 2021

	Numbers						Percents					
	2016			2021			2016			2021		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	99,600	49,525	50,075	99,408	48,251	51,157	100.0	100.0	100.0	100.0	100.0	100.0
Head	18,005	13,924	4,081	18,847	13,996	4,851	18.1	28.1	8.1	19.0	29.0	9.5
Spouse	11,588	104	11,484	11,405	153	11,252	11.6	0.2	22.9	11.5	0.3	22.0
Son/daughter	39,184	20,037	19,147	37,205	18,363	18,842	39.3	40.5	38.2	37.4	38.1	36.8
Adopted child	3,153	1,649	1,504	3,003	1,549	1,454	3.2	3.3	3.0	3.0	3.2	2.8
Brother/Sister	1,867	939	928	2,041	950	1,091	1.9	1.9	1.9	2.1	2.0	2.1
Grandchild	13,044	6,733	6,311	13,992	7,161	6,831	13.1	13.6	12.6	14.1	14.8	13.4
Parent of Head	541	109	432	534	97	437	0.5	0.2	0.9	0.5	0.2	0.9
Parent of Spouse	779	238	541	805	301	504	0.8	0.5	1.1	0.8	0.6	1.0
Child of Spouse	704	333	371	581	258	323	0.7	0.7	0.7	0.6	0.5	0.6
Other Relatives	9,209	4,635	4,574	9,191	4,482	4,709	9.2	9.4	9.1	9.2	9.3	9.2
No Relation	1,526	824	702	1,804	941	863	1.5	1.7	1.4	1.8	2.0	1.7

Sources: 2016 and 2021 Tonga censuses

Parental orphanhood

Figure 14.3 shows the percentage of mothers of children 0 to 17 who were alive at the time of the 2021 census. At each age, the mothers of male children were more likely to be alive than the mothers of female children. More male than female babies are born, but their numbers and percentages decrease over time.



The percentages for fathers alive are more similar as ages increase (Figure 14.4). That is, the percentages of fathers being alive is about the same for male and female children. The percentages of mothers alive are higher than for fathers alive at each age of child.

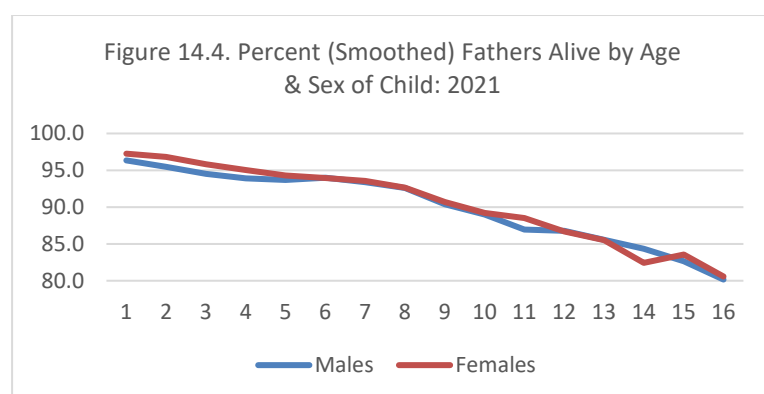
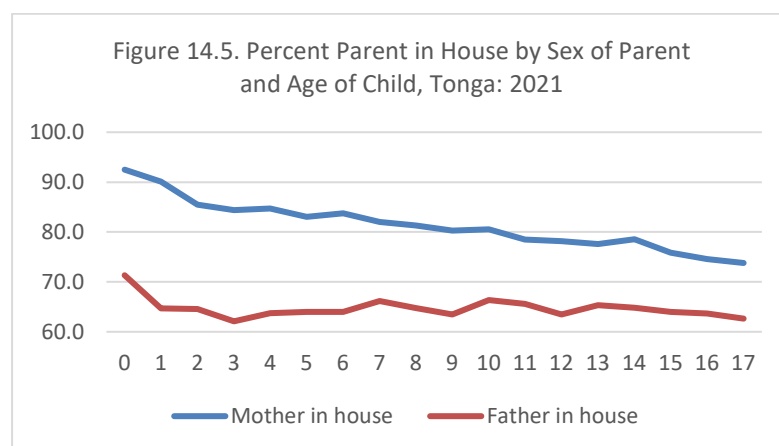


Figure 14.5 shows the percentage of fathers and mothers present in the housing unit by single age of child. At each age, more mothers than fathers were in the house in 2021. The fathers started at about 70 percent and decreased to about 65 percent by age 1 where they stayed for older ages of child. About 9 out of 10 mothers of newborn children were resident in the household, but the percentage decreased continuously as the age of child increased. At age 17 only about 3 in every 4 of the mothers were resident in the household.



Households and families

Table 14.5 shows the 8 family types suggested by the U.N. in its Principles and Recommendations. Of the 19,000 households in Tonga in 2021, about 11,200 were married-couple households headed by a male. The next largest category was the 4,000 non-family households headed by a female, and the 1,600 households headed by a male with no wife present. There were 1,300 people were living alone in 2021.

Table 14.5. Household Type by Division, Tonga: 2021

	Numbers						Percents					
	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua	Total	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
Total	18,847	13,705	2,790	1,157	931	264	100.0	100.0	100.0	100.0	100.0	100.0
Married couple family male head	11,202	7,950	1,783	752	575	142	59.4	58.0	63.9	65.0	61.8	53.8
Married couple family female head	203	174	18	3	8	0	1.1	1.3	0.6	0.3	0.9	0.0
Family male head no wife	1,594	1,148	244	85	90	27	8.5	8.4	8.7	7.3	9.7	10.2
Family female head no husband	4,004	3,086	491	208	168	51	21.2	22.5	17.6	18.0	18.0	19.3
Non-family male head	231	175	28	10	11	7	1.2	1.3	1.0	0.9	1.2	2.7
Non-family female head	263	209	30	9	11	4	1.4	1.5	1.1	0.8	1.2	1.5
Single person male	926	644	140	63	50	29	4.9	4.7	5.0	5.4	5.4	11.0
Single person female	424	319	56	27	18	4	2.2	2.3	2.0	2.3	1.9	1.5

Source: Tonga Population and Housing Census 2021

Figure 14.6 shows the household type by division. About 3 out of every 5 households in Tonga, as noted, were married-couple families, headed by a male, about 1 in 12 were households headed by a male with no spouse present and about 1 in 5 were family households headed by a female with no husband present. Vava'u and Ha'apai had the highest percentage of married-couple families headed by males, while 'Eua and Ongo Niua had slightly higher than average family households headed by males with no wife present.

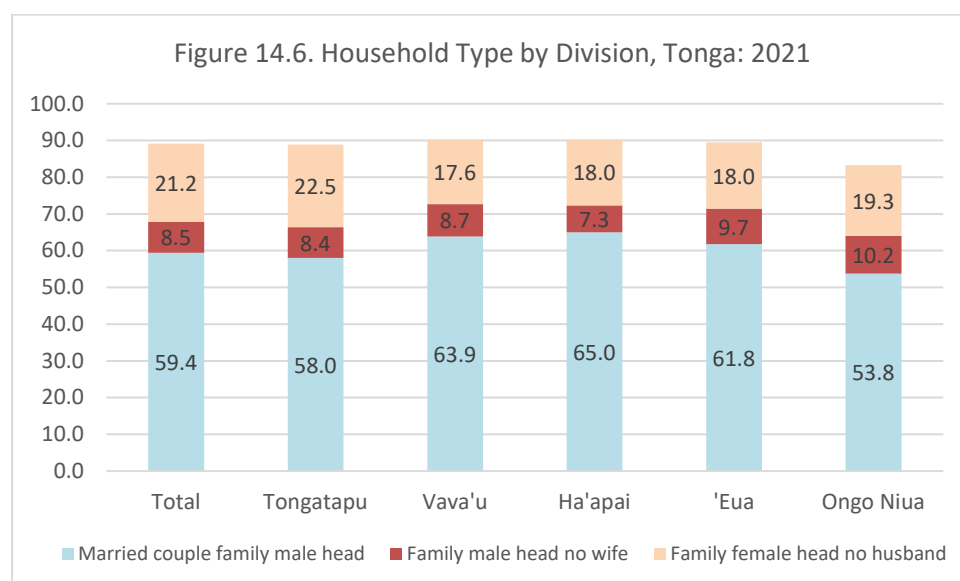


Figure 14.7 shows the dependency ratio by household type for Tonga based on the 2021 census. As before, we derive the dependency ratio by dividing the sum of the residents younger than 15 and those older than 59 by the potential workers, those 15 to 59 years old. A value of 100 would mean that there were equal numbers of dependents and those working to take care of them. So, the value of 80 for the entire population indicates that Tonga had about 80 dependents for each 100 adults taking care of them. The values were about the same for married couple families and for families headed by males with no spouse present. But households headed by females with no husband present had a higher dependency ratio, at 90, while still low, would require some more effort on the adults caring for the young and the aged. The dependency ratio for non-family households headed by males was much lower, partly because these are households made up of workers living together, away from their families they sent funds to.

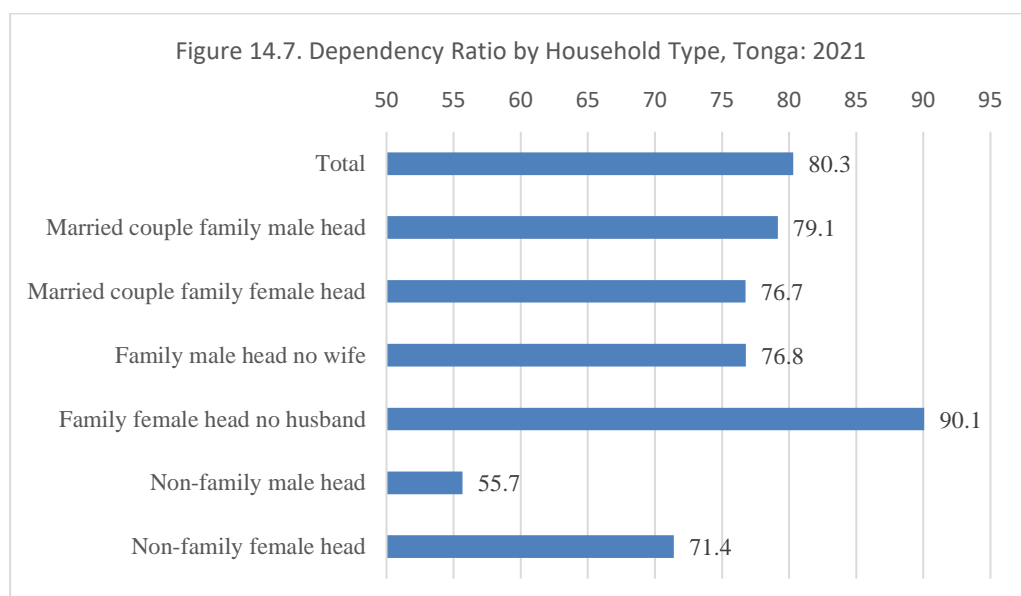
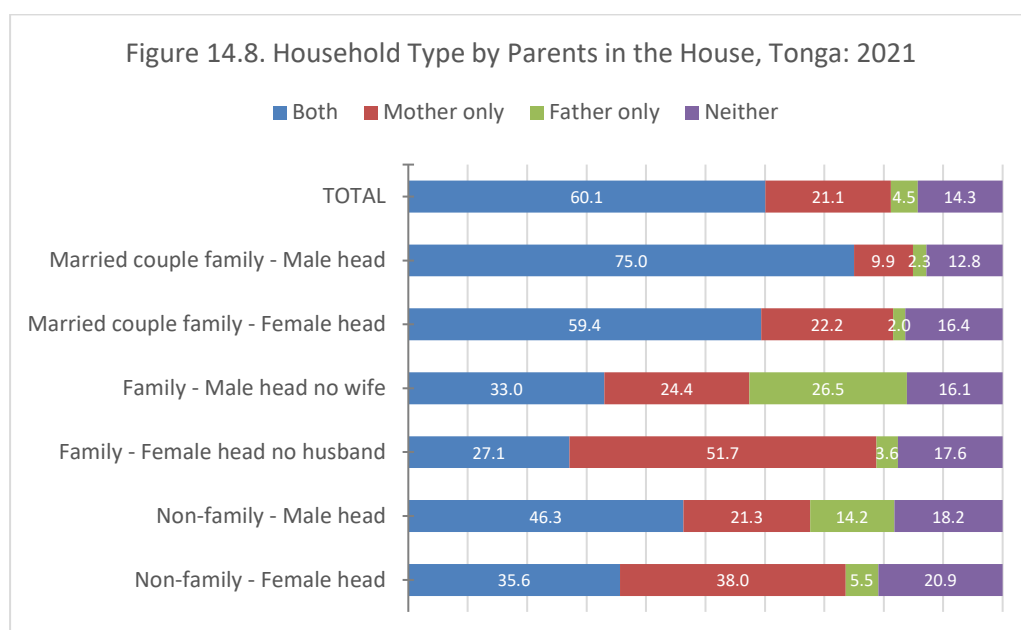


Figure 14.8 shows the household type by the vital status of the parents of the children younger than 18 living in the housing unit. About 3 out of every 5 households had both parents alive at the time of the 2021 census. About 1 in 5 had only the mother being alive (and so not the father), less than 1 in 20 had only the father (and not the mother) being alive, and 14 percent (about 3 in 20) had neither parent being alive. As expected, both parents were most likely to be alive in married couple family households with male heads, at 3 out of 4 households, followed by married couple households headed by females at 3 out of 5. Only the mother alive occurred in about half of the households headed by females with no husband present (and about 2 out of 5 in non-family households headed by females.) About 1 in 4 of the family households head by males with no wife present had only the mother alive and another 1 in 4 had only the father being alive.



Tenure

Household dwellings are either rented or owned, although the definitions in the Pacific Islands sometimes differ from those in more “Western” countries. Tenure can be either “owned with a mortgage” or “owned free and clear”. And rental can be “with rent” or “without payment”. Table 14.6 shows the types of tenure as they changed from the 1986 census to the 2021 census. The percentage of owned dwellings (whether with a mortgage or free and clear) decreased from 83 percent in 1986 to 70 percent in 2016, before increasing to 76 percent in the recent census. The percentage of rented dwellings remained low. And the percent of households living in dwellings that was rent free increased from 10 percent in 1986 to 24 percent in 2016, before decreasing to 19 percent in the last census.

Table 14.6. Tenure, Tonga: 1986 to 2021

	Numbers					Percents						
	1986	1996	2006	2011	2016	2021	1986	1996	2006	2011	2016	2021
Total	14,770	16,219	17,529	18,033	18,005	18,847	100.0	100.0	100.0	100.0	100.0	100.0
Own house	12,351	13,187	12,643	12,530	12,700	14,399	83.6	81.3	72.1	69.5	70.5	76.4
Rent	517	614	782	991	909	793	3.5	3.8	4.5	5.5	5.0	4.2
Rent free	1,543	2,090	4,026	4,319	4,396	3,655	10.4	12.9	23.0	24.0	24.4	19.4
Other	359	303	68	193	0	0	2.4	1.9	0.4	1.1	0.0	0.0

Source: Tonga Censuses

Figure 14.9 shows the changes in tenure more graphically. The percentage of owned dwellings decreased during the period, while the percentage being rent free increased.

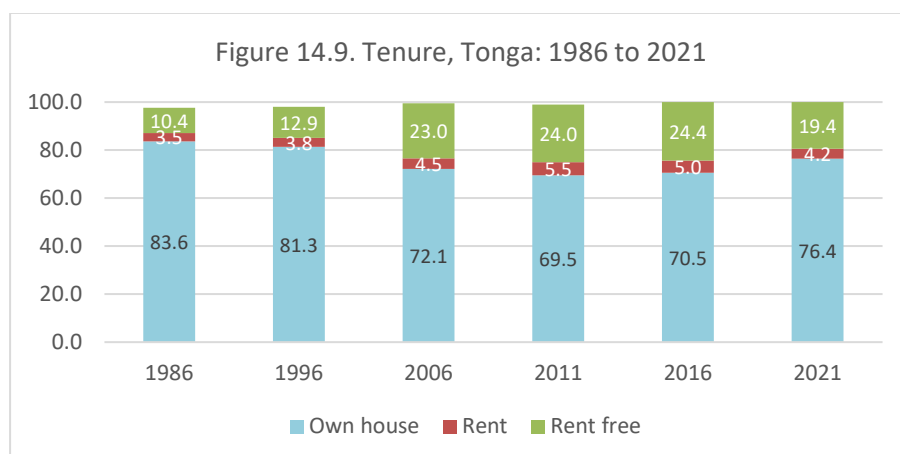
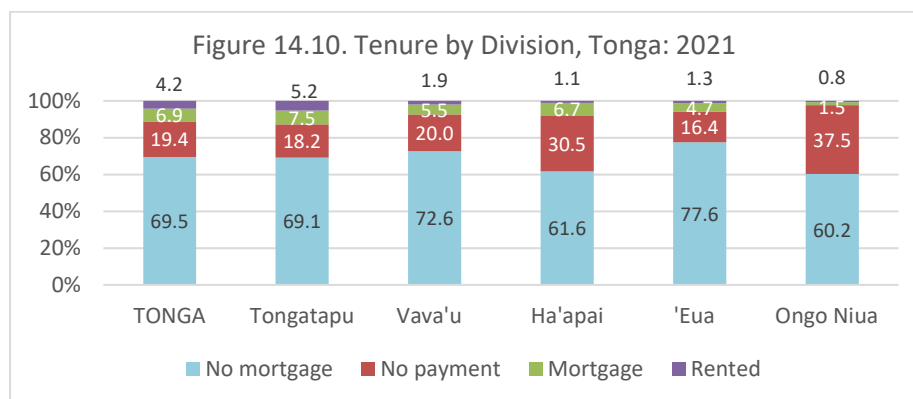


Figure 14.10 shows that in 2021, households owned over 2 out of every 3 household dwellings free and clear, using a traditional definition. The next largest category was household dwellings “rented” without the households paying any rent. The smallest categories across the divisions were those with a mortgage and those rented for cash payment. Ha’apai and Ongo Niua had the highest percentages of household dwellings with no rent payments.



Private households by structure

Walls. The 2006 census counted about 64 percent of the dwellings with wooden outside walls and about 31 percent being concrete (Figure 14.11). Later censuses saw dwellings with wood walls decreasing, and those of concrete increasing, so that in 2021 about half the dwellings had wood walls and about half had concrete walls.

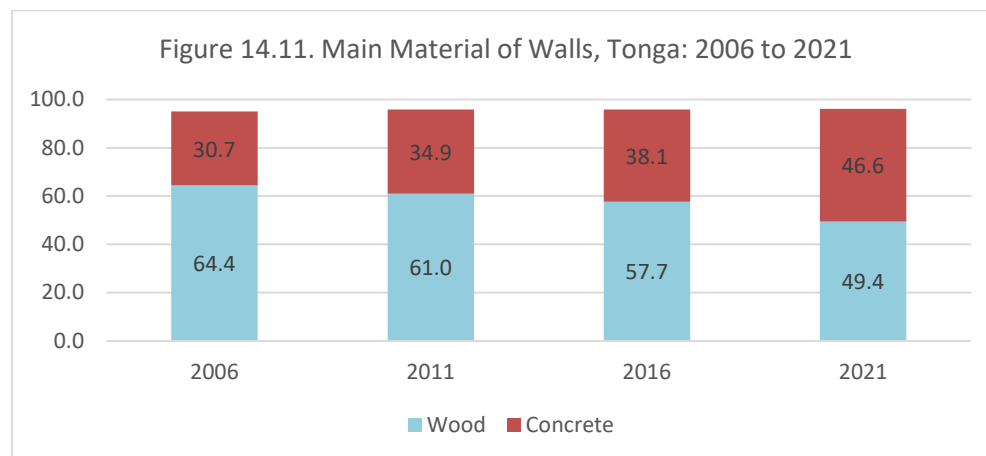
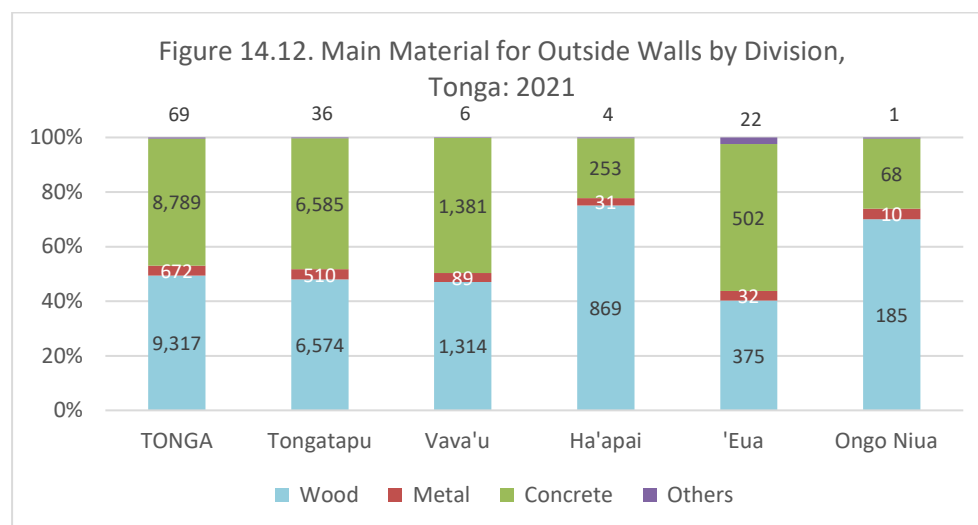


Figure 14.12 shows that Ha'apai and Ongo Niua had the largest percentage of wood walls, with 'Eua having the smallest percentage. Tongatapu and Vava'u percents were close to the total.



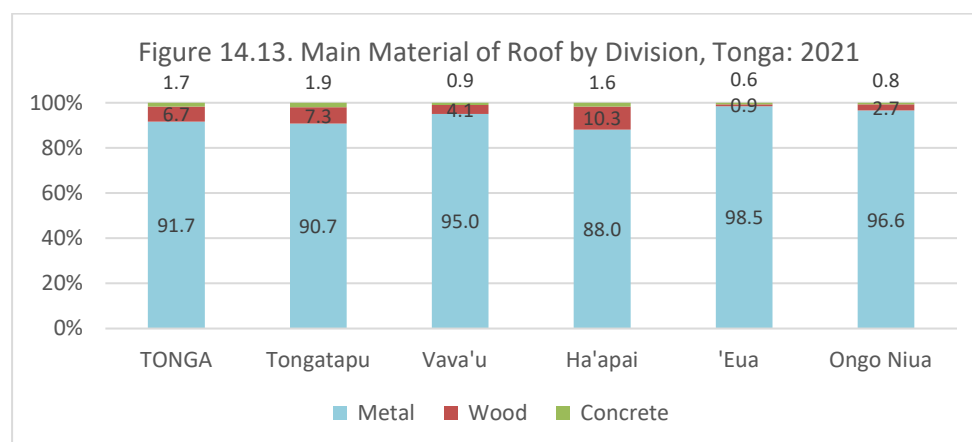
Roof. Between the 2006 and 2011 censuses, the percentage of private households occupying dwellings with metal roofs increased from 93 percent to 95 percent, and this increased marginally to 96 percent in 2016, and 92 percent in 2021 (Table 14.7). The remainder of occupied dwellings had wood or thatched roofs.

Table 14.7. Main Material of Roof, Tonga: 2006 to 2021

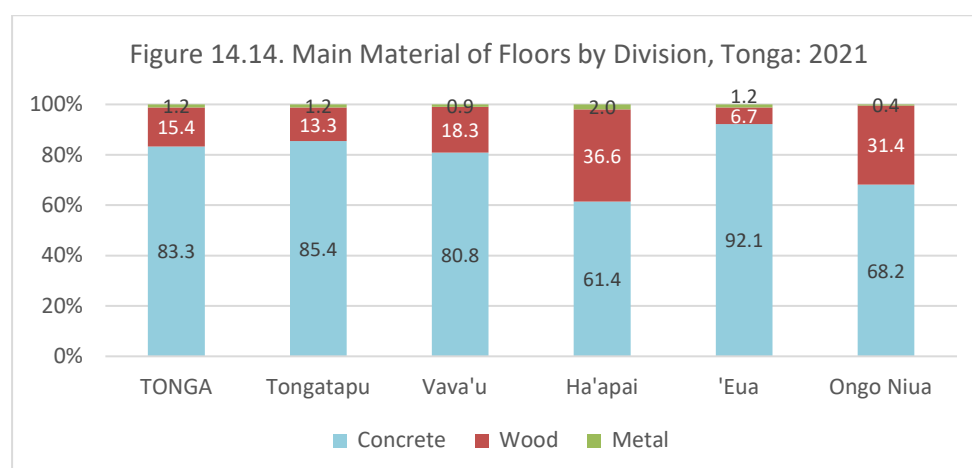
	Numbers				Percents			
	2006	2011	2016	2021	2006	2011	2016	2021
Total	17,529	18,033	18,005	18,847	100.0	100.0	100.0	100.0
Concrete	256	289	128	319	1.5	1.6	0.7	1.7
Metal	16,318	17,137	17,365	17,239	93.1	95.0	96.4	91.5
Wood	632	452	453	1,251	3.6	2.5	2.5	6.6
Thatch	240	135	42	27	1.4	0.7	0.2	0.1
Others	83	20	17	11	0.5	0.1	0.1	0.1

Source: Tonga Population and Housing Census 2021

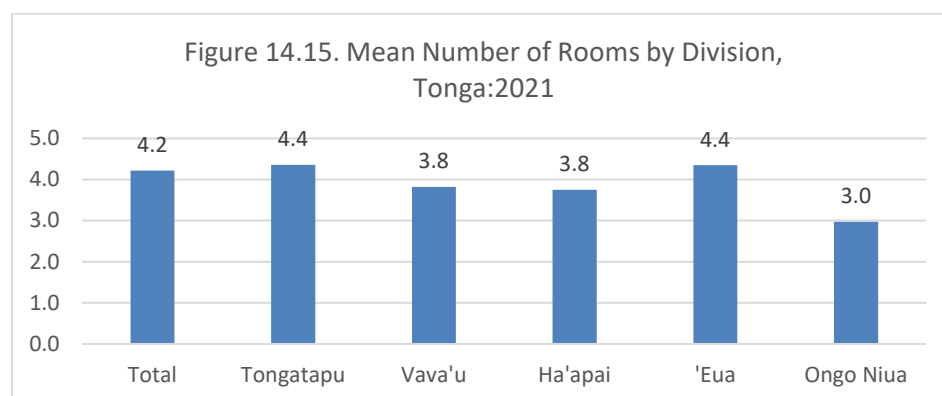
Figure 14.13 shows the distribution in types of roofs across the divisions in 2021. About 9 in every 10 household dwellings had metal roofs. Most roofs in 'Eua were metal, and the percentages in Vava'u and Ongo Niua were also remarkably high. Ha'apai had the largest percentage of wood roofs. Very few of the roofs in Tonga in 2021 were concrete.



Floors. About 83 percent of the floor materials in 2021 were concrete (Figure 14.14). 'Eua had the highest percentage of concrete floors, at 92 percent, while Ha'apai had only 61 percent of its floors being concrete, with over 1 in 3 made of wood.



Rooms. Figure 14.15 shows the average number of rooms per private dwellings across the divisions in 2021. The average dwellings had 4.2 rooms in 2021, so slightly larger than 4 rooms on average. Tongatapu and 'Eua had average dwellings of 4.4 rooms, Vava'u and Ha'apai dwellings were smaller, at 3.8 rooms per unit, and those in Ongo Niua, with the most traditional dwelling were smallest at 3.0.



Private households by water source

Tonga's censuses and surveys ask two questions about sources of water: drinking water and water for other uses.

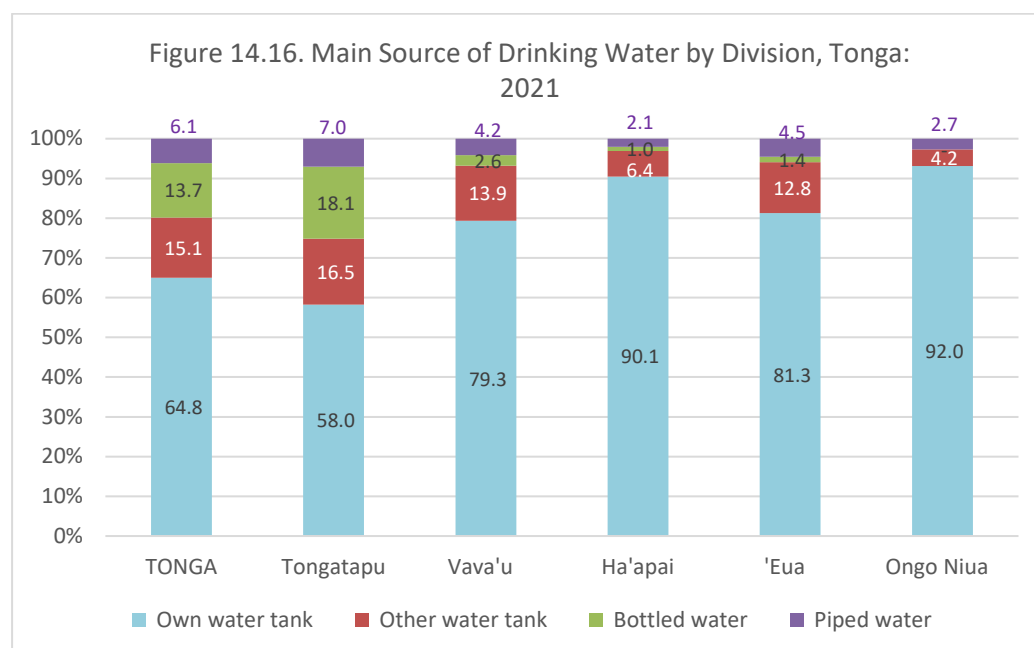
Drinking water. Table 14.8 shows the change in source of drinking water from 2006 to 2021. The percentage of households obtaining their drinking water from storage tanks decreased from about 80 percent in 2006 to 65 percent in 2021. The main cause of this decrease was the increasing availability and use of bottled water for drinking, increasing from 3 percent in 2006 to 14 percent in 2021. The percentage of households relying on neighbours for drinking water decreased during the period as well, from about 25 percent in 2011 to 15 percent in 2021.

Table 14.8. Source of Water for Drinking, Tonga: 2006 to 2021

	2006	2011	2016	2021
Total	17,529	18,033	18,005	18,847
Piped water supply	2,675	567	1,799	1,150
Cement/tank	14,059	12,142	10,890	12,205
Neighbour		4,546	3,537	2,853
Bottled water	521	651	1,713	2,577
Boiled water	136	102	34	47
Other	138	25	32	15
PERCENTS				
Total	100.0	100.0	100.0	100.0
Piped water supply	15.3	3.1	10.0	6.1
Cement/tank	80.2	67.3	60.5	64.8
Neighbour	0.0	25.2	19.6	15.1
Bottled water	3.0	3.6	9.5	13.7
Boiled water	0.8	0.6	0.2	0.2
Other	0.8	0.1	0.2	0.1

Source: Tonga censuses

As noted, about 65 percent of the households in Tonga in 2021 still obtained their water from storage tanks (Figure 14.16). Only 6 percent obtained drinking water from a public system. Although about 15 percent of the households obtained drinking water from bottled water, only Tongatapu of the divisions had substantial use of bottled water. About 9 out of 10 households in Ha'apai and Ongo Niua obtained drinking water from their tanks.



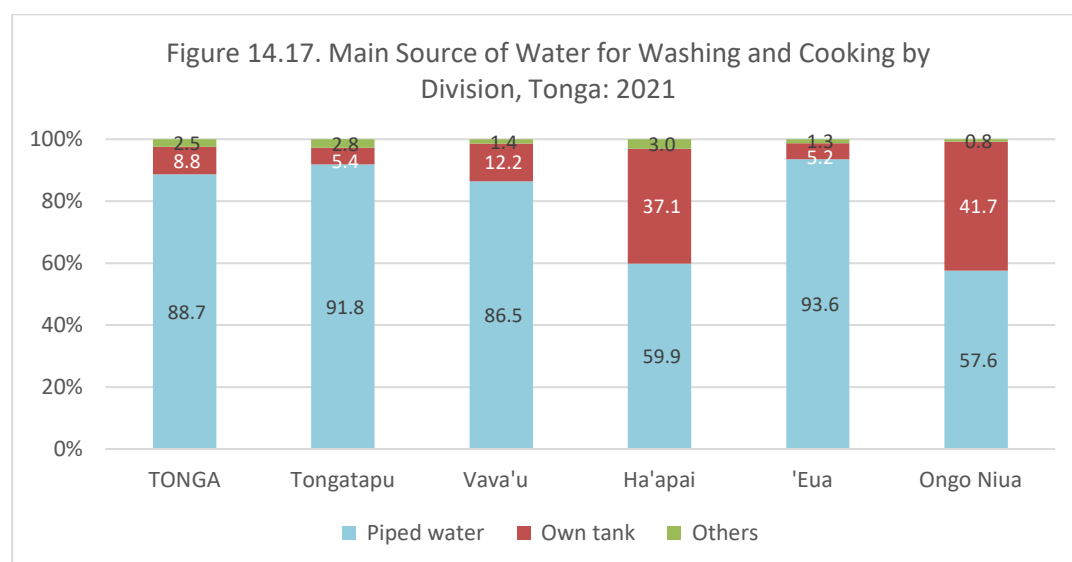
Non-drinking water. More of Tonga's households obtained their non-drinking water from the piped water supply. About 3 out of every 4 households in 1986 got water from the piped water, but that increased to about 7 in every 8 households in 2021 (Table 14.9). The percentage getting non-drinking water from tanks decreased from about 18 percent in 1986 to about 11 percent in 2016 and 2021.

Table 14.9. Source of Non-Drinking Water, Tonga: 1986 to 2021

	1986	2006	2011	2016	2021
Total	14,885	17,529	18,033	18,005	18,847
Piped water	11,100	14,533	16,014	15,892	16,716
Own tank	2,715	2,568	1,742	1,961	2,042
Own well	340	274	151	100	47
Other	730	154	126	52	
PERCENTS					
Total	100.0	100.0	100.0	100.0	100.0
Piped water	74.6	82.9	88.8	88.3	88.7
Own tank	18.2	14.7	9.7	10.9	10.8
Own well	2.3	1.6	0.8	0.6	0.2
Other	4.9	0.9	0.7	0.3	0.0

Sources: Tonga censuses

Only Ha'apai and Ongo Niua still obtained substantial amounts of non-drinking water from tanks. The other three divisions relied on piped water for water they were not drinking.



Toilet facilities

Toilet facilities. Most households in Tonga in 2021 had flush toilets – almost 9 in every 10 households. But Table 14.10 and Figure 14.18 show that as recently as 1986, only 1 in every 3 households had a flush toilet. The 1996 census used a series of items on toilets, so we do not include it in this series. But, by 2006, 7 in every 10 households used a flush toilet, and that proportion increased in each subsequent census. The percentage using a pit latrine decreased at the same time, from 42 percent in 1986 to 4 percent in 2021. The percentage using manual flush toilets also decreased over time.

Table 14.10. Type of Toilet Facilities, Tonga: 1986 to 2021

	Numbers					Percents				
	1986	2006	2011	2016	2021	1986	2006	2011	2016	2021
Total	14,822	17,529	18,033	18,005	18,847	100.0	100.0	100.0	100.0	100.0
Flush toilet	4,907	12,259	13,642	14,826	16,726	33.1	69.9	75.7	82.3	88.7
Manual flush	3,366	1,990	1,870	1,524	1,094	22.7	11.4	10.4	8.5	5.8
Pit	6,297	3,162	2,473	1,613	778	42.5	18.0	13.7	9.0	4.1
Other	252	118	48	42	249	1.7	0.7	0.3	0.2	1.3

Source: Tonga Censuses

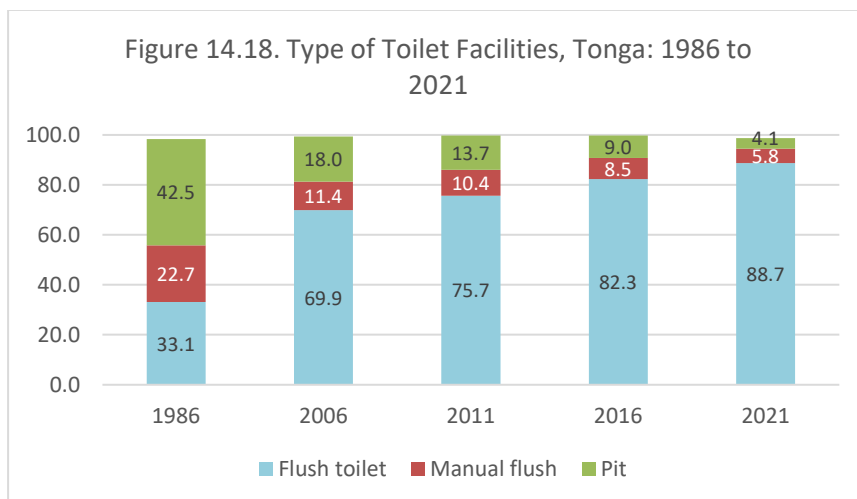
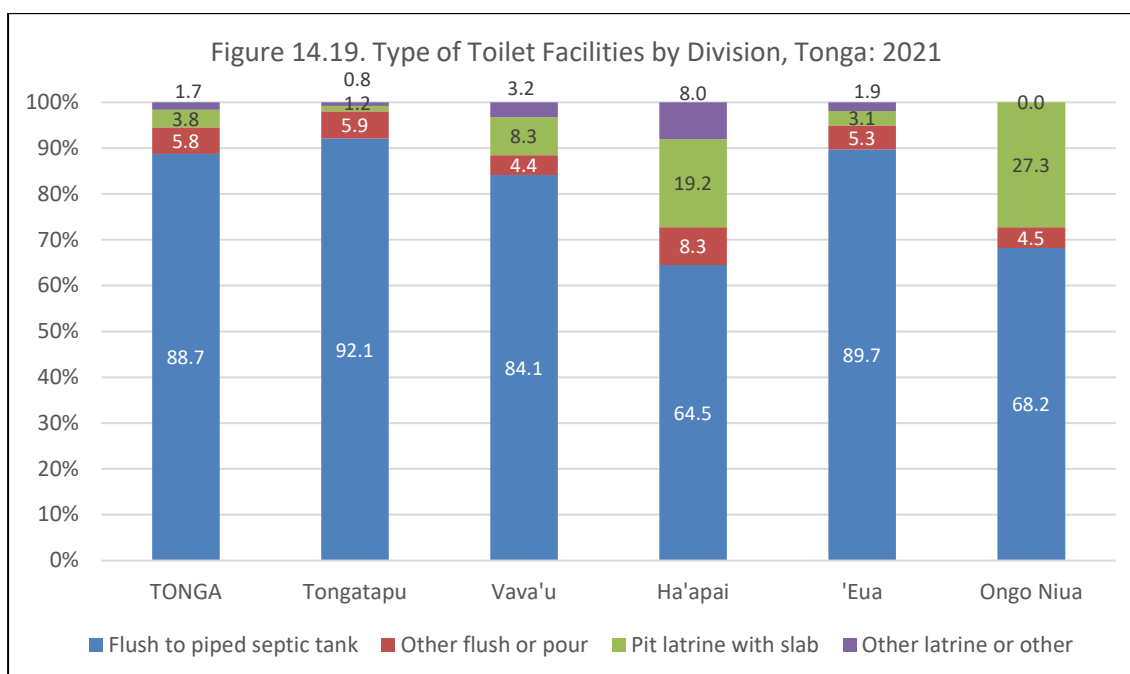
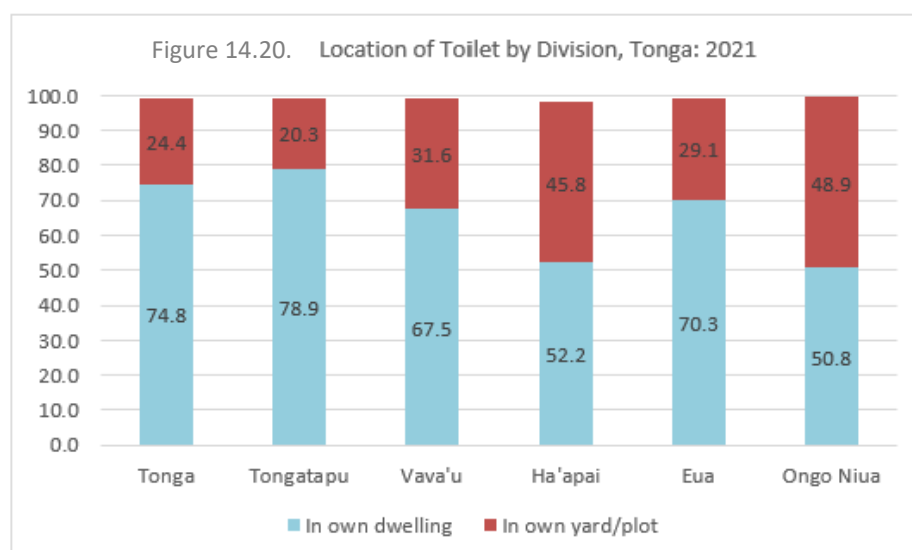


Figure 14.19 shows toilet facilities across the divisions in 2021. As expected, Tongatapu had the highest percentage of flush toilets, with 92 percent of its households using them. Ha'apai and Ongo Niua had the smallest percentage of households with a flush toilet. About 27 percent of Ongo Niua's and 19 percent of Ha'apai's households were still using pit latrines for their toilet facilities.



Toilet location. Most households in Tonga in 2021 either had a toilet in their own dwelling or in their own yard or plot (Figure 14.20). About 3 in every 4 of the households had the toilet in their own dwelling compared to about 1 in 4 who had the toilet facilities in their own yard or plot. Only about half of the households in Ha'apai and Ongo Niua had a toilet in their own dwelling.

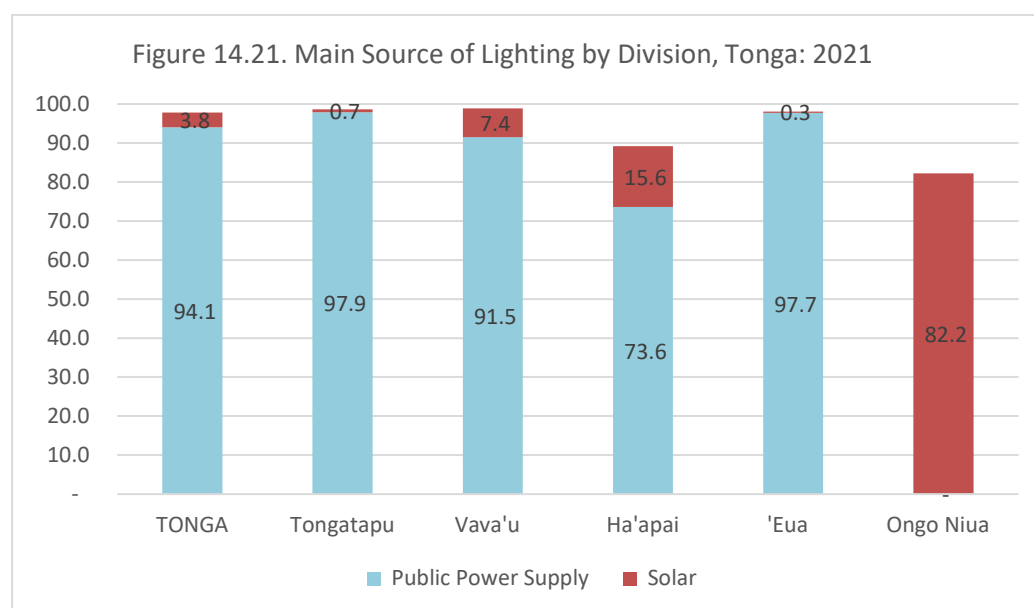


About 2 percent of the Tonga households in 2021 shared their toilet with another household (Figure 14.23). Households in Ha'apai were the most likely to share a toilet (about 2.5 percent of the households and households on Ongo Niua were least likely to share a toilet (about 1.5 percent).

Private households by main energy source

Main energy source.

Figure 14.21 shows the main source of lighting in 2021. A public power supply or solar energy provided all lighting. Ongo Niua did not have access to the public power supply, so solar capture provided all its energy for lighting. On the other hand, most households in Tongatapu in 2021 used the public power supply.



Cooking facilities

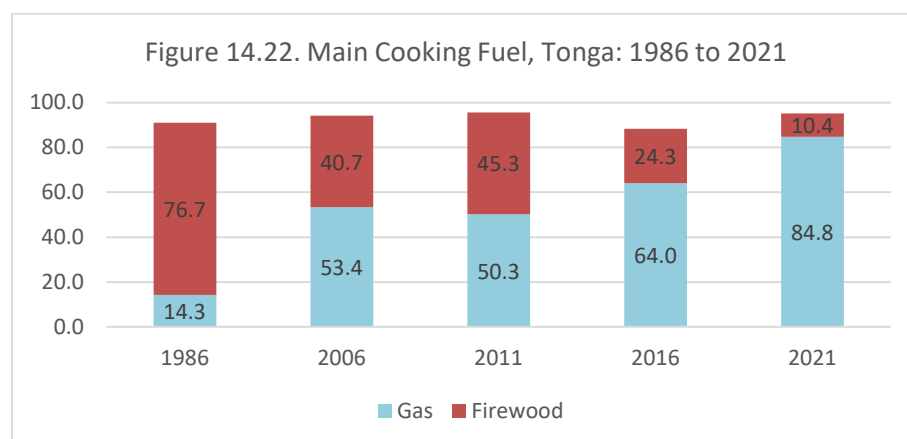
Cooking facilities. Table 14.11 shows changing cooking fuels over time. About 3 out of every 4 households in 1986 used firewood as cooking fuel and about 1 in 7 used gas. By 2011, the usage had switched, and 50 percent were using gas for cooking with 45 percent still using firewood. By 2021, the differences became even more extreme, with 85 percent using gas and 10 percent using firewood.

Table 14.11. Main Fuel Used for Cooking, Tonga: 1986 to 2021

	Numbers					Percents				
	1986	2006	2011	2016	2021	1986	2006	2011	2016	2021
Total	14,812	17,529	18,033	18,005	18,847	100.0	100.0	100.0	100.0	100.0
Electricity supply	367	611	640	1,960	830	2.5	3.5	3.5	10.9	4.4
Gas	2,121	9,359	5,906	11,530	15,976	14.3	53.4	50.3	64.0	84.8
Firewood	11,361	7,139	8,172	4,374	1,968	76.7	40.7	45.3	24.3	10.4
Kerosene	943	345	128	58	28	6.4	2.0	0.7	0.3	0.1
Other	20	75	28	83	45	0.1	0.4	0.2	0.5	0.2

Source: Tonga Censuses

Figure 14.22 shows the changes in cooking fuel usage more graphically. The percentage of households using firewood decreased continuously over time, while the percentage of households using gas increased.



And Figure 14.23 shows the distribution of main cooking facilities among the divisions in 2021. Over 70 percent of the households in Tongatapu, Vava'u and 'Eua used gas for cooking in 2021, and little else. About 1 in every 4 of the households in 'Eua used wood or coconuts. However, only half the households in Ha'apai and 3 in 10 households in Ongo Niua used gas for cooking. Over 1 in 3 of the households in Ha'apai and 3 of 5 households in Ongo Niua used firewood for their main cooking facilities.

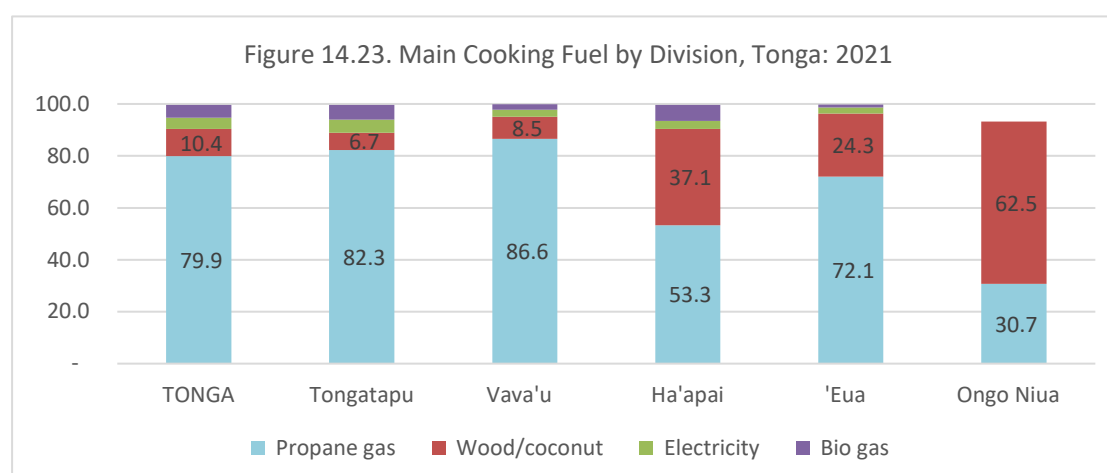
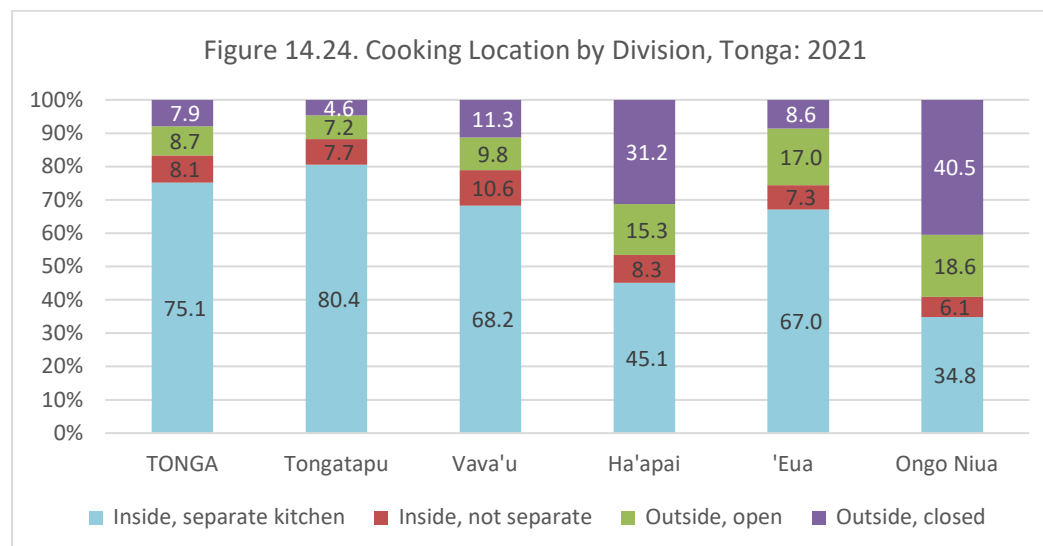


Figure 14.24 shows the cooking location by division in the 2021 census. About 3 in every 4 households in Tonga in 2021 had a separate area for its kitchen, and inside the unit. The divisions had different amounts of households with this distinction – about 4 in every 5 households on Tongatapu had separate, inside kitchens as did about 2 in every 3 of the household dwellings in Vava'u and 'Eua. However, only 45 percent of the dwellings in Ha'apai had separate, inside kitchens, and this was true for only 1 in 3 of the households in Ongo Niua. But, about 1 in 3 of Ha'apai's households had outside closed kitchens as did 2 out of every 5 households in Ongo Niua.



Private households by main means of waste disposal

Waste disposal. Table 14.12 shows the changes in waste disposal in Tonga over time. The percentage of households that burned their solid trash decreased from 86 percent in 1996 to just 6 percent in 2021, and the decrease was continuous and substantial from 2006 onward. Collection services for trash only started in the 2011 census, when about 1 in every 3 households reported as having this collection. But the proportion using collective services increased to about 2 in every 3 households in 2016, and 9 in every 10 households in 2021.

Table 14.12. Waste Disposal, Tonga: 1996 to 2021

	1996	2006	2011	2016	2021
Total	16,219	17,529	18,033	18,005	18,847
Burn	14,025	14,780	10,484	4,556	1,227
Bury	700	363	630	330	280
Lagoon/Ocean	122	15	297	8	9
Collection service			6,172	12,358	17,101
Others	1,372	2,371	450	753	230
PERCENTS					
Total	100.0	100.0	100.0	100.0	100.0
Burn	86.5	84.3	58.1	25.3	6.5
Bury	4.3	2.1	3.5	1.8	1.5
Lagoon/Ocean	0.8	0.1	1.6	0.0	0.0
Collection service	0.0	0.0	34.2	68.6	90.7
Others	8.5	13.5	2.5	4.2	1.2

Source: Tonga censuses

Figure 14.25 shows the changes in waste disposal very graphically. As noted, Tonga had no collection services for solid waste until before the 2011. And, then it increased rapidly in the manner most households disposed of their trash.

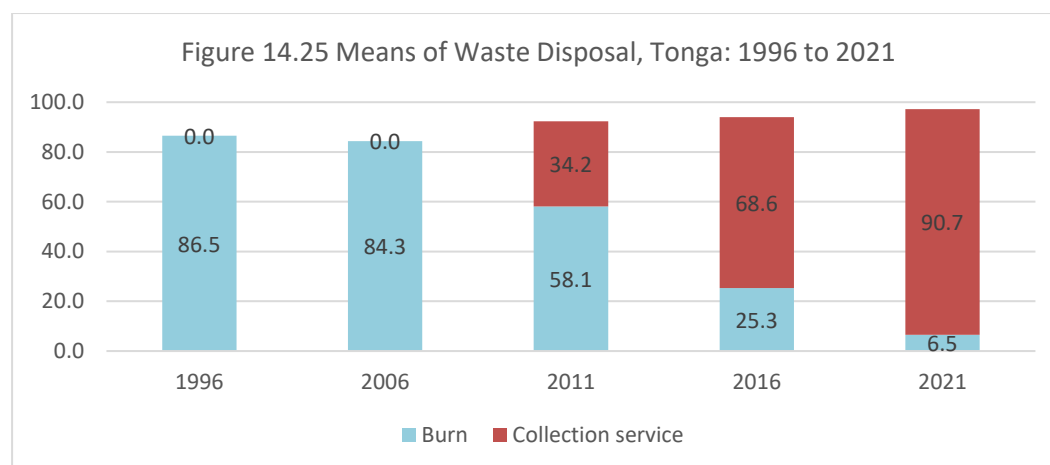
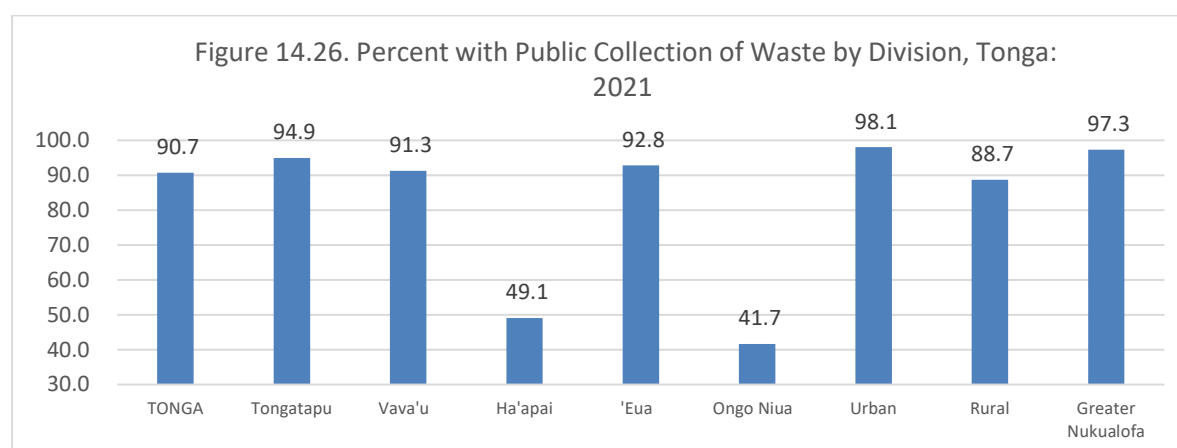


Figure 14.26 shows the percentage of the households that had public collection of disposable waste. About 9 in every 10 households had this public collection, including over 9 in 10 for Tongatapu, Vava'u, and 'Eua. However, only about half of the households in Ha'apai had public trash pickup and only 2 in 5 of the households in Ongo Niua had that service. Almost all households in urban areas – 98 percent – had public trash pickup, but only 89 percent of those in rural areas had this service. About 97 percent of the households in Greater Nukualofa had trash pickup.



Private households and availability of various household items

This section summarizes the availability of a variety of household items. In general, in 2021, a higher proportion of households in Tongatapu, compared to all other divisions, used household appliances such as a stove, washing machine, television, and whitegoods such as a fridge and freezers. This situation would reflect the greater household access to electricity in Tongatapu, but also the higher household income.

Table 14.13 compares selected assets reported in 2016 with those enumerated in the 2021 census. We sort the items so that the most common items in 2021, like cell phones and stoves, are at the top of the list, and fewer households have the items as you go down the list. The last two columns give the numerical and percentage change between the two censuses. Most items increased in number, except for televisions, CD/DVD players, landline phones and bicycles. The number of generators doubled over the 5 years and air conditioners went up by 78 percent.

Table 14.13. Selected Assets, Tonga: 2016 and 2021

	2016		2021		Change	
	Number	Percent of all households	Number	Percent of all households	Number	Percent
Cell Phones	15,929	88.0	18,332	97.3	2,403	15.1
Stove	15,419	85.2	17,257	91.6	1,838	11.9
Washing Machine	13,947	77.1	15,978	84.8	2,031	14.6
Freezer	7,144	39.5	12,251	65.0	5,107	71.5
TV	13,147	72.6	10,962	58.2	-2,185	-16.6
Fridges	8,959	49.5	10,376	55.1	1,417	15.8
Car	6,647	36.7	10,275	54.5	3,628	54.6
CD/ DVD Player	10,414	57.5	8,668	46.0	-1,746	-16.8
Laptops	6,791	37.5	7,448	39.5	657	9.7
Van	6,103	33.7	6,542	34.7	439	7.2
Tablets	3,204	17.7	3,873	20.5	669	20.9
Sewing Machine	3,110	17.2	3,825	20.3	715	23.0
Land Line Phones	4,720	26.1	3,699	19.6	-1,021	-21.6
Bicycles	4,695	25.9	3,031	16.1	-1,664	-35.4
Generator	946	5.2	1,933	10.3	987	104.3
Solar Panel	755	4.2	947	5.0	192	25.4
Boat	635	3.5	781	4.1	146	23.0
Air Condition	329	1.8	585	3.1	256	77.8
Motor Bike	237	1.3	205	1.1	-32	-13.5

Source: Tonga 2016 and 2021 censuses

Figure 14.27 shows comparisons of percentages of households with various appliances in 2016 and 2021. In most cases, the percentage was greater in 2021 than in 2016. But the percentage with televisions decreased over the 5 years, as the percentage with landlines, CD players, and bicycles. The percentage of households with freezers and cars moved up the most. But as noted, most households had access to cell phones, and this was also true for stoves, and washing machines increased between the two censuses.

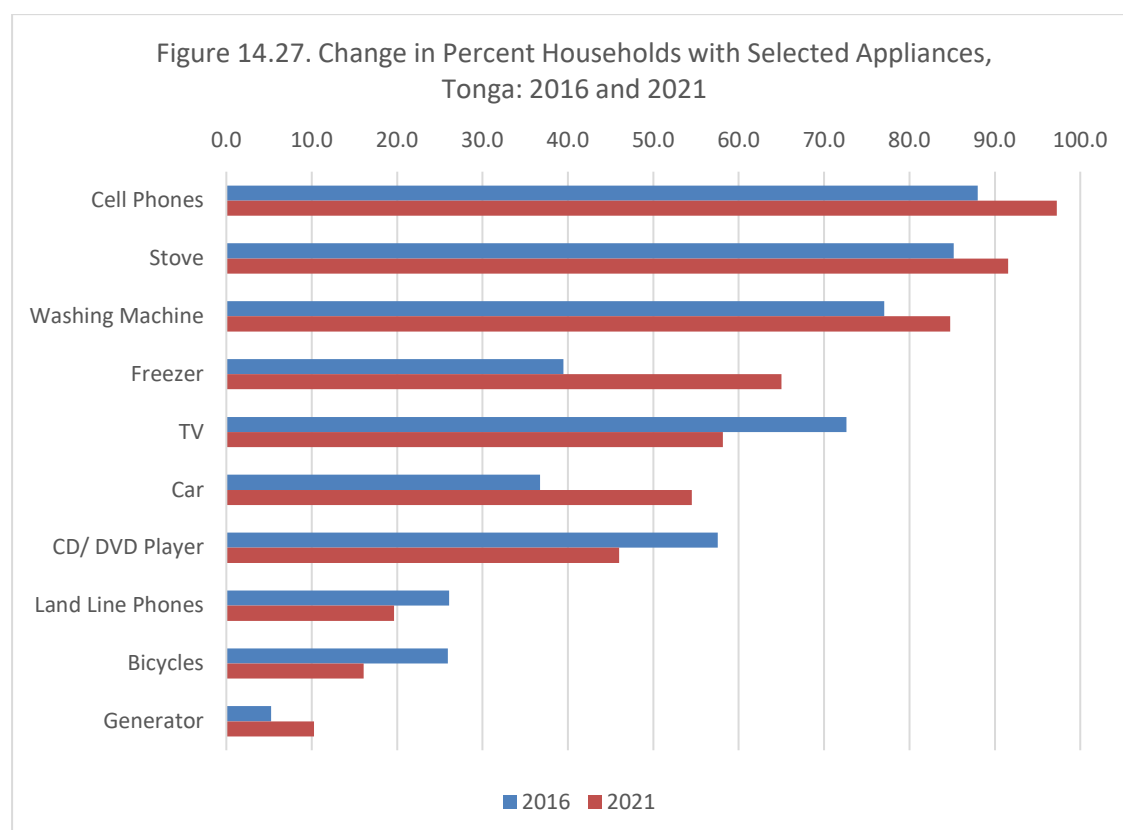


Table 14.14 shows selected appliances by Division from the 2021 census. As expected, Tongatapu had by far the largest number of almost any appliance, and in most cases, a larger percentage of households as well. As noted above, each division had 96 percent or more of its households having a cell phone. But, while over 3 out of 4 of the households in all divisions except Ongo Niua had a washing machine, the figure was only 58 percent in that last division.

Table 14.14. Households with Selected Appliances by Division, Tonga: 2021

	Numbers						Percent of all Households					
	Tonga	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua	Tonga	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
Mobile phone	18,332	13,368	2,698	1,118	896	252	97.3	97.5	96.7	96.6	96.2	95.5
Landlines	3,699	3,069	313	152	156	9	19.6	22.4	11.2	13.1	16.8	3.4
Tablets	3,873	3,246	407	92	97	31	20.5	23.7	14.6	8.0	10.4	11.7
Desktop/laptop computers	7,448	6,115	763	254	252	64	39.5	44.6	27.3	22.0	27.1	24.2
CD/DVD players	8,668	6,504	1,426	371	348	19	46.0	47.5	51.1	32.1	37.4	7.2
Battery powered radio	10,671	7,679	1,544	742	552	154	56.6	56.0	55.3	64.1	59.3	58.3
Television screen	10,962	8,916	1,305	286	448	7	58.2	65.1	46.8	24.7	48.1	2.7
Washing Machine	15,978	11,789	2,379	872	785	153	84.8	86.0	85.3	75.4	84.3	58.0

Source: Tonga Population and Housing Census 2021

Figure 14.28 shows the distribution for having a desktop or laptop computer. About 2 in every 5 households had a desktop or laptop computer in 2021. The percentage of households with a computer was largest on Tongatapu, at 45 percent, which influenced the average for all divisions. The other 4 divisions all had less than 30 percent of the households with a computer, with Ha'apai lowest at 22 percent, less than half the percentage for Tongatapu.

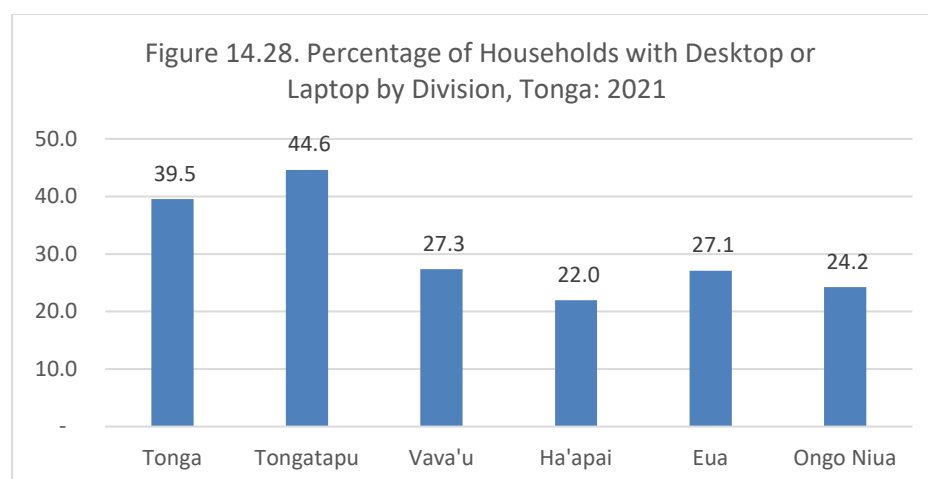


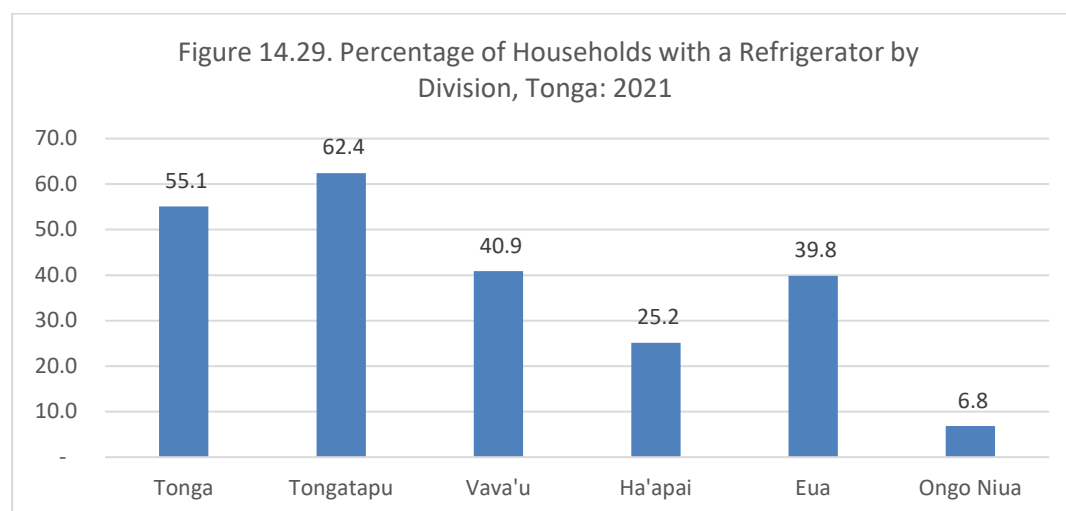
Table 14.15 shows various kitchen appliances by division in 2021. Ongo Niua had little electricity, so it had very few electric kitchen appliances, with only 2 percent of households having an electric frying pan, 3 percent with a water heater, 6 percent with an electric kettle, and 7 percent with a refrigerator. But 3 out of 5 households in Ongo Niua had a stove, which compared favorably with the other divisions, just less. And, while over half of all households had plastic water tanks, including 2 out of 3 on Vava'u and 3 out of 5 in Ha'apai, about 9 in every 10 of Ongo Niua households had these water tanks. And while 2 out of 3 three households in Tonga had a freezer by 2021, only 3 in 10 of the households in Ongo Niua had one.

Table 14.15. Households with Selected Kitchen Appliances by Division, Tonga: 2021

	Numbers						Percent of all Households					
	Tonga	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua	Tonga	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
Electric Kettle	12,669	9,444	1,746	701	762	16	67.2	68.9	62.6	60.6	81.8	6.1
Electric frying	6,357	4,820	796	378	357	6	33.7	35.2	28.5	32.7	38.3	2.3
Refrigerator	10,376	8,556	1,140	291	371	18	55.1	62.4	40.9	25.2	39.8	6.8
Freezer	12,251	9,139	1,648	670	715	79	65.0	66.7	59.1	57.9	76.8	29.9
Stove	17,257	12,698	2,556	996	797	210	91.6	92.7	91.6	86.1	85.6	79.5
Water heater	2,120	1,834	174	35	70	7	11.2	13.4	6.2	3.0	7.5	2.7
Plastic water tank	10,038	6,349	1,860	943	646	240	53.3	46.3	66.7	81.5	69.4	90.9

Source: Tonga Population and Housing Census 2021

Figure 14.29 shows the distribution of refrigerators graphically. About 55 percent of the households had a refrigerator in Tonga in 2021. Tongatapu had the most, at 62 percent, the only division with over half the households having a refrigerator. About 2 in every 5 of the households in Vava'u and 'Eua had a refrigerator, but this was true for only 1 in 4 of Ha'apai's households, and only 7 percent of those in Ongo Niua.



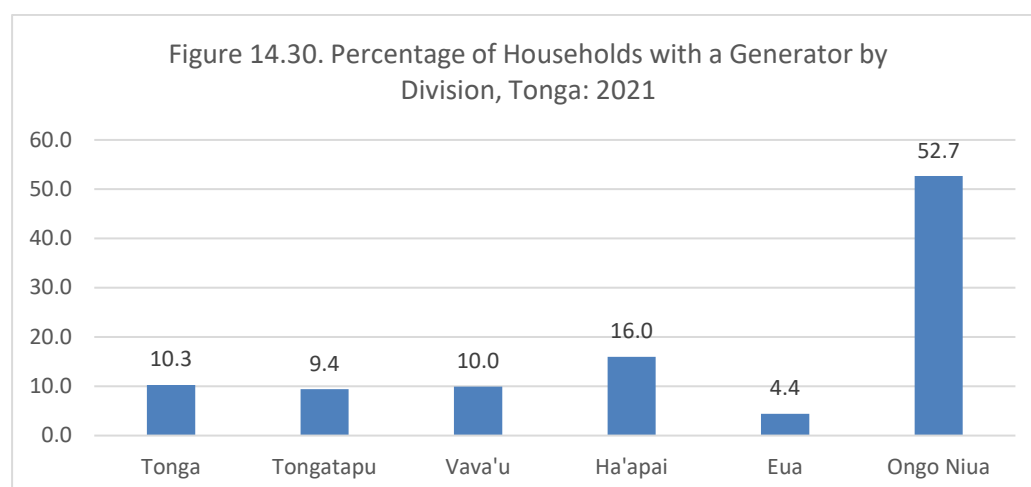
The 2021 census asked about energy systems. Only 3 percent of Tonga's households had an air conditioner, with Tongatapu having the most (Table 14.16). But, while 1 in every 10 of Tonga's total households had a generator, over half the households in Ongo Niua did; 'Eua, at 4 percent, was at the other extreme. And, about 2 out of every 3 households in Ongo Niua had a solar system, the proportion for the whole country was 1 in 20. However, as shown elsewhere in this paper, Ongo Niua gets its electricity from solar power, so the solar systems are shared.

Table 14.16. Households with Energy Systems by Division, Tonga: 2021

	Numbers						Percent of all Household dwellings					
	Tonga	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua	Tonga	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
Air Conditioner	585	538	38	6	3	0	3.1	3.9	1.4	0.5	0.3	0.0
Generator	1,933	1,290	278	185	41	139	10.3	9.4	10.0	16.0	4.4	52.7
Solar System	947	367	220	178	10	172	5.0	2.7	7.9	15.4	1.1	65.2

Source: Tonga Population and Housing Census 2021

Figure 14.30 shows the percentage of households with generators graphically. As noted, Ongo Niua had the highest percentage, followed by Ha'apai.



Private households by type of transport

Table 14.17 shows selected vehicles by division, both land and water transport. Over half the households had cars, including 3 out of every 5 in Tongatapu. But only 2 out of every 5 households in Vava'u had a car, and only 1 in 6 in Ongo Niua. About 1 in every 3 households in Tonga had a van, and that was close to the rate across the divisions. Only 4 percent of the households had a boat, with an even smaller percentage in Tongatapu, but 1 in 10 of the households in Ha'apai had a boat. Tonga only counted a very few canoes.

Table 14.17. Households with Selected Vehicles by Division, Tonga: 2021

	Numbers						Percent of all Household dwellings					
	Tonga	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua	Tonga	Tongatapu	Vava'u	Ha'apai	'Eua	Ongo Niua
Cars	10,275	8,397	1,216	319	296	47	54.5	61.3	43.6	27.6	31.8	17.8
Van	6,542	4,906	933	243	384	76	34.7	35.8	33.4	21.0	41.2	28.8
Bicycles	3,031	2,288	329	227	99	88	16.1	16.7	11.8	19.6	10.6	33.3
Truck	1,804	1,418	288	34	53	11	9.6	10.3	10.3	2.9	5.7	4.2
Boats	781	409	229	118	13	12	4.1	3.0	8.2	10.2	1.4	4.5
Out-board Engine	560	278	169	93	11	9	3.0	2.0	6.1	8.0	1.2	3.4
Motorbikes	205	133	40	15	13	4	1.1	1.0	1.4	1.3	1.4	1.5
In-board Engine	130	81	38	10	1	0	0.7	0.6	1.4	0.9	0.1	-
Canoes	111	48	33	28	2	0	0.6	0.4	1.2	2.4	0.2	-

Source: Tonga Population and Housing Census 2021

Figure 14.31 shows the percentage of households with a bicycle. About 1 in every 6 of the households in the country had access to a bicycle, but the percentage was twice as large in Ongo Niua where about 1 in every 3 households had access to a bicycle.

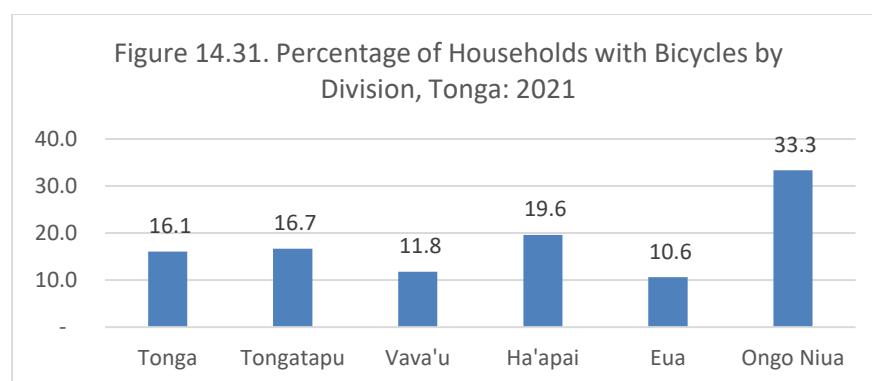
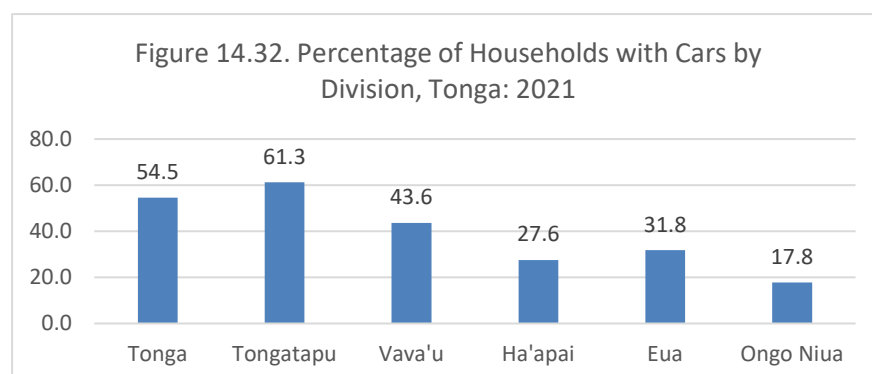


Figure 14.32 shows the distribution for cars, as discussed above. While 54 percent of all the households had access to a car, the range was from 61 percent for Tongatapu down to 18 percent for Ongo Niua.



Conclusion

In general, more households in all the divisions had more assets in 2021 than they did in 2016. We use the assets described here to make the wealth index which we describe and implement in Chapter 17 to assist in studying the wealth and poverty of Tonga's population.

CHAPTER 15: HOUSEHOLD INCOME AND REMITTANCES

Very few Tongans continue to live at subsistence, that is, without any salaried workers in the household. Most had salaried workers and so the 2021 asked questions about household income.

Main source of household income

Figure 15.1 shows the percentage of households with regular salary workers for all of Tonga and for the Divisions in 2021. About 38 percent or about 2 out of every 5 households had a regular salary worker. The percentages for Tongatapu and Ongo Niua were slightly higher, and the percentages for the other three divisions were lower. Only about 1 in every 4 households in Vava'u and 'Eua had a regular salaried worker. Ha'apai had about 1 in every 3 households with a regular salaried worker.

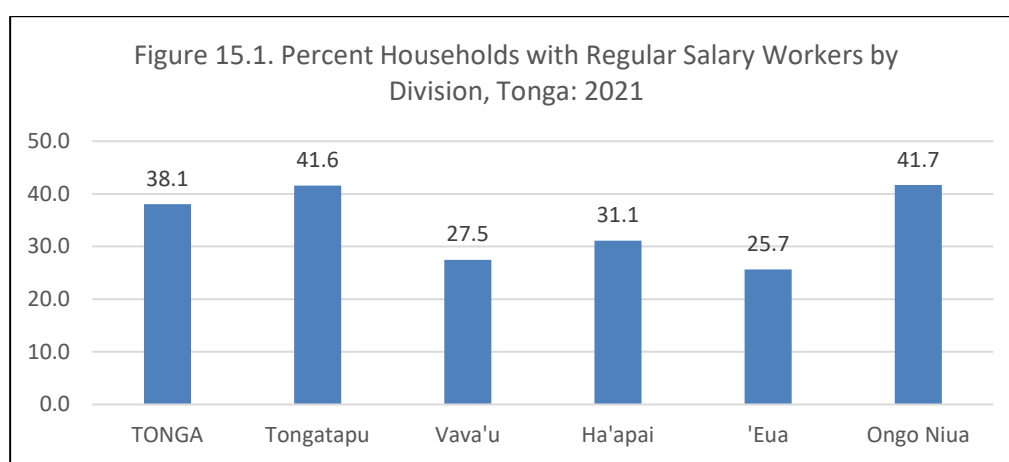
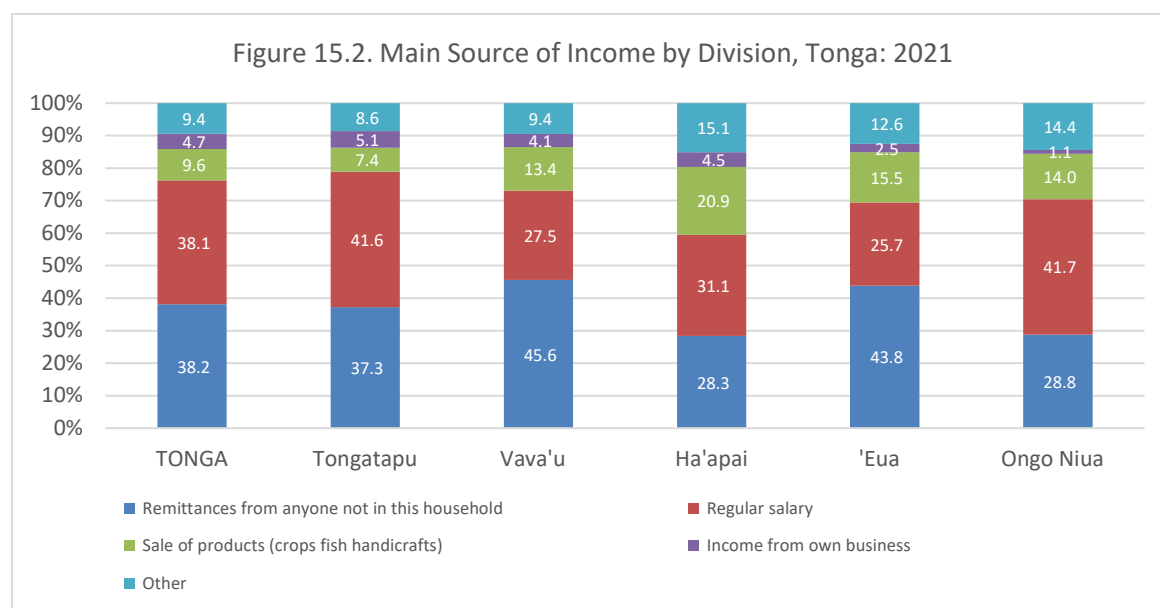
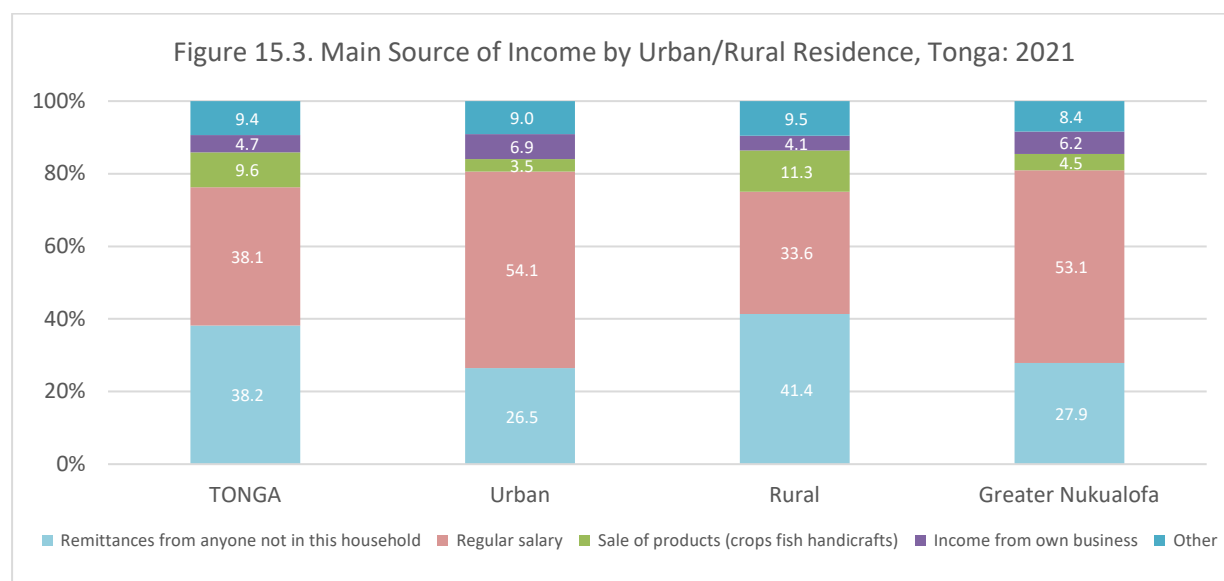


Figure 15.2 shows the main source of income by division in 2021. About 2 in every 5 households had remittances from outside the household as their main source of income. But about half the income sources were from regular salaries. Vava'u and 'Eua had the highest percentages in remittances, and Tongatapu had the highest percentages in regular salary wages. Ha'apai had the largest percentage of main income coming from sale of products.

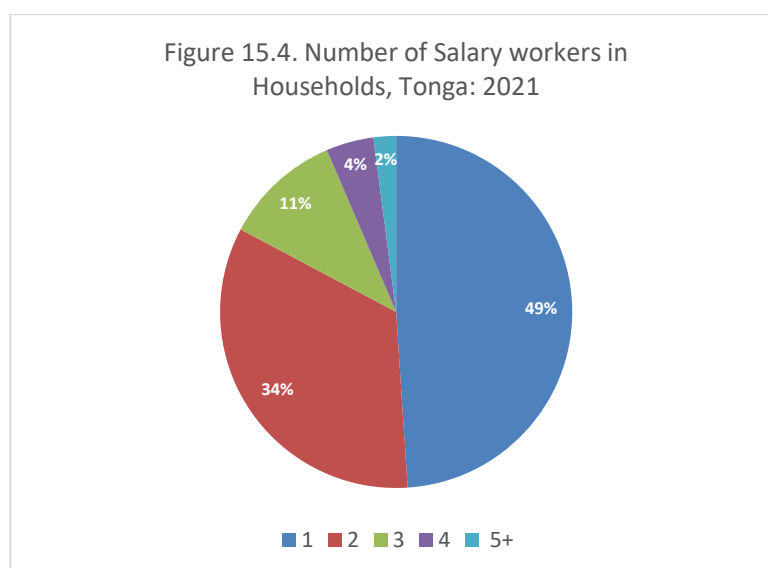


About equal numbers of households in Tonga had remittances as their main source of income compared to households living on regular salary employment. But, over half of the urban households lived off regular salaries compared to 1 in 3 in rural areas – 2 out of every 5 in rural areas had remittances as their main source (Figure 15.3).



Salaried workers

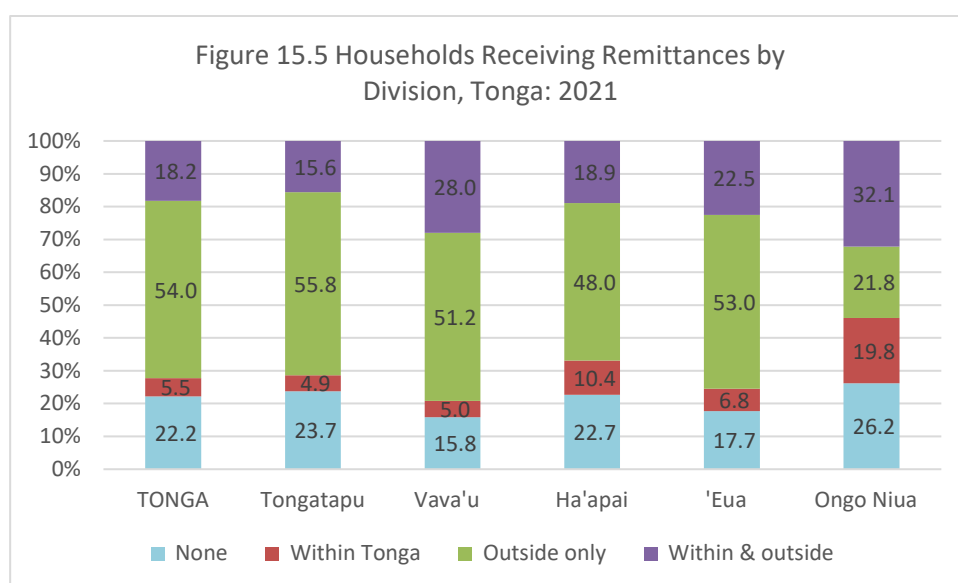
Figure 15.4 shows a pie chart of the distribution of the number of salaried workers in households in Tonga in 2021. Almost half the households had only one salaried worker in the household. About 1 in every 3 households had two salaried workers, and about 1 in every 10 had 3 salaried workers. Smaller numbers had 4 or 5 or more salaried workers.



Remittances

Remittances are money sent to households from relatives or friends of another household whether in Tonga or abroad. For instance, when members of a population move to another area (district, division, or another country) and send money and food back home, these are remittances. Tongans have moved to New Zealand and Australia for decades and have also moved in large numbers to the United States. Migrants, once settled, start sending remittances back to their remaining family members in Tonga.

Figure 15.5 shows the percentages of remittances coming from outside and inside Tonga for the divisions. About half the remittances came only from outside Tonga, except for Ongo Niua at about 1 in 5. About 22 percent of households in Tonga did not receive any remittances, with a smaller percentage for Vava'u and a larger percentage in Ongo Niua. About 1 in 5 of the remittances for Ongo Niua came from within Tonga, a much larger percentage than for the other divisions, and about 1 in 3 of all remittances for Ongo Niua were from both inside and outside Tonga. About 28 percent of Vava'u's remittances came from a combination of inside and outside Tonga.



Over half the remittances in both urban and rural areas came from outside Tonga (Figure 15.6). Only a small amount of remittance came from within Tonga only, but the percentages were about the same for urban and rural areas. Similarly, about the same percentages came from a combination of within and outside Tonga – less than 1 in every 5 households.

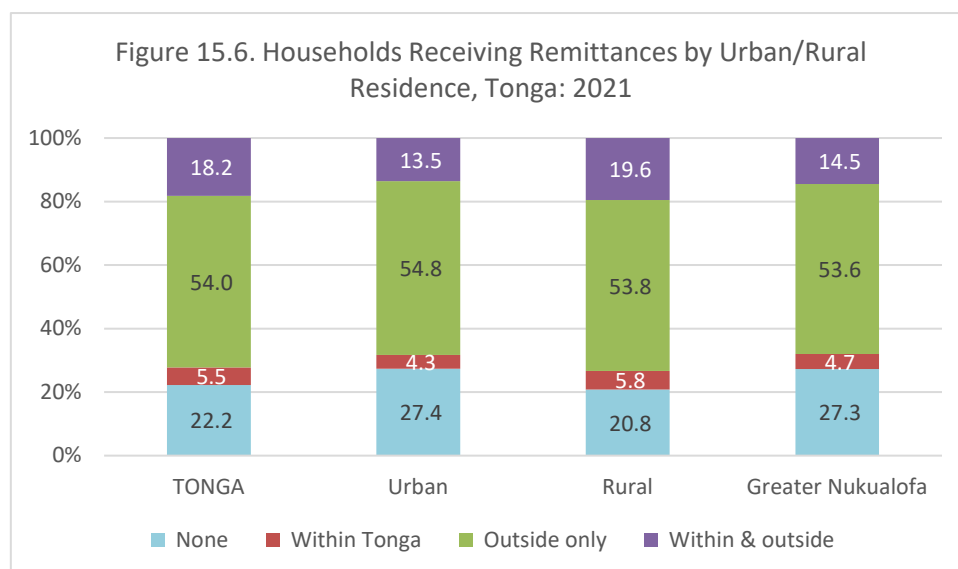


Figure 15.7 shows that the frequency of receiving remittances was about the same across the categories. About the same percentages occurred for “every 2 weeks” and “every month” and these two categories accounted for about half of the remittances frequencies. A smaller percentage received remittances every 2 months, and even smaller proportions received remittances either “once or twice a year” or “occasionally”. A smaller percentage of remittances went bi-weekly to Ha’apai and Ongo Niua, and Ongo Niua reported a larger percentage received remittances “every month”. ‘Eua had a larger percentage receiving remittances only “occasionally.”

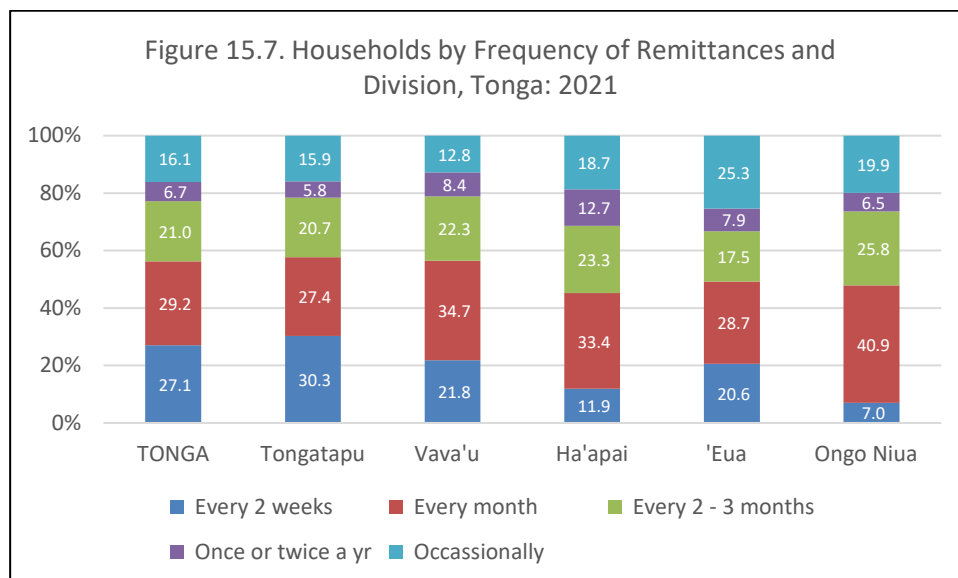
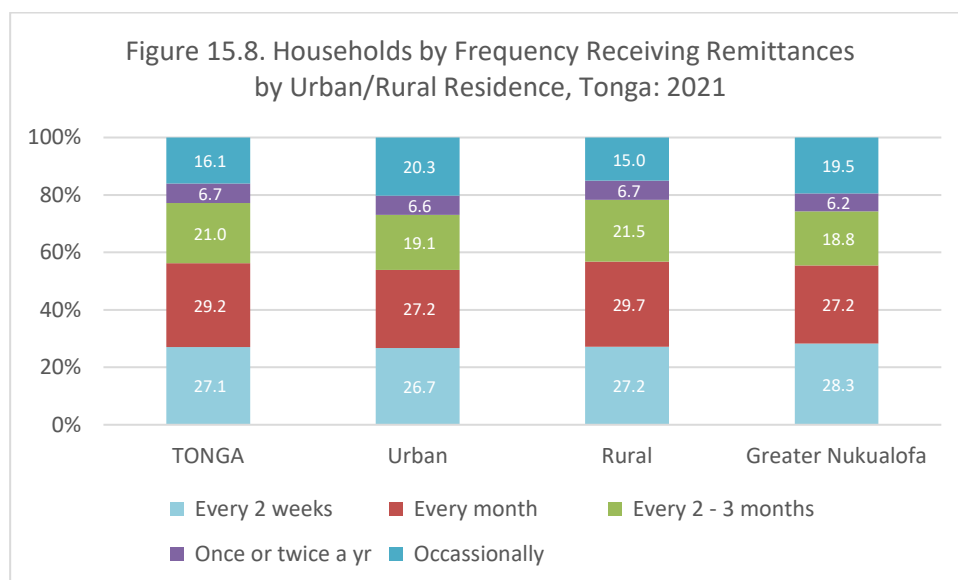


Figure 15.8 shows that the households receiving remittances received them in about the same proportions by urban and rural residence as for the entire country. Over 1 in 4 in both urban and rural areas received remittances on average every 2 weeks, and another 1 in 4 received them each month, whether in urban or rural areas. The other categories also played out about the same.



Temporary Labour Mobility

The 2021 census asked questions to households about residents ever doing temporary work in Australia and New Zealand as part of “labour schemes”. The census also asked specific questions about this type of work around the time of the census.

Figure 15.9 shows the percentage of households with residents who were never employed in temporary labour mobility schemes involving work in New Zealand or Australia. About 4 in 5 households, their adult residents were never employed in any of the schemes, so about 1 in 5 households had one or multiple residents taken part in the schemes at some point in their adult lives. Those in Tongatapu were the least likely to have taken part in movement for overseas labour, while those in 'Eua were the ones mostly likely to have taken part in those labour schemes.

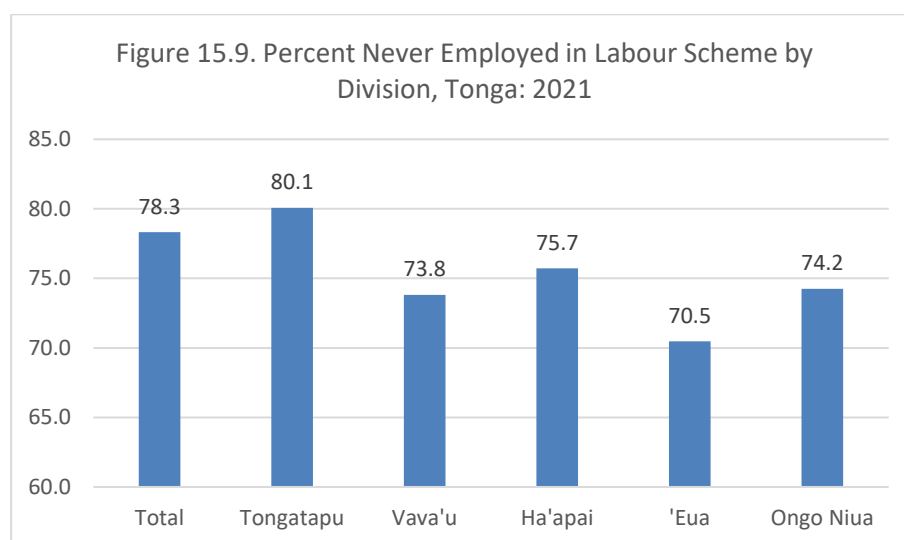
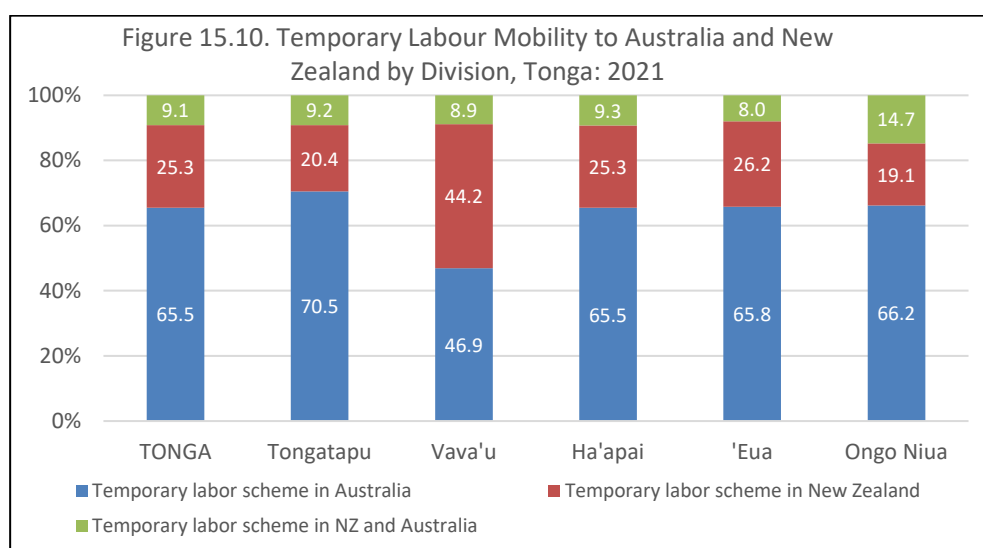


Figure 15.10 shows where the labour scheme took place, whether in New Zealand or Australia, or both countries. It looks at households with residents who participated in the Labour scheme (22 percent), about 65 percent were in Australia only, about 25 percent participated in a New Zealand scheme only, and about 10 percent participated in schemes that took place in both Australia and New Zealand. Majority of the households were with current residents that went to Australia or New Zealand only, and a much smaller number went to both. The percents for the other Divisions are like that of Tonga as a whole.



The census then asked the 22 percent households mention in the previous paragraph, whether its residents took part in a labour scheme during calendar years 2020 and 2021. About 2 out of every 5 of these households resides adult members that had not taken part in a labour scheme at all in 2020 or 2021, and the percentage was about the same for all the Divisions except for Ongo Niua (Figure 15.11). The rest had no resident participated in a labour scheme in 2020 or 2021.

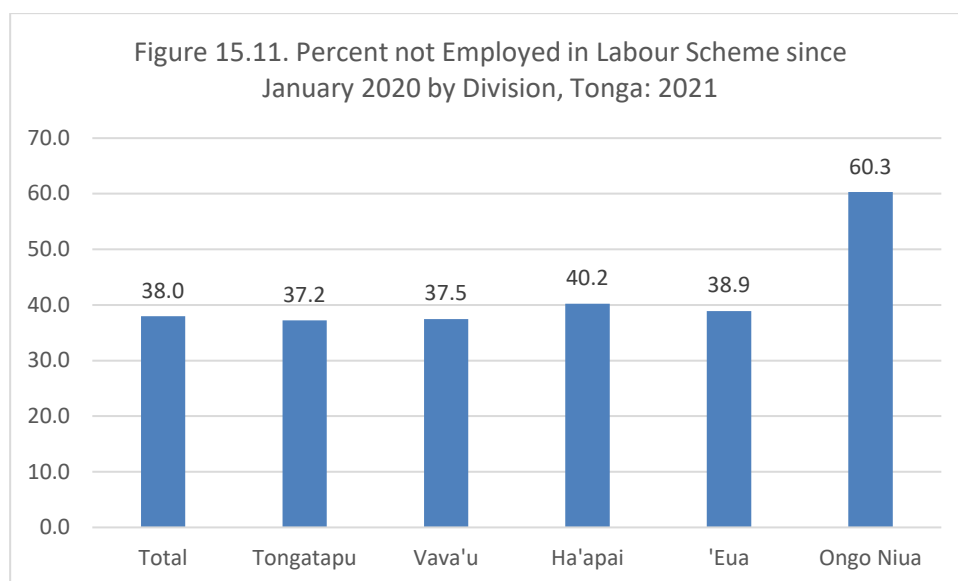
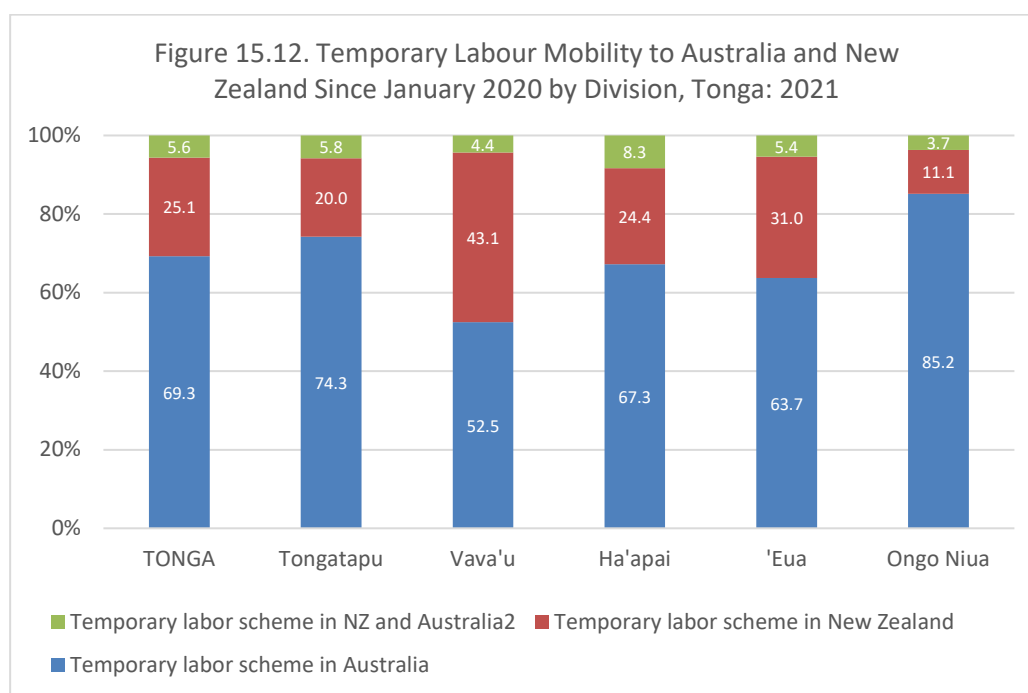
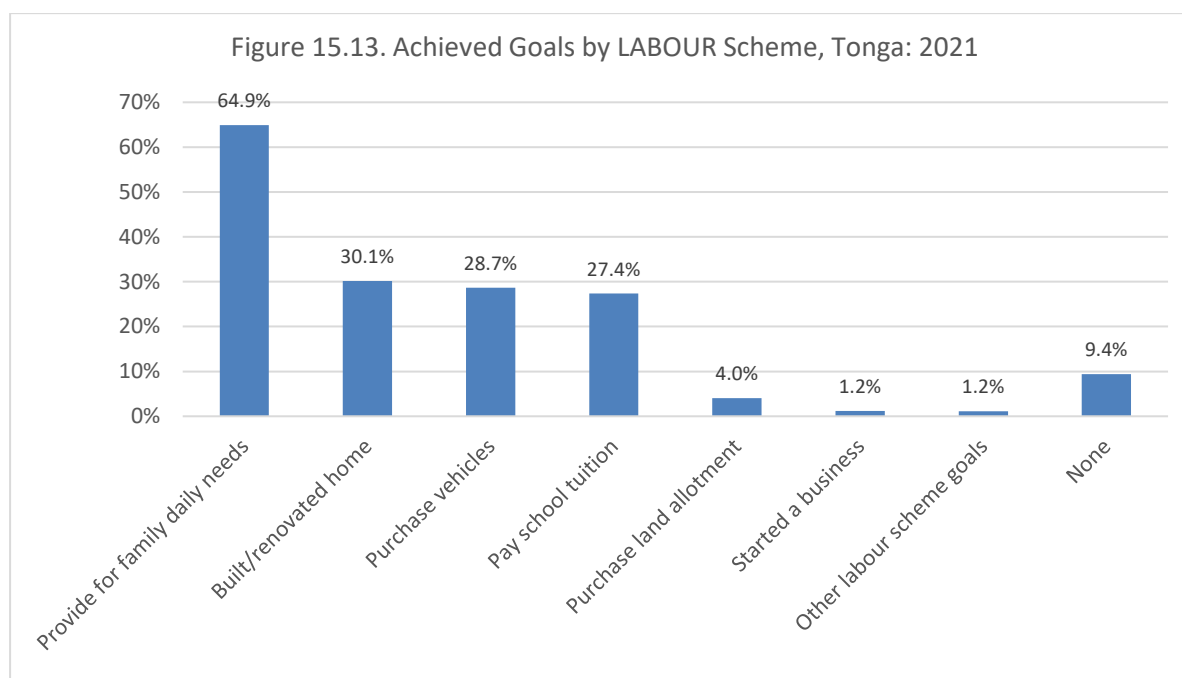


Figure 15.12 shows the percentage distribution of the households shown in Figure 15.11 to where the Labour scheme took place, whether in Australia or New Zealand or both. As before, Australia was the preferred location for traveling for the labour scheme. About 70 percent participated in labor schemes to Australia only, while about 25 percent to New Zealand, and the rest to both Australia and New Zealand. The percentages for the short-term Labour schemes were like those above for those who ever took part in a labour scheme with slight changes.

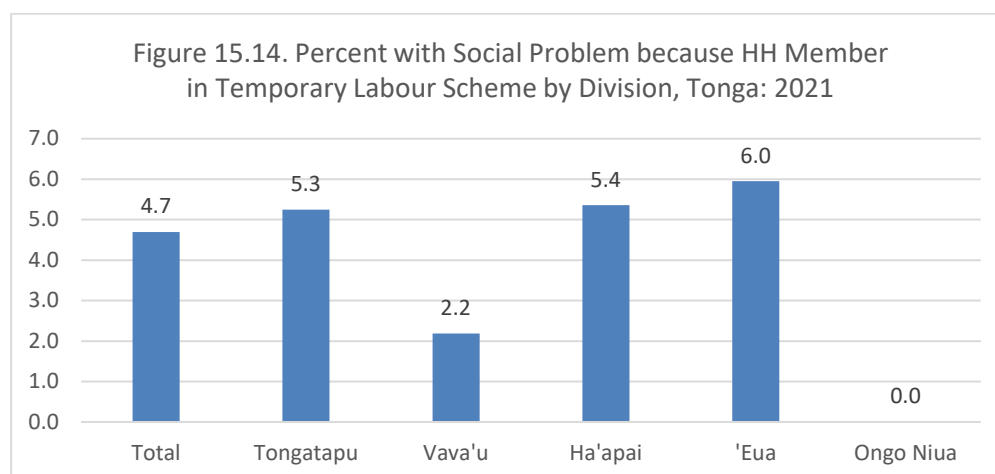


When residents traveled to Australia or New Zealand to participate in the labour scheme, they usually have a goal in mind. With specific goals listed, Figure 15.13 shows the responses of the 4,085 households (with residents who were employed in temporary labour mobility schemes) to each goal. The largest numbers went to provide for their family's daily needs. Followed by building or renovating a house, paying school tuition, and purchasing a vehicle which is all around the same numbers of responses.



Note: one household can have multiple goals achieved thus the percentages would not add up to a 100 percent

The census also asked whether the residents had any social problems arising out of their participation in a labour scheme. Figure 15.14 shows that about 5 percent had a social problem related with the work. About 6 percent of those residing in 'Eua at the time of the census had a social problem compared to only 2 percent for Vava'u and none reported for Ongo Niua.



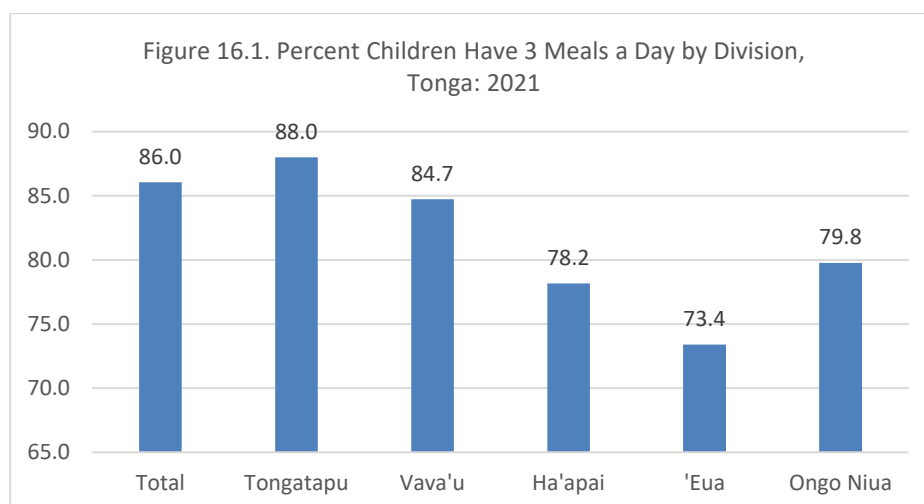
Tonga traditionally had a close work ties with New Zealand and Australia, and these ties continue. The temporary labour schemes allow for Tongans to do short-term work in the receiving countries and New Zealand and Australia benefit from the work of strong, enthusiastic Tongans.

CHAPTER 16: CHILD DEPRIVATION AND DISASTERS

The 2021 Tonga census asked a series of questions to find out the conditions of children throughout the country. The questions identified potential problems getting food, types of food, and opportunities to study and to learn.

Child deprivation

Figure 16.1 shows the percentage of children who had access to three meals a day for the Divisions. About 86 percent of Tonga's children had three meals a day. The children in Tongatapu were the most likely to have three meals, at 88 percent, or about 7 out of 8 children. About 85 percent of Vava'u's children had three meals a day, and about 4 out of every 5 children in Ongo Niua and Ha'apai were also getting three meals a day. However, only about 3 out of every 4 children in 'Eua received three meals a day.



A higher percentage of children took part in celebrations like Christmas than got three meals a day. About 9 out of 10 of the children in Tonga took part in celebrations, with Tongatapu again leading the Divisions (Figure 16.2). About 93 percent of Tongatapu's children took part in celebrations. For the other division, Vava'u at 89 percent, 'Eua at 88 percent, Ongo Niua at 87 percent and Ha'apai at 86 percent were not far behind.

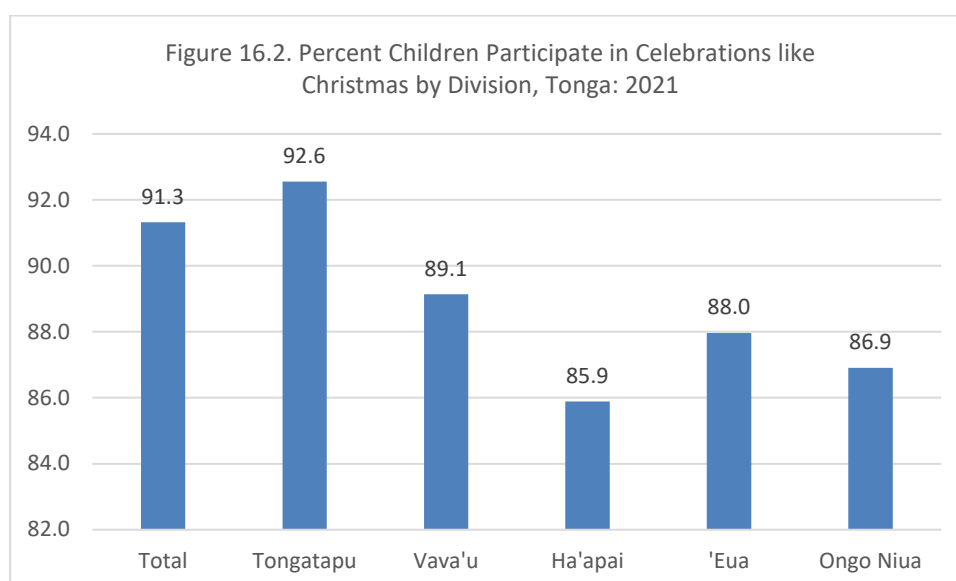
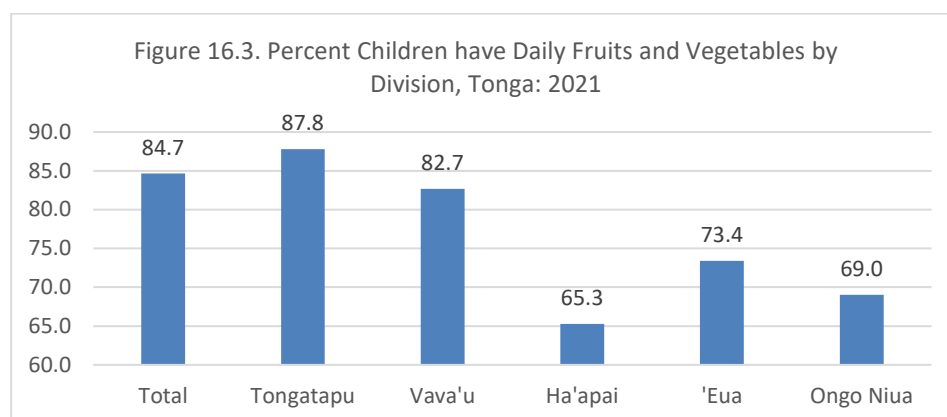
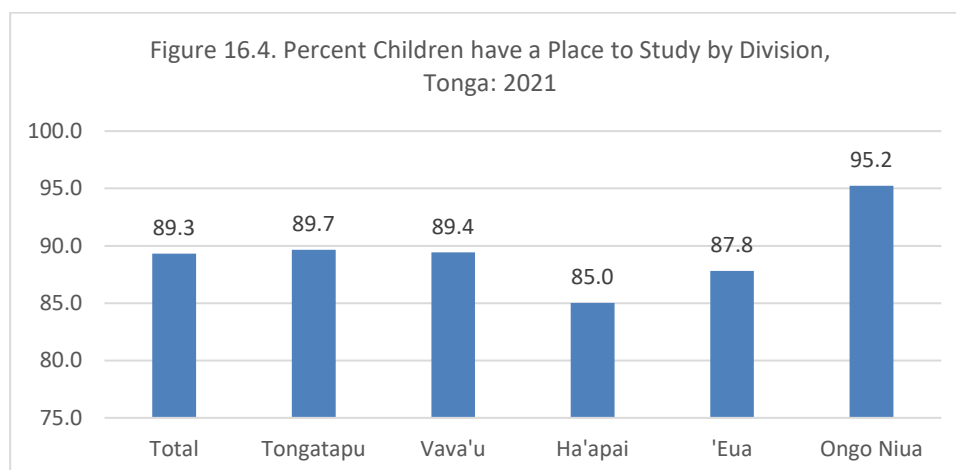


Figure 16.3 shows the percentages of Tonga's children who had daily access to fruits and vegetables. About 85 percent of the children had daily access to fruits and vegetables, including about 7 in every 8 of Tongatapu's children. Unfortunately, while about 83 percent of Vava'u's children had daily fruits and vegetables, only about 3 in 4 of those in 'Eua, 7 in 10 of those in Ongo Niua, and 2 out of 3 of those in Ha'apai had this access.



About 9 out of every 10 children in Tonga had a place where they could study (Figure 16.4). All divisions saw percentages of 85 or above for student's place to study, and the figure was 95 percent for Ongo Niua.



About 4 out of every 5 children in Tonga in 2021 had books at home (Figure 16.5). As with the other variables, Tongatapu had a slightly higher percentage, but about 3 in every 4 children in Vava'u, Ha'apai, and 'Eua had books at home, but less than 2 out of 3 children in Ongo Niua fell in this category.

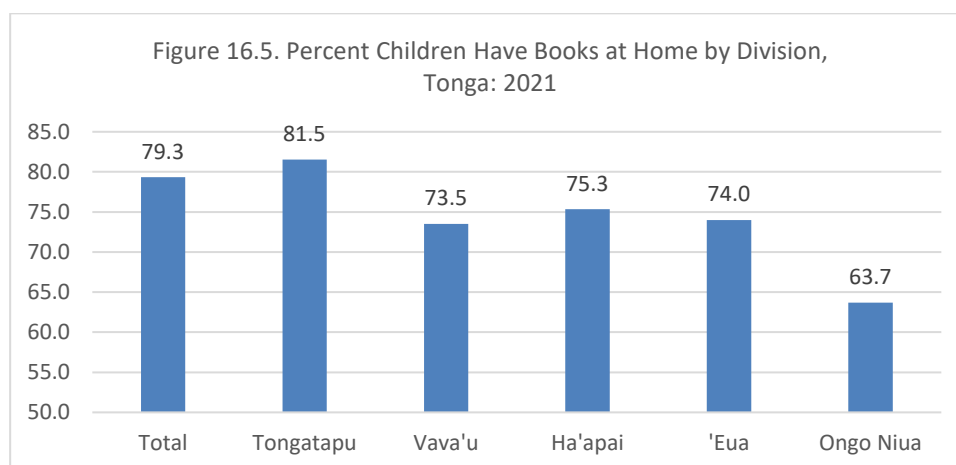
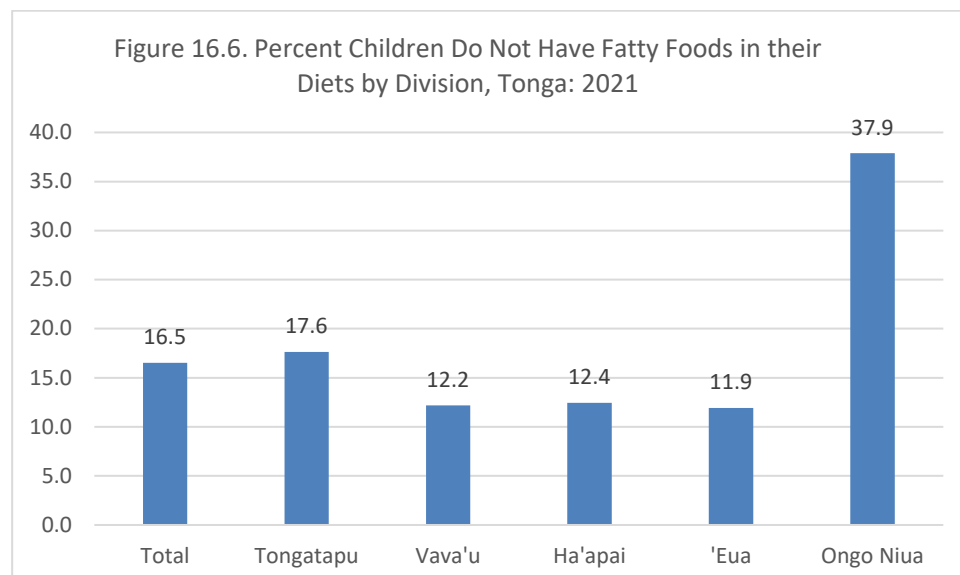
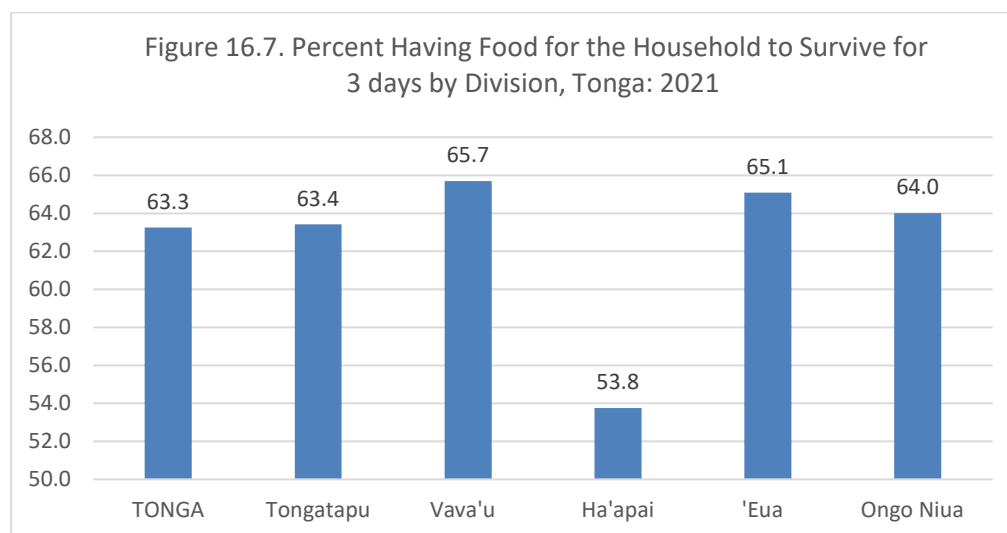


Figure 16.6 shows the percentage of children who did not have fatty foods in their diets by Division. That is, the 16 percent for all of Tonga that did not have fatty food diets meant that about 84 percent of the children had fatty foods in their diets. The percentages of fatty foods in the diet were remarkably high, reaching about 82 percent in Tongatapu. Because those on Ongo Niua did not have the same access to “junk” and therefore fatty foods, only about 62 percent of the children there had access to fatty foods. As Tonga becomes more Westernized, its diets have changed to what most of the rest of the world eats daily.

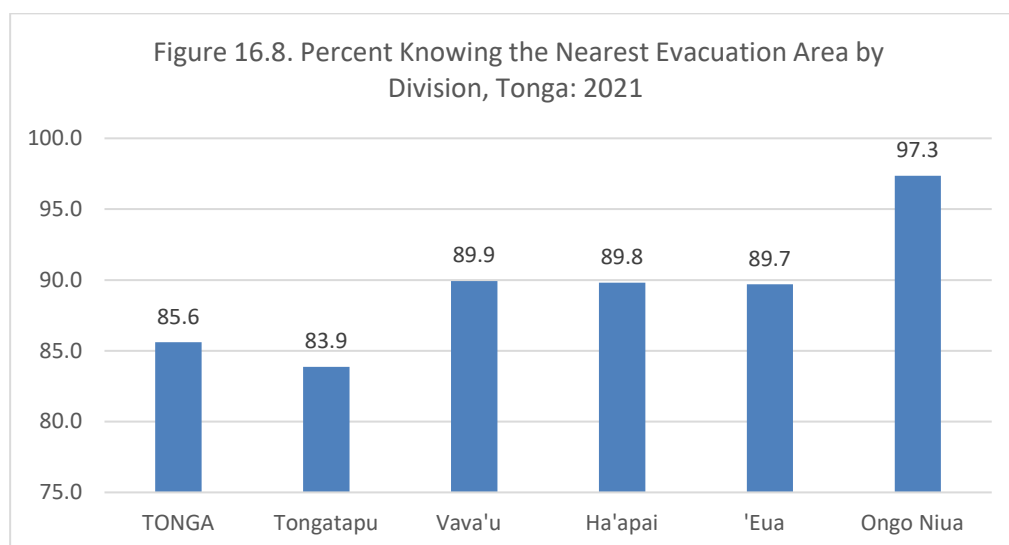


Response to disasters

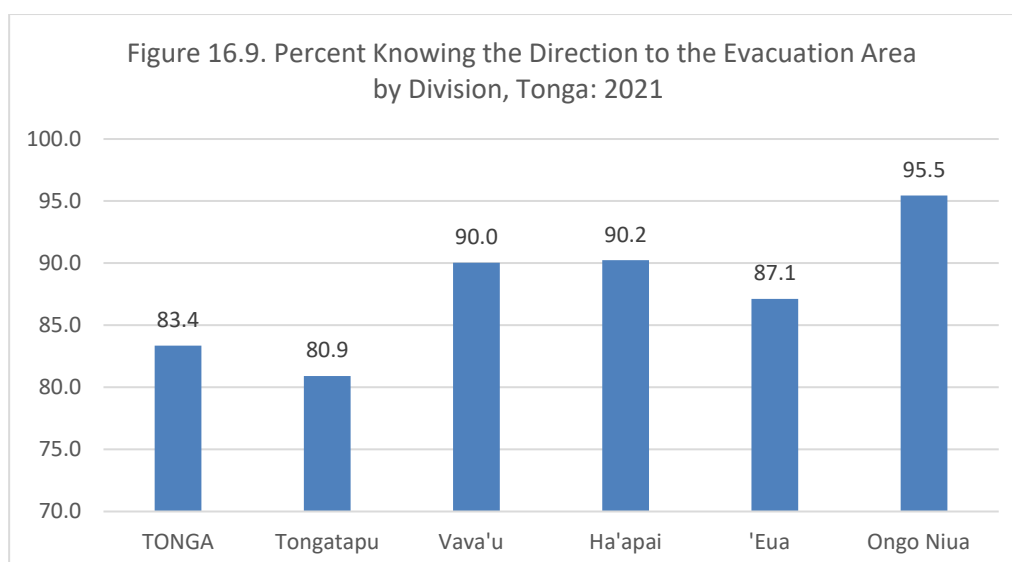
Although the census phrases items negatively, most census items required positive responses. Figure 16.7 shows that about 2 out of every 3 households would have enough food to survive for three days if a disaster struck (as the earthquake, a cyclone, or a tsunami). The percentages were similar for the Divisions except for Ha'apai where over half the families would have enough food to survive for 3 days.



Most households knew where their nearest evacuation center was, as measured by the census. About 86 percent of households knew their nearest evacuation center, including 97 percent of those in Ongo Niua (Figure 16.8). Tongatapu had the lowest percentage knowing the nearest evacuation area, at 83 percent, but the other three divisions were at 90 percent.



The results were about the same for the question about knowing the direction to the nearest evacuation area. About 83 percent households knew directions to the evacuation area, including 81 percent of those on Tongatapu, and 90 percent or more for Vava'u, Ha'apai, and Ongo Niua (Figure 16.9).



About 2 in every 3 Tonga households knew the town officer and his contact information at the time of the census (Figure 16.10). Over 3 in every 4 households in Vava'u, Ha'apai, 'Eua, and Ongo Niua knew the town officer as did about 64 percent of those households in Tongatapu.

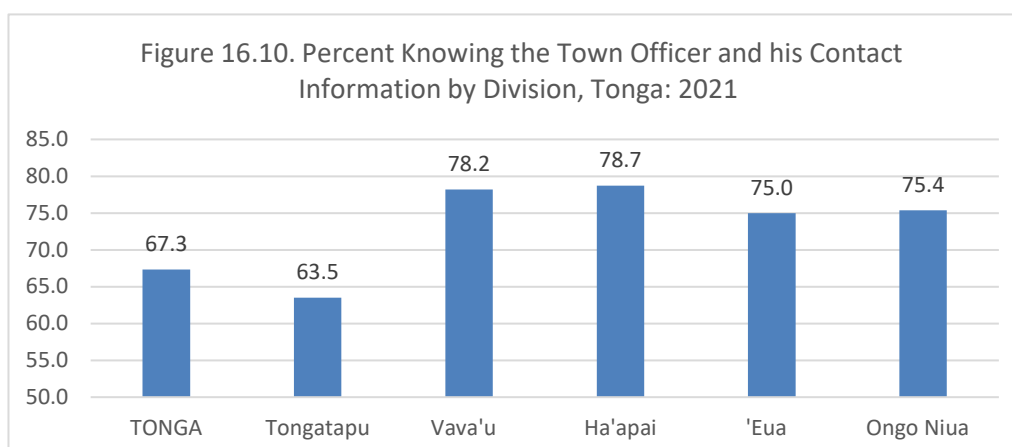
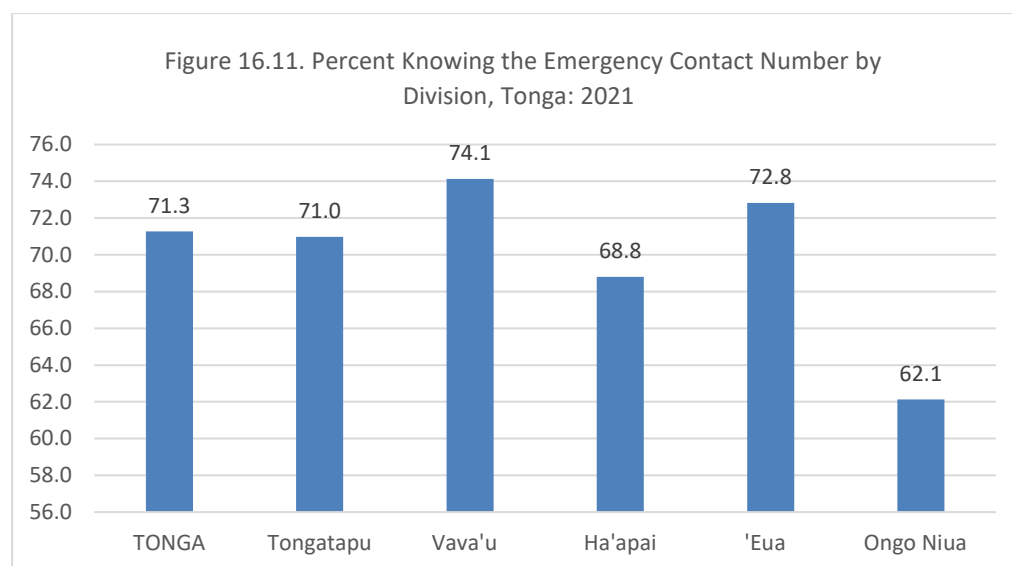


Figure 16.11 shows the percentages knowing the emergency contact numbers in case of an emergency. About 7 in every 10 Tonga households knew the emergency contact numbers, with Ha'apai and Ongo Niua having lower numbers.



The items on types of child deprivation help determine the conditions of children across Tonga as of 2021 at the time of the census. And the items on disasters allow the national and division governments information about the amount of planning the households are doing in case a disaster threatens.



CHAPTER 17: WEALTH QUINTILES

Most Pacific Island countries do not ask for income amounts on their censuses. They reserve collection of income data for Household Income and Expenditures (HIES) to be able to collect income and expenditures at the same time. Hence, another measure, called a “wealth index” is used to compare relative amounts of household assets and then to be able to compare this wealth of households.

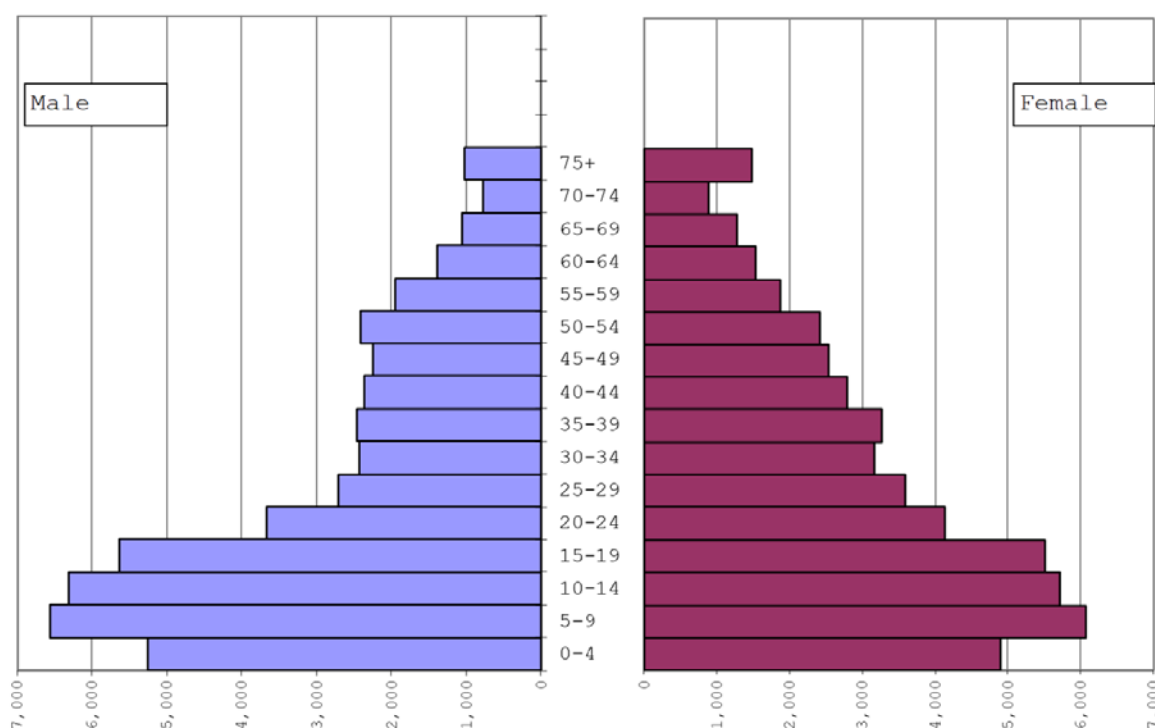
Usually, a factor analysis is used to determine which variables would be in the wealth index, and how much weight should be applied from each. Often, the assets are divided into binary variables, so that a single item in the census may be divided into several parts. The entries are weighted and summed to get a raw score. And, then, usually quintiles or deciles are formed to do further analysis. The programmer for the 2021 Tonga census developed the wealth through the household assets, and actually provided the assets used in the census records for those wanting to do further research.

The programmer also determined the quintiles and placed them as records on the housing records collected in the census. Usually, the household items are not tabulated against the quintiles since they went into making it. Instead, the quintiles are crossed by the population items to see the relative “wealth” of the households in Tonga. We are using those quintiles in this chapter for the analysis.

Demography

Figure 17.1 shows the age and sex distribution for all quintiles combined. This pyramid is about the same as the pyramid for the whole country because almost everyone in the country appears. Those living in institutions are excluded because they don’t have the items needed to make the index.

Figure 17.1 All Quintiles: Tonga 2021
1. Population by Age and Sex



But, Figure 17.2 shows the population pyramids for quintile 1 (the lowest quintile on the basis of assets) with Quintile 5 (the highest quintile, so the households with the most assets). The higher quintile shows more older people because they gather assets as they get older.

Figure 17.2 Lowest and Highest Quintile, Tonga: 2021

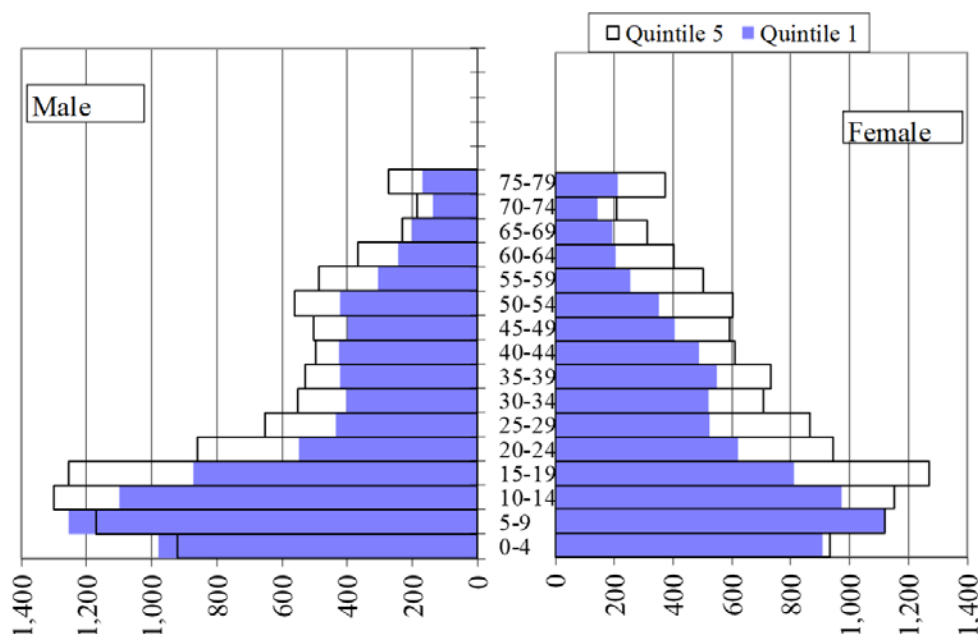
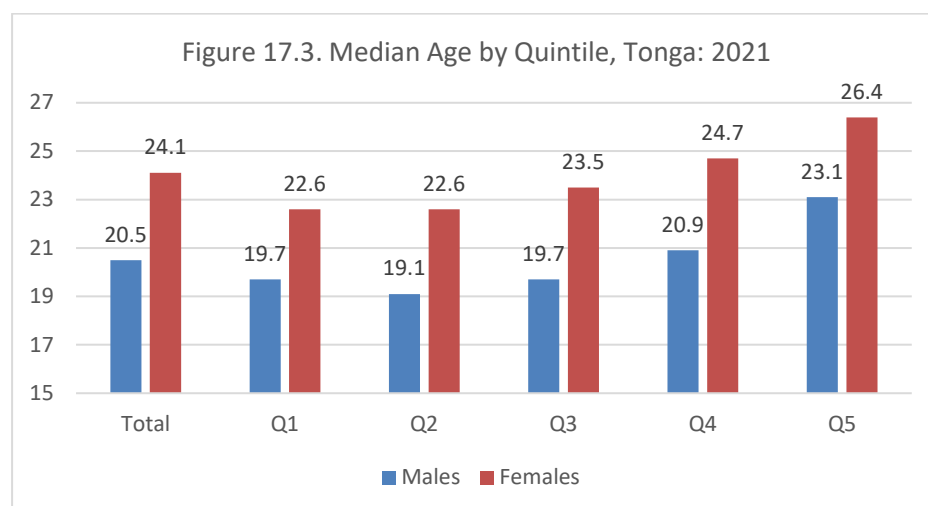


Figure 17.3 shows the median age for the quintiles. The median age for males in Tonga in 2021 was 20.5 years compared to the 24.1 years for females; females were about 3 ½ years older than the males on average. Females increased in age across the quintiles, ranging from an average of 22.6 years in quintiles 1 and 2, and increasing to 26.4 years in quintile 5. The males were under 20 years on average for the lowest 3 quintiles, but they also were older in the higher quintiles as well. Part of this difference is that households increased their assets as they aged, so the median ages for the older quintiles occurred because of their increased assets over these times.



Tonga had more females than males, as we discussed earlier – about 94 males for every 100 females (Figure 17.4). In the lowest quintile, the numbers of males and females were about the same, but as the assets increased, so did the proportion being female, so that in the highest quintile, about 91 males were included in the households for each 100 females. It could be that some males were out of the household earning money and sending it and goods back to the household, hence the males were away while the assets made for the highest quintile.

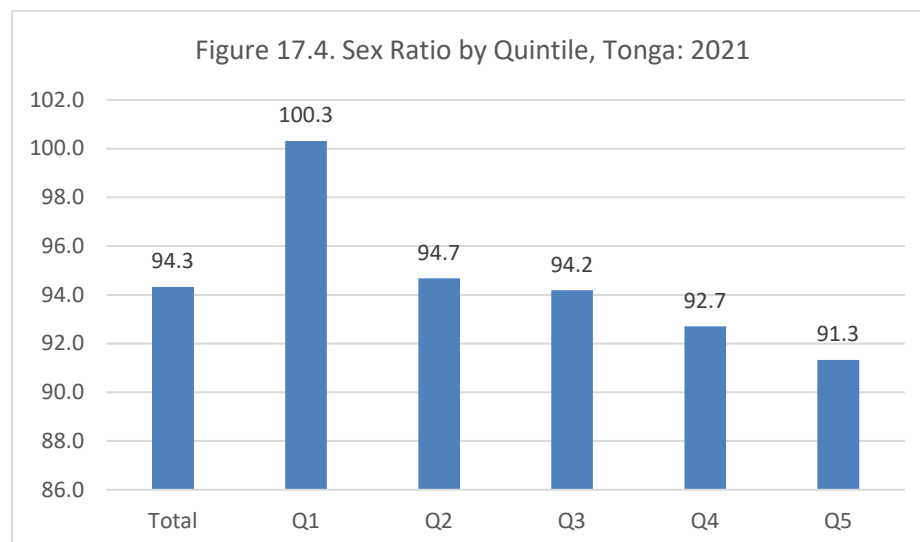
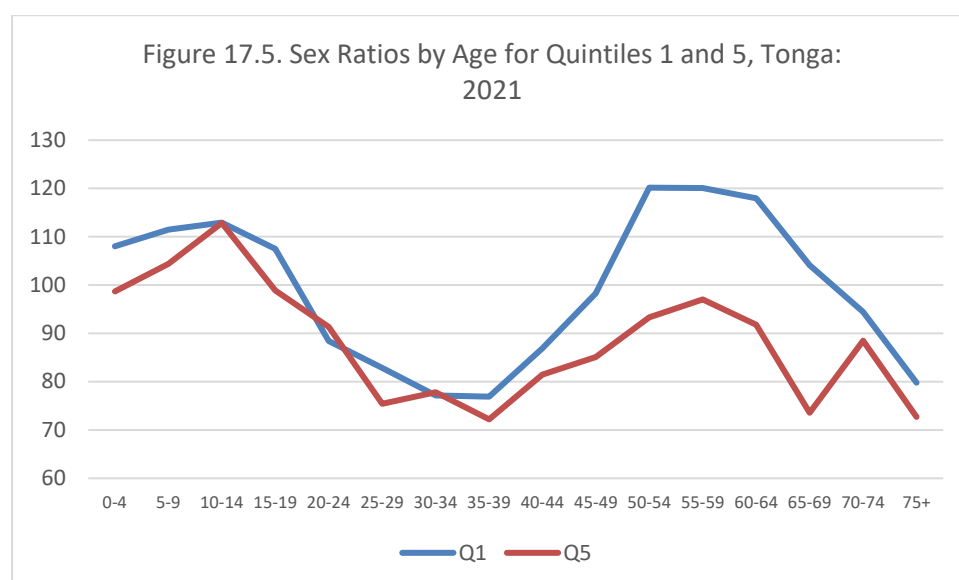
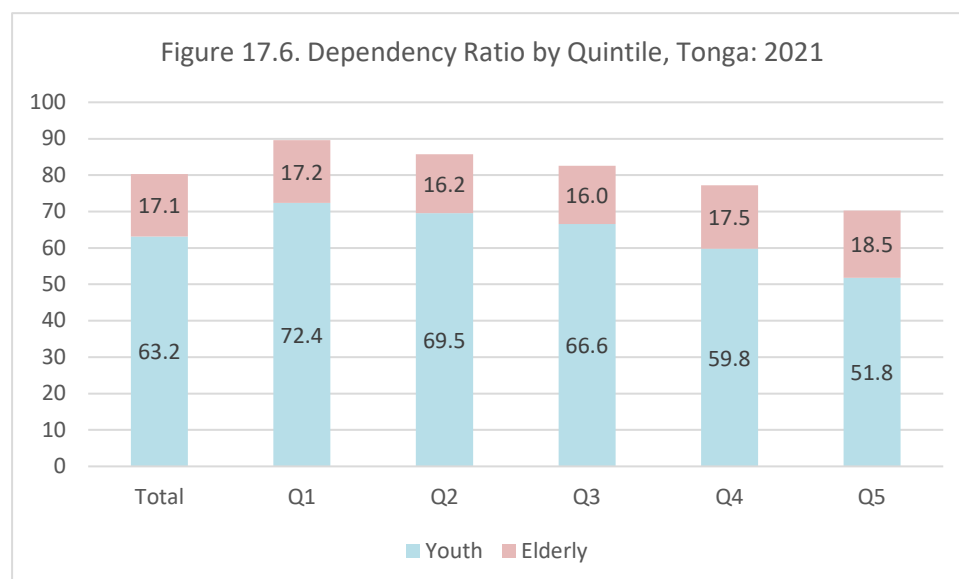


Figure 17.5 shows the sex ratios by age for quintiles 1 and 5 – the lowest and highest – to demonstrate the differences. Again, a value of 100 indicates equal numbers of males and females in the age group. As is usually the case, in the youngest age groups, more males than females were born and grew, but the ratios change from about age 15 to 35, plunging to about 80 males for every 100 females (4 males for each 5 females). From there, the ratios changed again, especially for quintile 1, where the ratio became much more male, with about 6 males for each 5 females at age 60 in the lowest quintile. The rise was not as prominent in the highest quintile, with the sex ratio never becoming more male than female. It could be that females were marrying up, and single and other otherwise unattached males have relatively few assets.



As we discussed in the earlier chapters, the dependency ratio provides a measure of the relative dependence of youth and elderly on the potential workers. The dependency ratio varies depending on the ages used; here we use 0 to 14 as youths and 60 and over as elderly, with the persons 15 to 59 as the potential workers. The dependency ratio for all persons in Tonga in 2021 was about 80, about 17 for the elderly and 63 for the youths

– as expected, Tonga had many more young people than old people (Figure 17.6). The dependency was highest for the lowest quintile, at about 90, and was lowest for the highest quintile, at about 70. The dependency ratio decreased from quintile to quintile, partly because those in the highest quintile had fewer children than those in the lower quintiles. The proportions for elderly were about the same in the various quintiles, but the value for youths decreased from quintile to quintile.



Households and families

The median household size in Tonga in 2021 was about 5.4 (more than 5 persons per household) and the mean was about 5.3 (Figure 17.7). The mean and median increased from quintile to quintile, the median from 4.6 for the lowest quintile to about 5.9 – almost 6 – for the highest quintile. So, with more people in the house, the household would often have more workers and so could attain more assets.

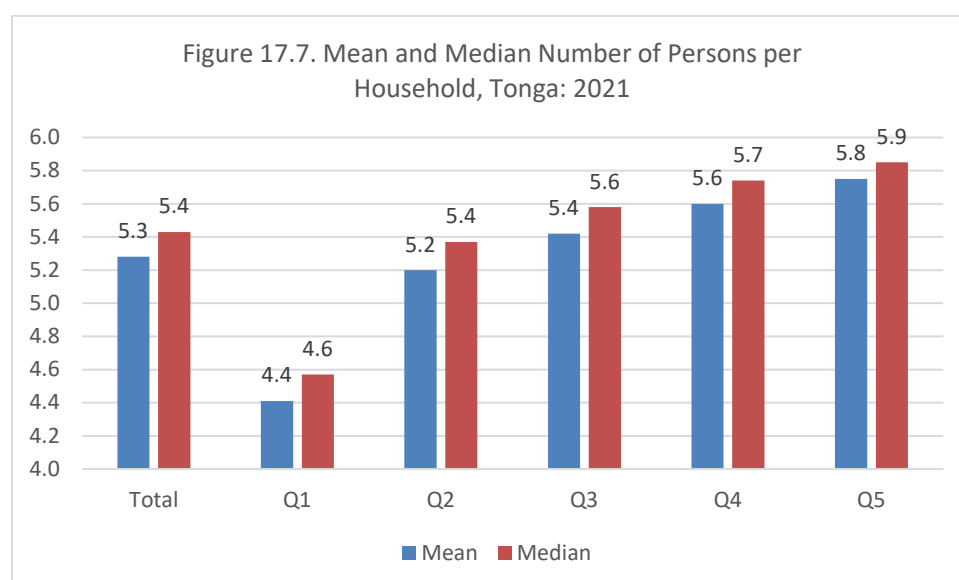
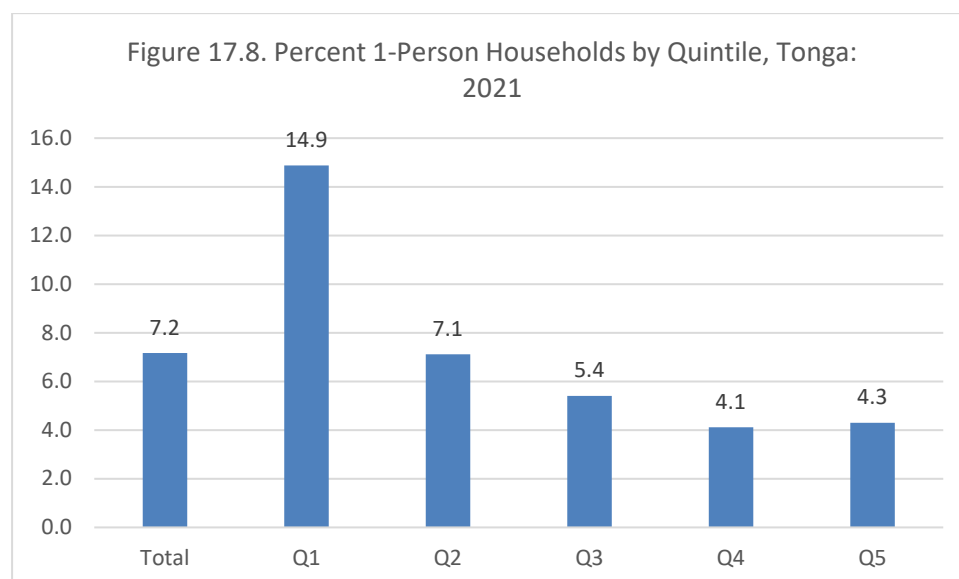
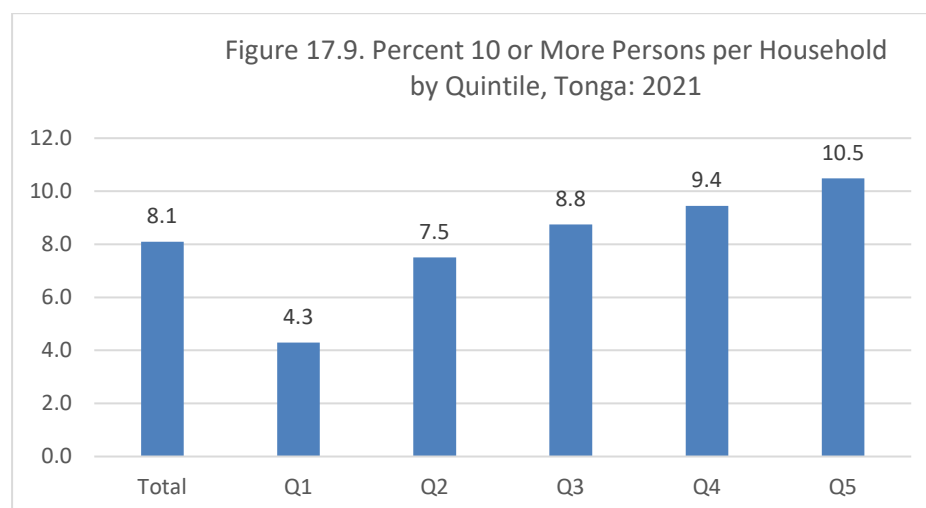


Figure 17.8 shows the percentage of the households with only one person, person living alone. About 7 percent of the households in Tonga in 2021 had only 1 person. But, about 15 percent of the households in the lowest quintile had only one person, and that one person had fewer assets than the households with more than one person. In fact, the higher the quintile, so the more assets, the smaller the percentage of people living alone. Only about 4 percent of the households in quintiles 4 and 5 had only one person.



The opposite was true for households with 10 or more persons. About 8 percent of the households in Tonga in 2021 had 10 or more people living in them (Figure 17.9). It is useful to note that in the Pacific, people often live in compounds, so with more than one structure for the household, which could increase the number of household members, but it is also true that since the climate is conducive and structures are used mainly for sleeping, more people could be using them.

Only 4 percent of the households in the lowest quintile had 10 or more persons living in them. The percentages increased from quintile to quintile, with more than 1 in every 10 households in the highest quintile having 10 or more persons.



Earlier, we discussed the United Nations' definitions of household types. Table 17.1 shows the distribution of household types by quintile. About 60 percent of the households were "married couple families with male head", so about 3 in every 5 of the households. The percentage being this type of household increased from 53 percent in the lowest quintile to 64 percent in the highest quintile. The only other relatively large percentages were for families headed by females with no husband present. The average was 21 percent of all households, so about 1 in every 5 households. The percentage was around 21-23 percent for quintiles 1 to 4 before decreasing to 18 percent for the quintile with the most assets. About 5 percent of the households were single males, but about 11 percent of the households in the lowest quintile were single males compared to less than 3 percent in quintiles 4 and 5.

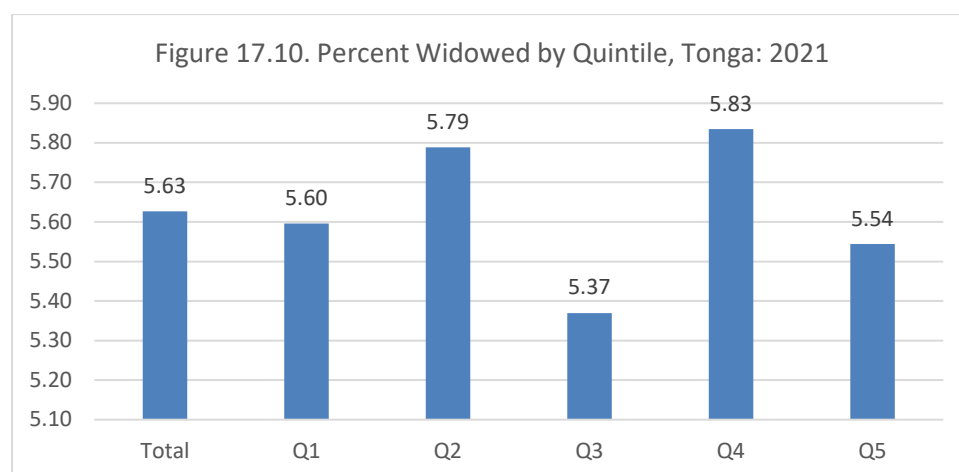
Table 17.1. Household Type by Quintile, Tonga: 2021

	Numbers						Numbers					
	Total	Lowest	Second	Middle	Fourth	Highest	Total	Lowest	Second	Middle	Fourth	Highest
Total	18,847	3,770	3,769	3,770	3,769	3,769	100.0	100.0	100.0	100.0	100.0	100.0
Married couple family male head	11,202	2,009	2,175	2,297	2,307	2,414	59.4	53.3	57.7	60.9	61.2	64.0
Married couple family female head	203	32	30	46	40	55	1.1	0.8	0.8	1.2	1.1	1.5
Family male head no wife	1,594	307	336	302	328	321	8.5	8.1	8.9	8.0	8.7	8.5
Family female head no husband	4,004	778	874	827	833	692	21.2	20.6	23.2	21.9	22.1	18.4
Non-family male head	231	45	40	50	41	55	1.2	1.2	1.1	1.3	1.1	1.5
Non-family female head	263	38	46	44	65	70	1.4	1.0	1.2	1.2	1.7	1.9
Single person male	926	419	180	133	94	100	4.9	11.1	4.8	3.5	2.5	2.7
Single person female	424	142	88	71	61	62	2.2	3.8	2.3	1.9	1.6	1.6

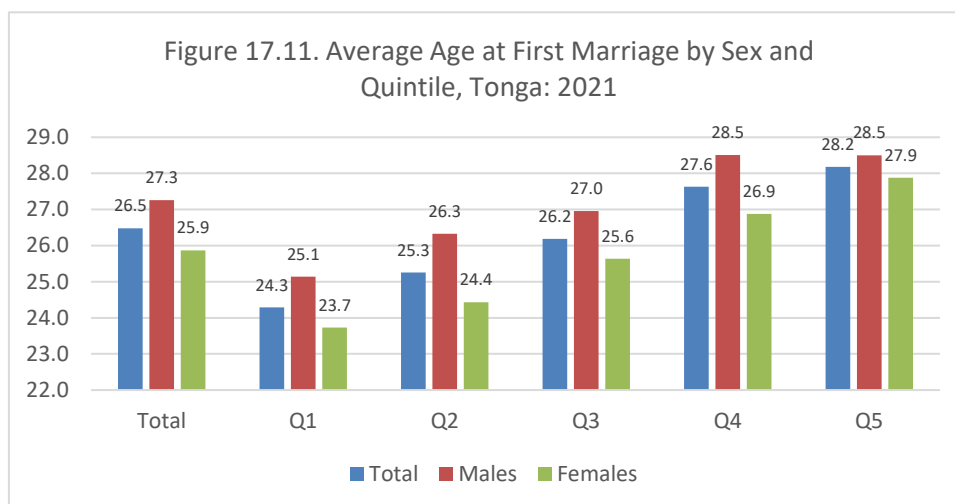
Source: Tonga Population and Housing Census 2021

Marital Status

Figure 17.10 shows the percentage of the adult population being widowed in 2021. About 6 percent of the adults were widowed. Although the middle quintile was higher than the 4th quintile, the numbers of widowed persons was small so the differences are minor. Basically widow status is about the same across all quintiles

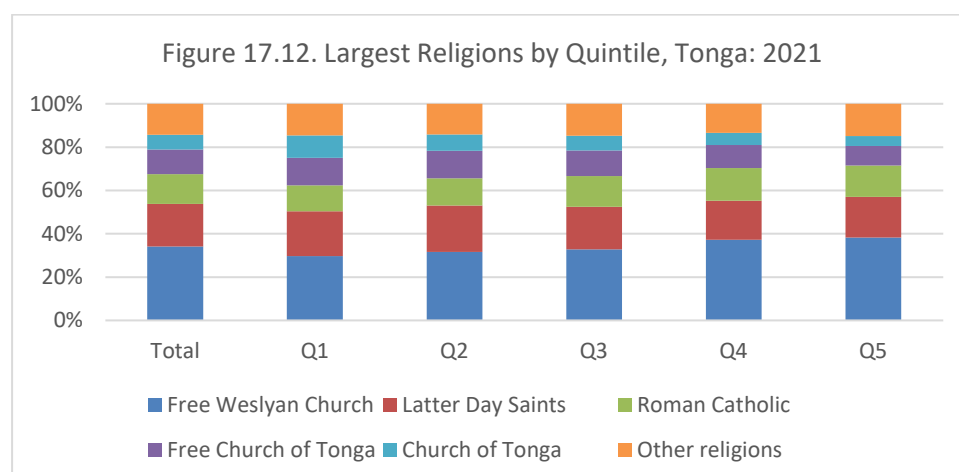


We discussed the singulate or mean age at first marriage (SMAM) earlier in the report. The SMAM is derived on the basis of the percentage of the males or females who had never married in age group. For the entire population, the SMAM was 27 years for males and 26 years for females. As seen in Figure 17.11, once again, the average age at first marriage increased from quintile to quintile, from about 24 in the lowest quintile to about 28 in the highest quintile. As Tongans finish school and take jobs and then get established and start their own households, they usually put off marriage until they are settled and can afford to take care of a family.

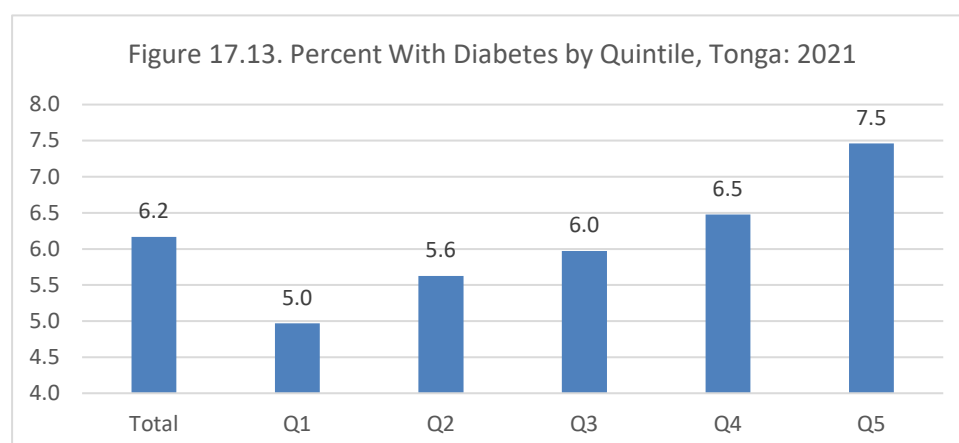


Religion and Health

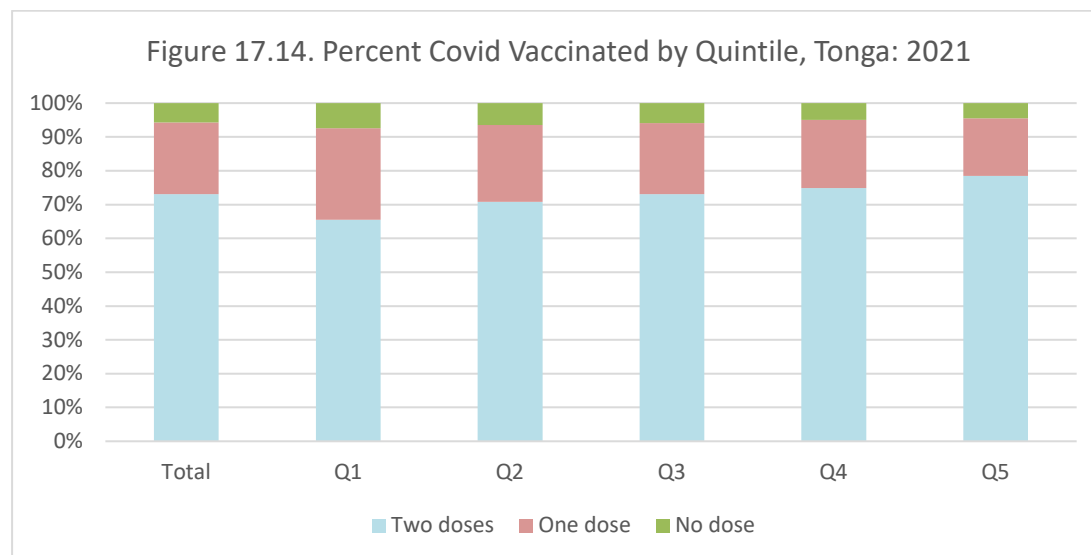
Figure 17.12 shows the distribution of the largest religious affiliations across the quintiles. Unlike many of the other characteristics, religion does not show the variations that others show. That is, the distributions of religions across the quintiles did not vary very much. The same proportions occurred in each of the quintiles.



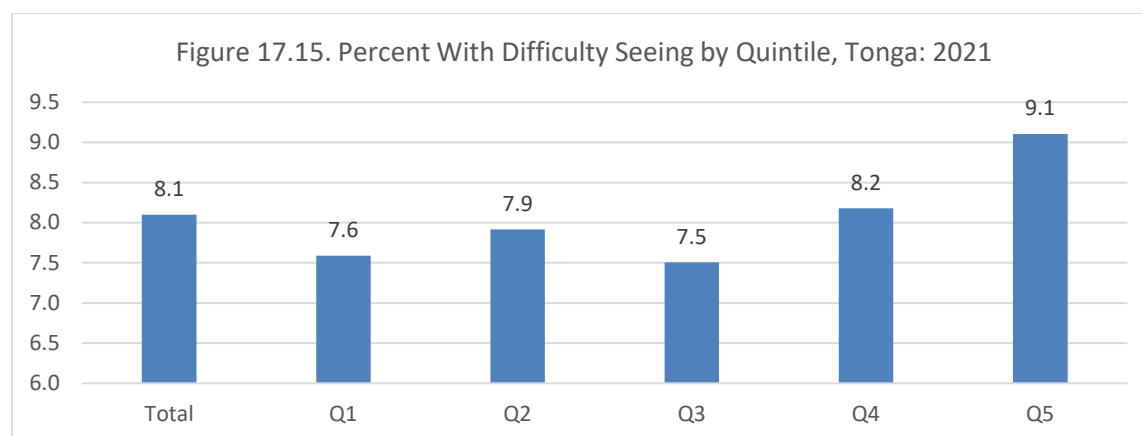
The different quintiles exhibit differences in many of the health items. For diabetes, for instance, the lowest quintiles had the smallest proportions with diabetes. About 5 percent (1 in every 20) of the persons in the lowest quintile reported having diabetes (Figure 7.13). The percentage increased continuously from quintile to quintile, with the highest quintile having about 7.5 percent reporting being diabetic. Most people in the lowest quintile were living at subsistence – they were least likely to have access to fast-foods, and were most likely to be eating traditional foods. Those in the highest quintile had the most assets and so could afford to eat store-bought food, much of which did not have the same nutrition as the traditional foods.



As noted earlier in the text, the census was taken under the difficult conditions of apprehension about Covid 19. The government had a program of making the first two doses of the covid vaccine available to the Tongan population. More than 7 in every 10 Tongans took two doses of the vaccine (Figure 17.14). Those in Quintile 1 were the least likely to have two doses, those in the highest quintile were the most likely to have two doses. But, the differences were not great. And, only about 5 percent of Tonga's population in 2021 did not take any doses of the covid vaccines.

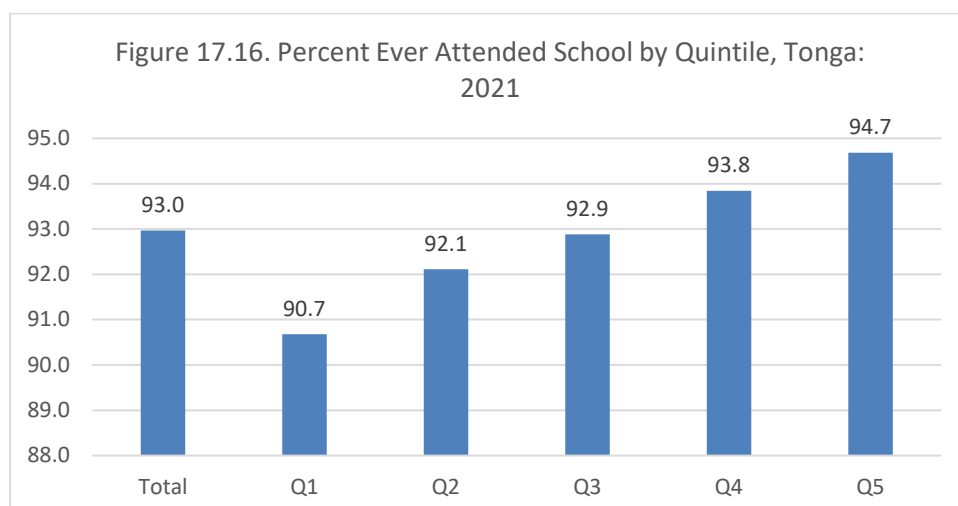


We discussed the 6 disabilities collected in the census in an earlier chapter. Here, we will look at one – sight – to show that assets were not particularly associated with disabilities. About 8 percent of Tonga's population 10 years and older had some difficulty seeing – that is, they did not report having “no difficulty” seeing (Figure 17.15). About 8 percent of those in the bottom 4 quintiles reported having trouble seeing. But the percentage was a little higher for the highest quintile, where about 9 percent had some difficulty seeing; they may have been able to afford better care of their eyes and so were more sensitive to the question.

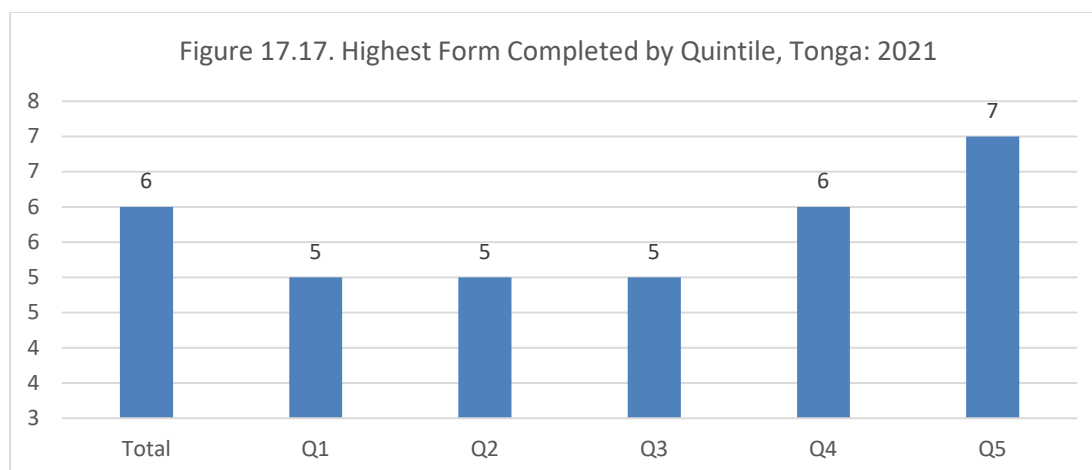


Education and literacy

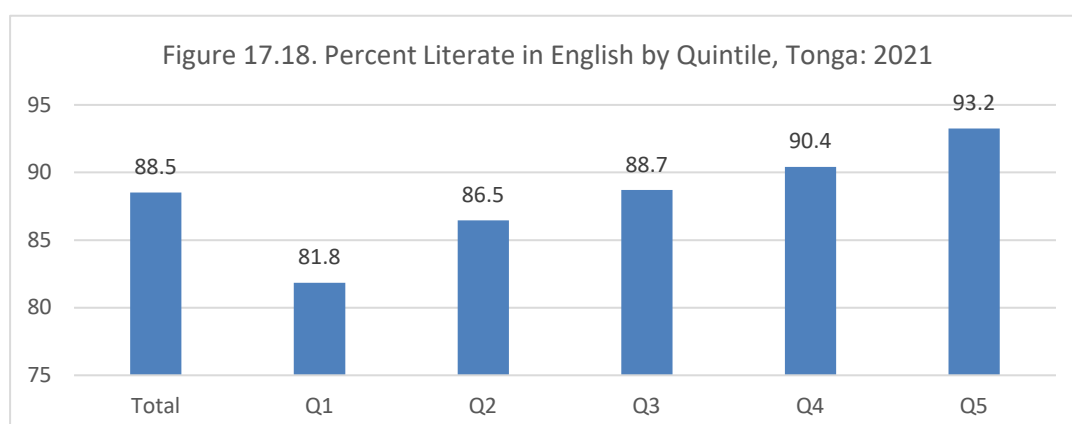
The education items showed clear differences among the wealth quintiles in 2021. About 93 percent of the population had ever attended school (Figure 17.16). The graph makes it seem that large differences existed between the quintiles, but while the percentage having attended school did increase from quintile to quintile, even the lowest quintile saw 91 percent having attended school, and the percentage only increased to 95 percent for the highest quintile.



The item on schooling completed did not provide a continuum but did provide individual grades. The average adult in Tonga in 2021 had reached Form 6 (Figure 17.17). For the lowest three quintiles, the highest was form 5, Quintile 4 reached form 6 on average, and the highest quintile individuals reached form 7 on average.

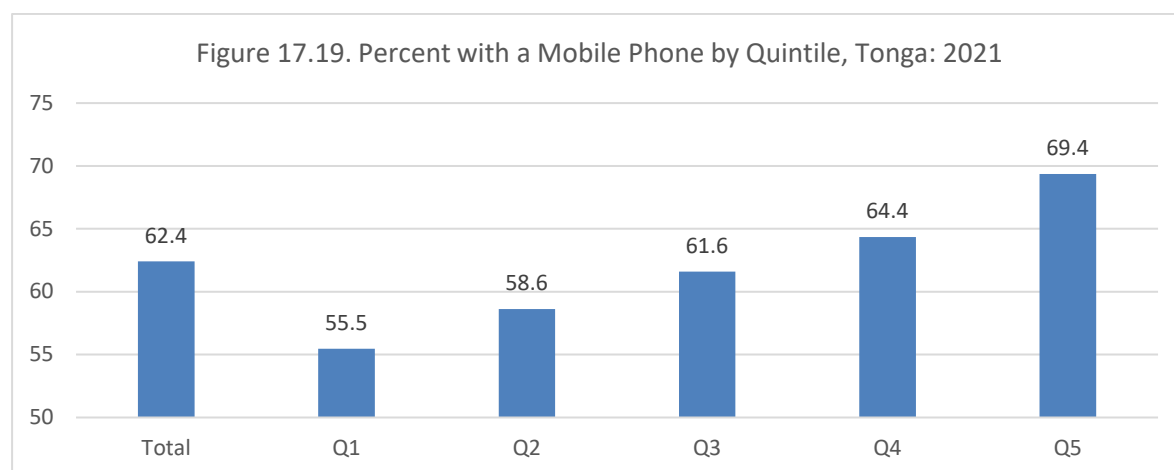


Almost all Tongans were literate in the Tongan language at the time of the census. And, the percentage literate in English was also very high for a Pacific country. About 88 percent of the adult population in Tonga in 2021 could read and write in English (Figure 17.18). About 82 percent of Tongans in the lowest quintile were literate in English, and the percentage increased from quintile to quintile. Quintile 4 had about 9 in every 10 being literate in English. And, quintile 5 saw 93 percent having English literacy.

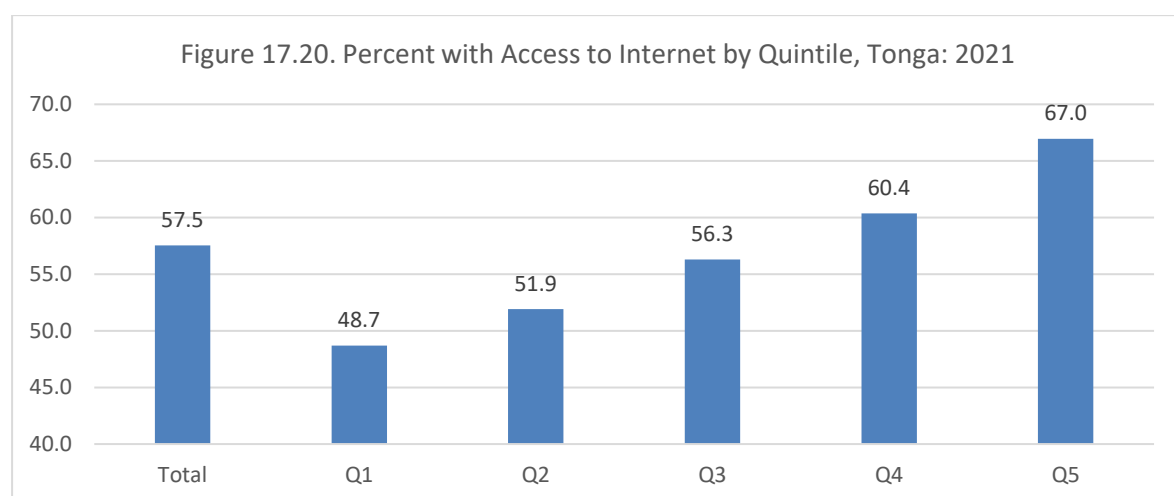


Mobile phone and Internet

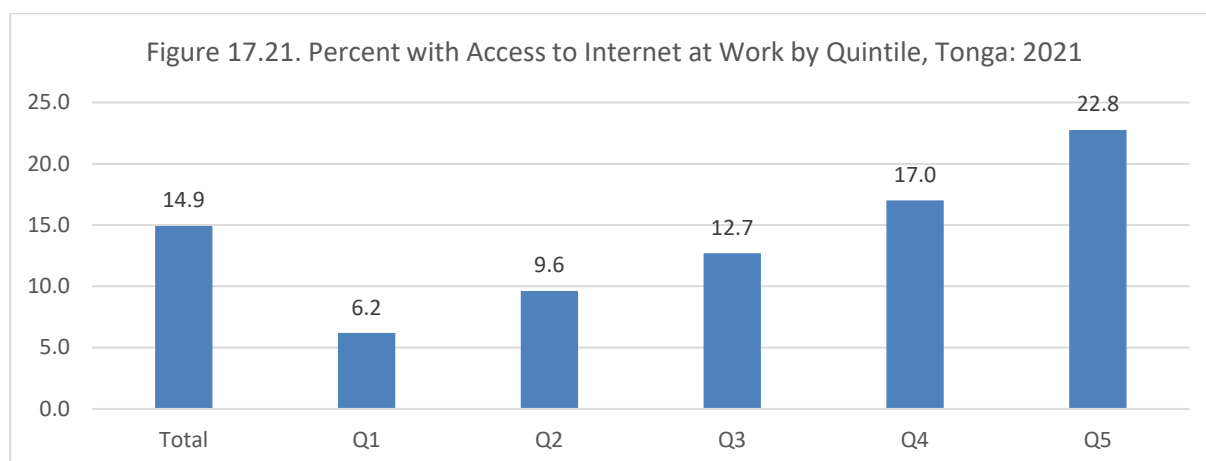
As with many of the physical items in the census, the percentage with mobile phones also increased with the other assets. So while 62 percent of the Tongans had a mobile phone, this was true for only 56 percent of those in the lowest quintile (Figure 17.19). The percentage of persons having access to a mobile phone also increased quintile to quintile, with almost 7 of every 10 in the highest quintile having access to a mobile phone.



And, once again, those with the fewest assets also had the least access to the internet. About 58 percent of the Tongans had access to the internet, but less than half of those in the lowest quintile had that access (Figure 17.20). And the percentage having access increased from quintile to quintile, arriving at 2 out of every 3 adults in the highest quintile.



Similarly, the percentage of the population that had access to the internet at work also increased with the amount of assets. So, while 15 percent of the entire population had access to the internet at work, only 6 percent of those in the lowest quintile had that access (Figure 17.21). Of course, a much smaller percentage of those in the lowest quintile actually did have work where the internet might be needed or any paid work at all. The percentage with access to the internet at work increased quintile to quintile, with about 23 percent – about 1 in every 4 – of those in the highest quintile having access to the internet at work.



Habits

As discussed in an earlier chapter, the census asked questions about the population's habits. About 17 percent of the population responded that they used alcohol (Figure 17.22). About 16 percent of those in the lowest quintile and about 15 percent of those in the second quintile used it, but then the percentage increased with assets. About 18 percent of those in the third quintile and fourth quintile used alcohol, as did 19 percent of those in the highest quintile. The percentages were not very dissimilar.

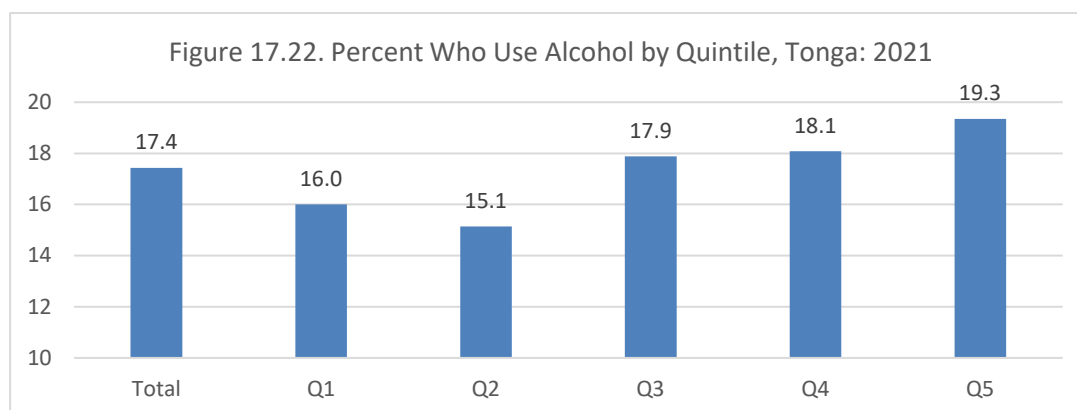
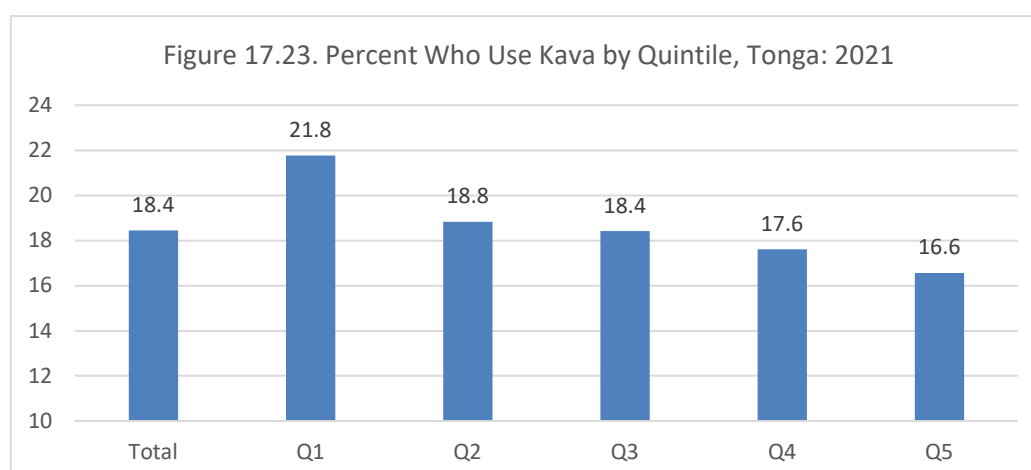
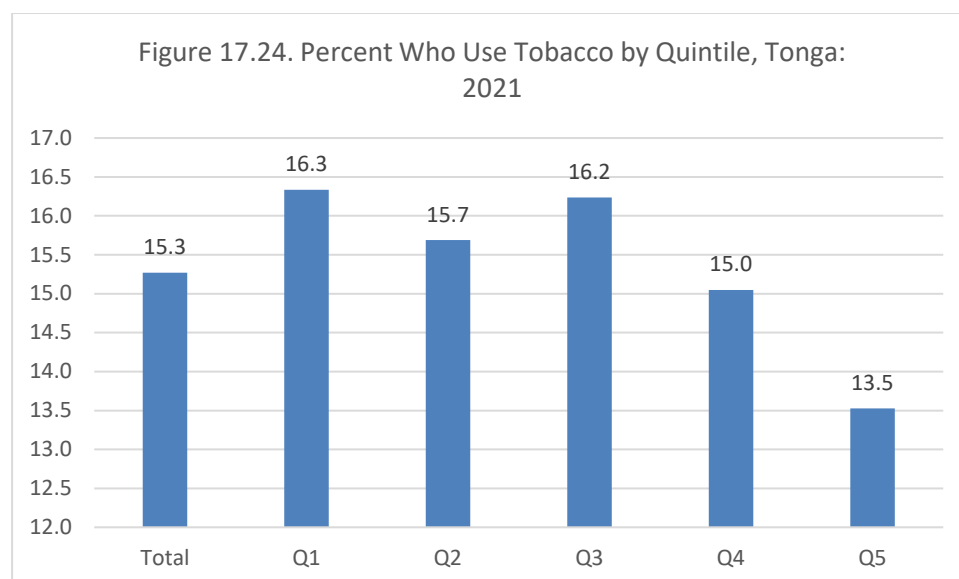


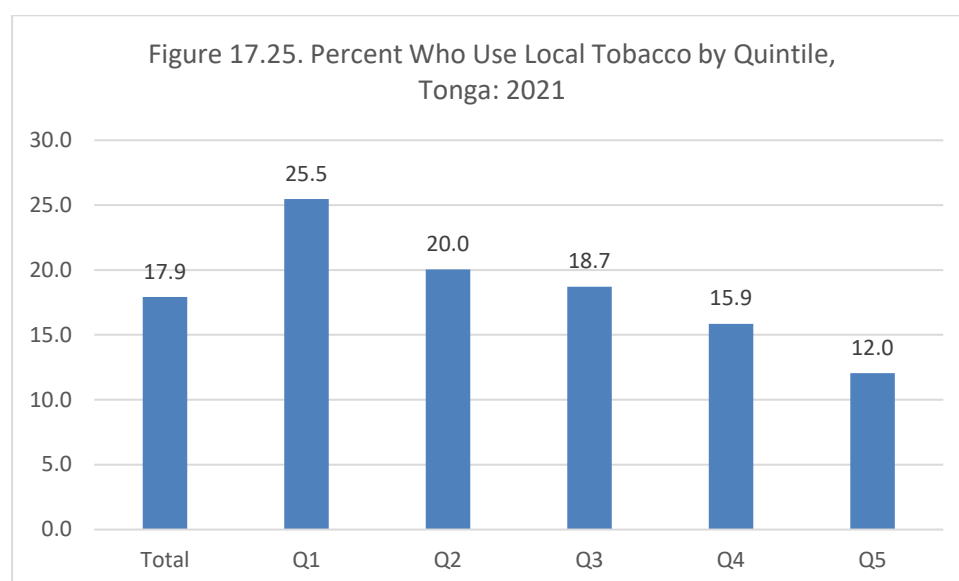
Figure 17.23 shows the percentage of the adult population who used kava. About 18 percent of Tonga's adults used kava. And here the percentages in the quintiles were reversed from alcohol and almost all the other variables. About 22 percent of those in the lowest quintile used kava on a regular basis. About 19 percent of those in the second quintile used the drink, and the percentages decreased from quintile to quintile, with only 17 percent of those in the highest quintile using kava.



Use of tobacco did not show the same pattern. About 15 percent of the population used tobacco of some type, including about 16 percent of those in the lowest three quintiles (Figure 17.24). Quintile 4 reported about 15 percent, and the highest quintile reported about 14 percent.

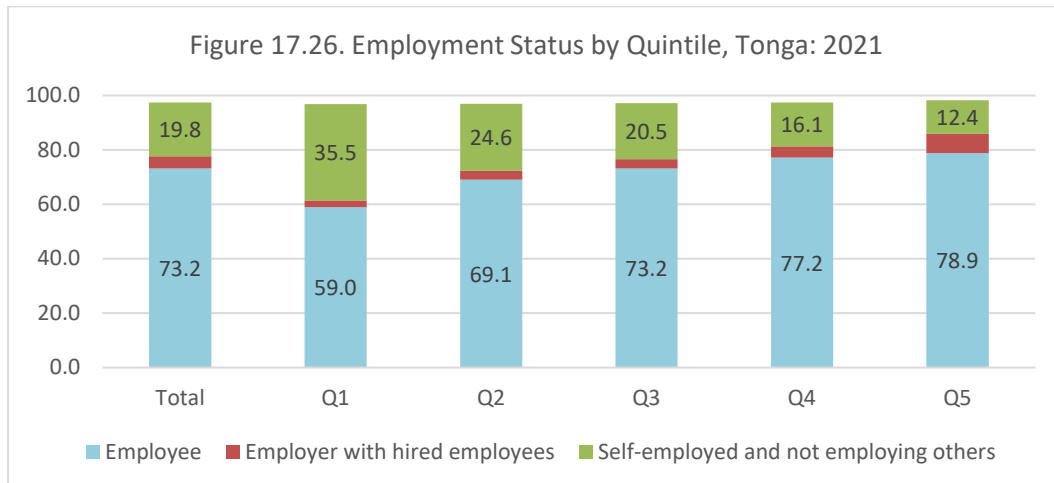


However, those using local tobacco did show a consistent pattern, with use decreasing with assets. So while about 18 percent of the Tongans used some form of local tobacco, about 1 in every 4 of those in the lowest quintile used local tobacco compared to only about 1 in 8 of those in the highest quintile, with the other quintiles falling in between (Figure 17.25).

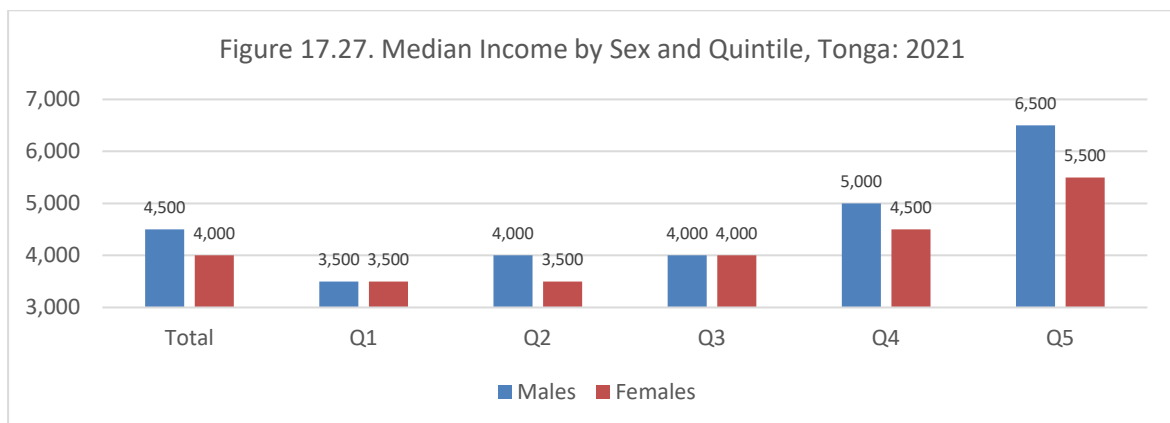


Economics

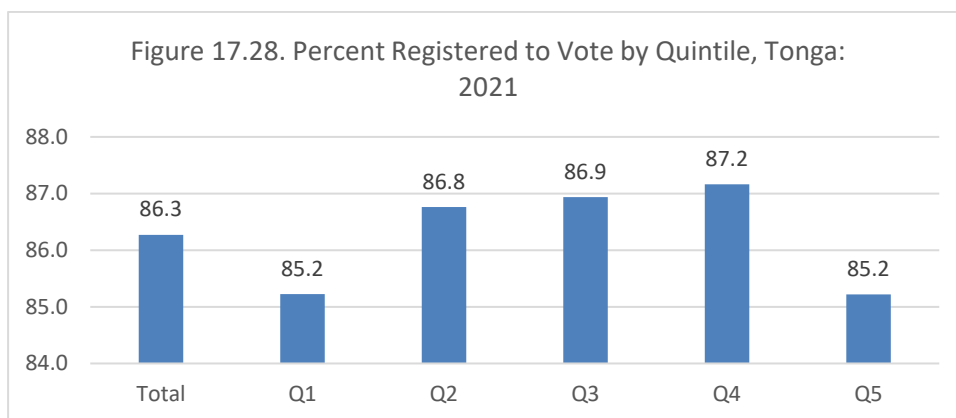
Figure 17.26 shows the employment status by quintile. About 73 percent of the adults were employees. The percentage being employees increased with assets, from about 3 in 5 of those in the lowest quintile to about 4 in 5 of those in the highest quintile. Those who were self-employed showed the opposite trend. While about 12 percent of those in the highest quintile were self-employed, more than 1 in 3 of those in the lowest quintile were in this category.



The census collected individual income data, but in categories. The median incomes provided in Figure 17.27 were obtained by finding the middle income category, and using the numbers provided to make an estimate of the median income. The medians for the entire population was about \$4,500 for males and about \$4,000 for females. Quintiles 1 and 3 showed males and females making equal amounts of income, the median being about \$3,500 for quintile 1 and about \$4,000 for quintile 3. The median income was about \$5,000 for males and \$4,500 for females in quintile 4, and, as expected, quintile 5 showed the highest incomes, at about \$6,500 for males and about \$5,500 for females.

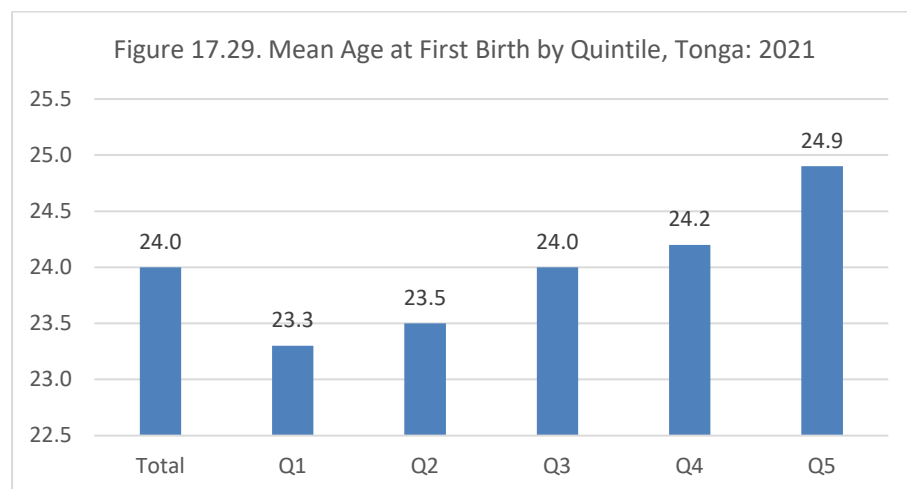


About 86 percent of the eligible Tongan population in 2021 had registered to vote (Figure 17.28). Surprisingly, the lowest and highest quintiles were the least likely to register vote, at about 85 percent. About 87 percent of the persons in the other quintiles were registered.

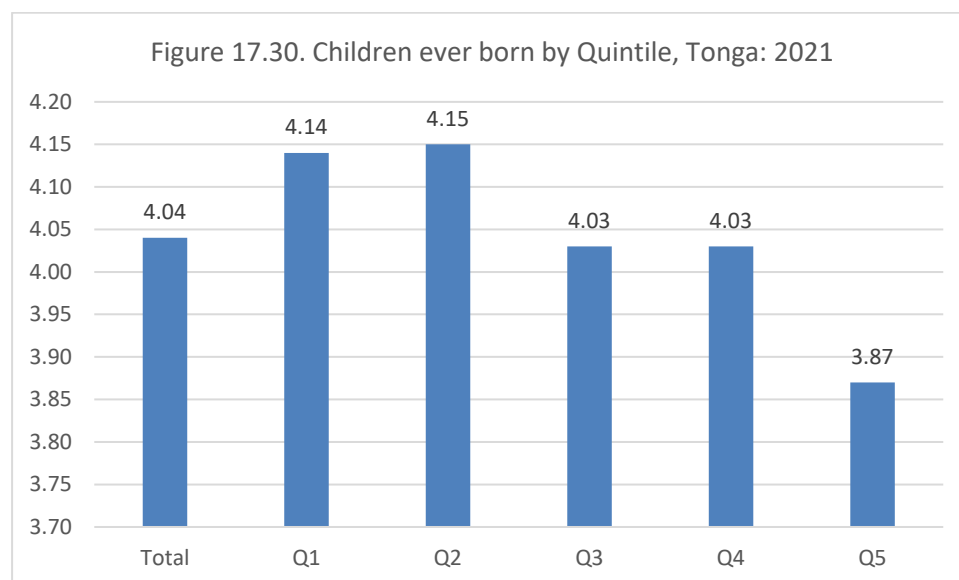


Fertility

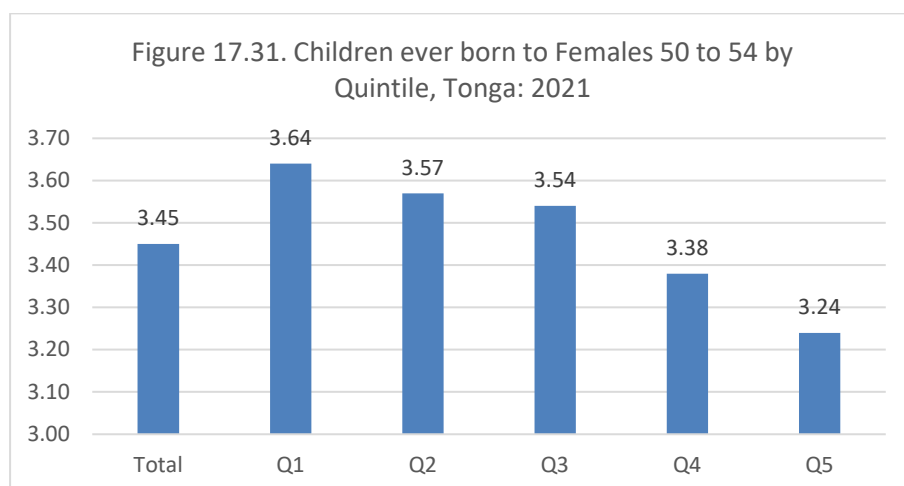
Figure 17.29 shows the average age at first birth for the females who gave birth. The average age was about 24 in 2021. The mean age for the lowest quintile was about 23.3 years, and this increased quintile by quintile to about 24.9 years, basically age 25 for those in the highest quintile. Females in the highest quintile were putting off marriage and first births while they finished school and started jobs, so it is not surprising that their age at first birth was higher.



We showed in the fertility chapter that the average female had about 4 births during her reproductive life span as of the 2021 census (Figure 17.30). The females in quintiles 1 and 2 had the highest average number of children ever born, at about 4.1, those in quintiles 3 and 4 had about 4, and those in the highest quintile had about 3.9. These numbers are similar, but they did show a slight decrease for the higher quintiles.



By ages 50 to 54, most females have completed their fertility. For these females, the average number of children ever born was 3.45 (Figure 17.31). The females of these ages in the lowest quintile had the highest number of children ever born, at about 3.6, and then the averages decreased with assets, so that those in the 4th quintile had about 3.4 children, and those in the highest quintile had about 3.2 children.



For births in the year before the census, the unadjusted age specific fertility rate was about 2. Quintile 2 had the highest number births in the year before the census at almost 2.5 children based on the children born to females 15 to 49 in the 12 months before the census (Figure 6.32). The females in the higher quintiles were having fewer than 2 babies at the time of the census.

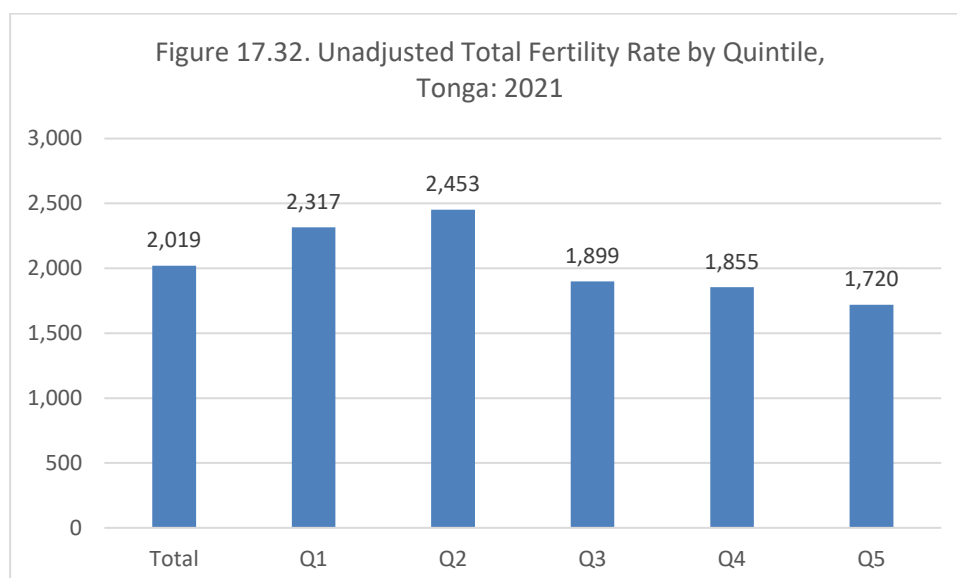


Table 17.2 shows the quintiles cross tabulated by the number of moves. The way we calculated the moves appears in the earlier chapters. Basically, we look at the birthplace, the residence in 2016 and the current residence to see whether the person moved over time. As the table shows, the number of moves did not change very much depending on the combination of assets. That is, about 3 out of every 4 Tongans, no matter what their assets, were in the same division at enumeration as where they were born and where they lived in 2016, 5 years before the census. And 1 in 4 of Tonga's residents were reported as having moved once and very few moved twice, reporting a different division at birth, at residence in 2016 and for current residence.

Table 17.2. Internal Migration by Quintile, Tonga: 2021

	Numbers						Percents					
	Total	Lowest	Second	Middle	Fourth	Highest	Total	Lowest	Second	Middle	Fourth	Highest
Total	89,274	14,723	17,397	18,254	19,079	19,821	100.0	100.0	100.0	100.0	100.0	100.0
No moves	65,791	10,572	12,720	13,669	14,166	14,664	73.7	71.8	73.1	74.9	74.2	74.0
One move	22,400	3,952	4,468	4,410	4,699	4,871	25.1	26.8	25.7	24.2	24.6	24.6
Res5 to CR	2,506	637	604	452	467	346	2.8	4.3	3.5	2.5	2.4	1.7
BP to Res5	3,254	511	599	550	680	914	3.6	3.5	3.4	3.0	3.6	4.6
BP and CR	16,640	2,804	3,265	3,408	3,552	3,611	18.6	19.0	18.8	18.7	18.6	18.2
Two moves	1,083	199	209	175	214	286	1.2	1.4	1.2	1.0	1.1	1.4

Source: Tonga Population and Housing Census 2021

Table 17.3 shows household type crossed by quintile summaries of assets. In this case, the greater the assets the more likely the resident was to live in a married couple family with a male head. About 3 out of every 5 residents lived in this family, with the range from 53 percent for those in the lowest quintile to 64 percent for those in the highest quintile. The other large category of household type was a family household with a female head. About 1 in every 5 residents lived in this type of household. The largest percentage living in this type of household occurred in the second quintile, and from there, the percentages decreased with increased assets, ending in 18 percent for those in the highest asset.

Table 17.3. Household Type by Quintile, Tonga: 2021

	Numbers						Numbers					
	Total	Lowest	Second	Middle	Fourth	Highest	Total	Lowest	Second	Middle	Fourth	Highest
Total	18,847	3,770	3,769	3,770	3,769	3,769	100.0	100.0	100.0	100.0	100.0	100.0
Married couple family male head	11,202	2,009	2,175	2,297	2,307	2,414	59.4	53.3	57.7	60.9	61.2	64.0
Married couple family female head	203	32	30	46	40	55	1.1	0.8	0.8	1.2	1.1	1.5
Family male head no wife	1,594	307	336	302	328	321	8.5	8.1	8.9	8.0	8.7	8.5
Family female head no husband	4,004	778	874	827	833	692	21.2	20.6	23.2	21.9	22.1	18.4
Non-family male head	231	45	40	50	41	55	1.2	1.2	1.1	1.3	1.1	1.5
Non-family female head	263	38	46	44	65	70	1.4	1.0	1.2	1.2	1.7	1.9
Single person male	926	419	180	133	94	100	4.9	11.1	4.8	3.5	2.5	2.7
Single person female	424	142	88	71	61	62	2.2	3.8	2.3	1.9	1.6	1.6

Source: Tonga Population and Housing Census 2021

Figure 17.33 illustrates the household types by quintile graphically. Here we are showing household types without regard to the sex of the head. So, the percentage in married couple families increased from 54 percent through the quintiles. The percentage that were families with no spouse present remained at about 30 percent through the quintiles. But, while the lowest quintile had about 15 percent who were individuals living alone, that value decreased to 7 percent for the second quintile, and to 4 percent for the highest two quintiles.

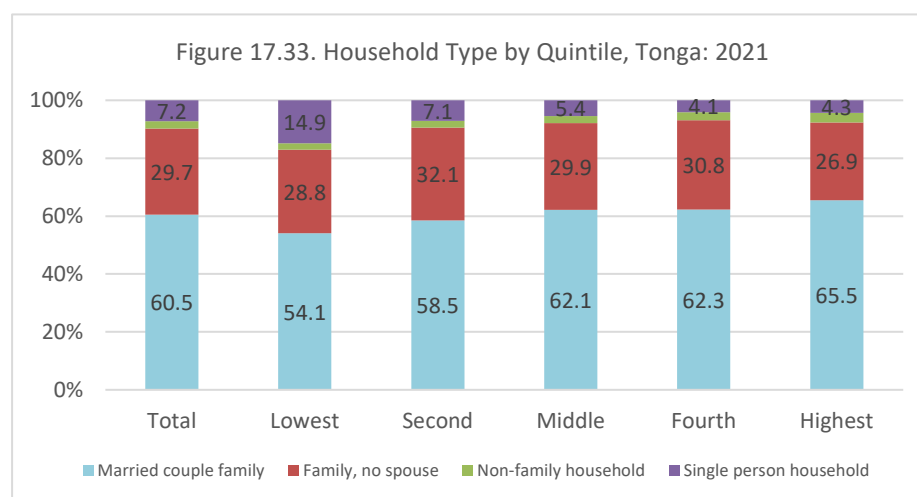


Figure 17.34 shows numbers of family households by type and their quintile assets. About 2 out of every 3 households, no matter which quintile, were married-couple families with a male head. This is the traditional household structure and continues in Tonga even though many other places have changed to a larger variety of households. Very few married-couple households were headed by females, and so those are not shown in the graph. About 1 in every 10 households was headed by a male with no wife present. And about 1 in every 4 households in Tonga in 2021 was headed by a female with no husband present. This type of household was rare

among the households with the most assets – quintile 5 – perhaps because the females did not make enough money to have as many assets.

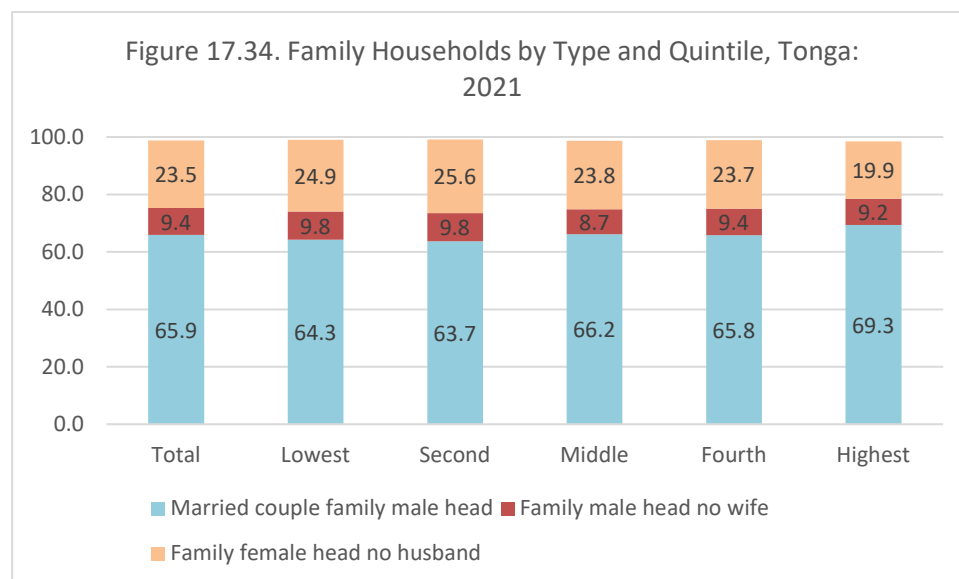
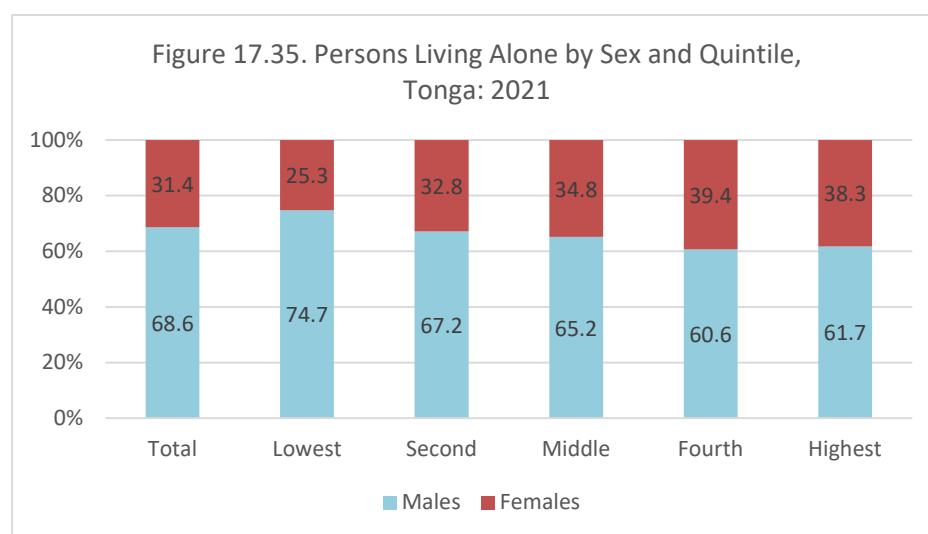


Figure 17.35 shows the percentage of the population by sex for persons living alone through the quintiles. About 2 out of every 3 residents living alone were male (and so 1 in 3 were female). In the lowest quintile by assets, about 3 males lived alone for each female, but that decreased to about 2 in 3 males in the second quintile, and about 3 in 5 for the highest quintiles. It is likely that wealthier males living alone attracted females and so their percentage decreased with assets.



When countries do not ask for monetary income on their census questionnaires, household assets can be used as a proxy for income. A wealth index is compiled on the basis of various appliances and items in the household. Then the raw scores can be divided into quintiles, and those values can be compared to various population items, as we have done here.

CHAPTER 18: Conclusion

Tonga's population is not increasing. Emigration is offsetting the change due to the decreased fertility. The 2021 census counted 100,179 people, an annual decrease of -.5 percent. About 1 in every 5 Tongans lived in urban areas so about 4 in every 5 lived in rural areas.

About 1 in every 3 Tongans were younger than 15 years old, about 1 in 5 were between 15 and 24, about 1 in 10 were 60 years and older, and more than half were 15 to 59 years old, about the ages of the working population. The age dependency ratio was 71, so about 71 youth and elderly were dependent on each 100 potential adult workers. And the median age of the population was about 22, with females being slightly older than males on average.

The average age at first marriage for males was about 27 and for females was about 25 so males were about 2 years older than their brides when they married. The average age at first marriages has been increasing over time in Tonga.

About 2,500 births were reported in the 12 months before the census, with a crude birth rate of 24 per 1,000 population. The total fertility rate, that is, the average number of children a female was likely to have in her lifetime was about 3.5, which continued the decrease in fertility over the recent past. The teenage fertility rate was about 36 per 1,000 teenagers 15 to 19 years old. And the average age of childbearing was about 29. About half the babies were born before age 29 of the females, and half were born to the women older than 29. The families registered almost all births.

About 600 people were reported dying in the 12 months before the census. The crude death rate was about 6 deaths per each 1,000 population. The life expectancy at birth was about 72, about 69 for the males and about 75 for females, so a difference of about 6 years.

About 1 in every 20 Tongans reported having some disability. About 17 percent of the population 10 years and older smoked daily, with the males at 28 percent and the females at 7 percent. And about 14 percent of the population had at least alcoholic drink per week, with males at 24 percent and females at about 5 percent.

Almost all children 6 to 15 years old were enrolled in school, the males and females in the same percentages. About 3 in every 4 have at least secondary school education, but only about 4 percent have secondary school qualifications. About 1 in every 10 adults had some tertiary education. About equal numbers of males and females were graduating from the educational levels.

About 31,000 people were employed in 2021. About 4,400 reported as doing subsistence activities and about 33,600 of the adults were not in the labor force. The unemployment rate ranged from about 3 percent to 15 percent, depending on how the measure was calculated.

The average annual emigration rate was about 2,400, with most of the Tongans going to New Zealand or the United States. A supplemental report will discuss the emigrants in considerable detail.

Tonga had 18,847 households in 2021. In addition, the census enumerated 193 institutions, which were non-family households, with 750 people – 486 males and 264 females. The average household size was 5.3, which continues the decline in household size as families have fewer children. About 3 in every 4 households received remittances in the 12 months before the census.

About 9 out of every 10 households had access to piped water and to flush toilets. Almost 9 in every 10 had at least one mobile phone. Even more – about 94 percent had electricity as their main source of lighting. But only 13 percent had access to the internet, mostly on Tongatapu.



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