

Navigating Turbulent Waves Toward Sustained Poverty Reduction:

Tonga Poverty and Equity Assessment 2024



What is this report about

- **The Tonga Poverty and Equity Assessment (PEA)** examines the extent, nature, and drivers of poverty and inequality in the country.
- The PEA uses findings from the 2021 Household Income and Expenditure Survey (HIES) and compares them with the 2015/16 to highlight poverty patterns and trends.
- The PEA also raises importance of human capital development and social protection systems in relation to sustainable poverty reduction.
- This assessment follows a 2023 report by Tonga Statistics Department (TSD) on poverty as of 2021.

Overview of key messages

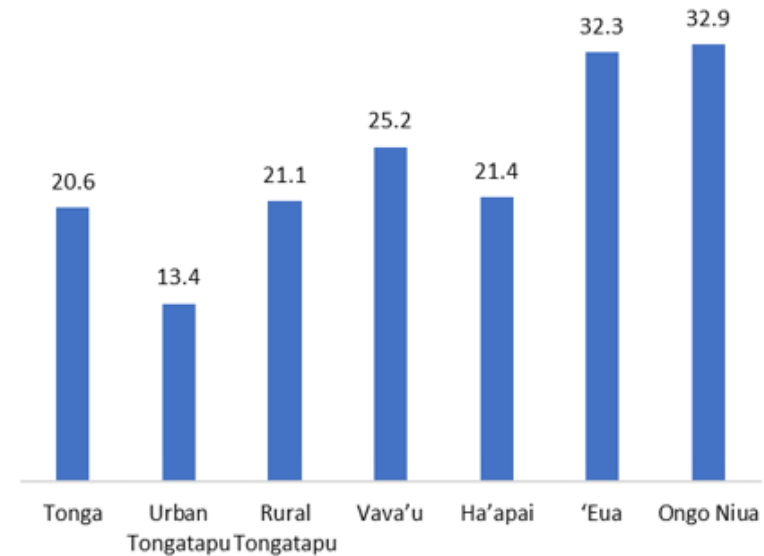
- Monetary and non-monetary poverty has reduced between 2015/16 and 2021.
- The reduction in poverty is unlikely to have been caused by the domestic labor force or social assistance program.
- Remittances have significantly contributed to poverty reduction.
- Relying solely on remittances to reduce poverty poses challenges.
- Income diversification is crucial.
- Social safety nets need further development.
- Improving education and training is key.
- Temporary labor schemes need to be managed effectively.

Poverty fell between
2015/16 and 2021

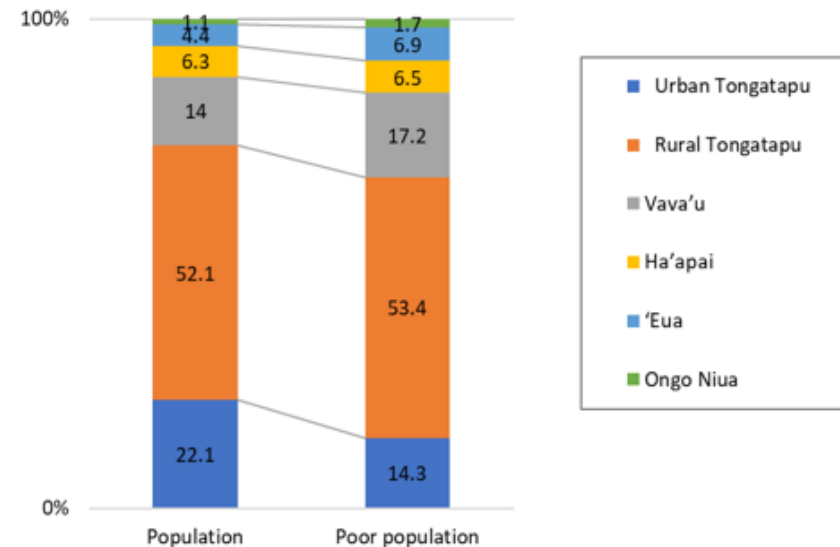
About one in five Tongans are poor as of 2021

- TSD reported the percentage of people living below the national cost-of-basic-needs poverty line (TOP 6,058 per adult per year) to be 20.6 percent in 2021.
- The poverty rate was higher in 'Eua and Ongo Niua, where one-third of the population lived in poverty. Despite the relatively low poverty incidence, Tongatapu accommodates two-thirds of Tonga's impoverished individuals.
- Tonga's poverty and inequality levels are relatively low compared to other countries with similar GDP per capita.

(C) Poverty rate by island group, 2021

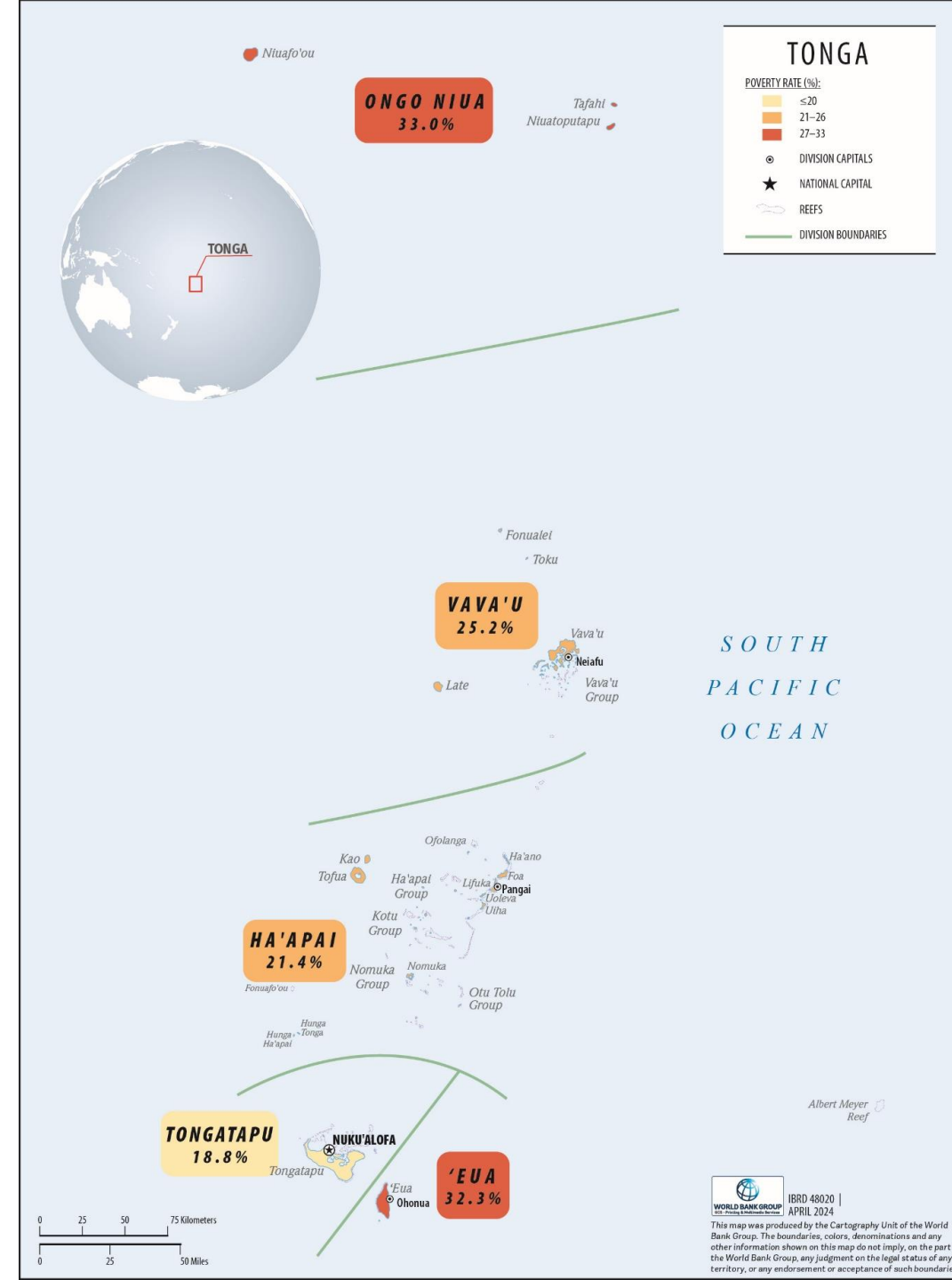


(D) Composition of the poor by island group, 2021



About one in five Tongans are poor as of 2021

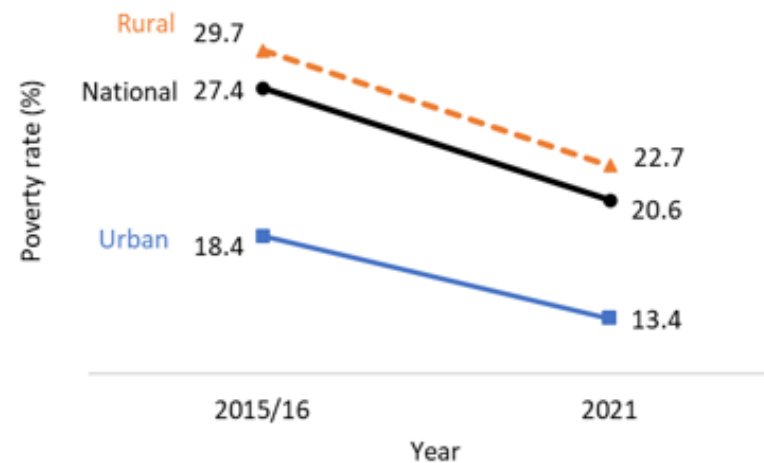
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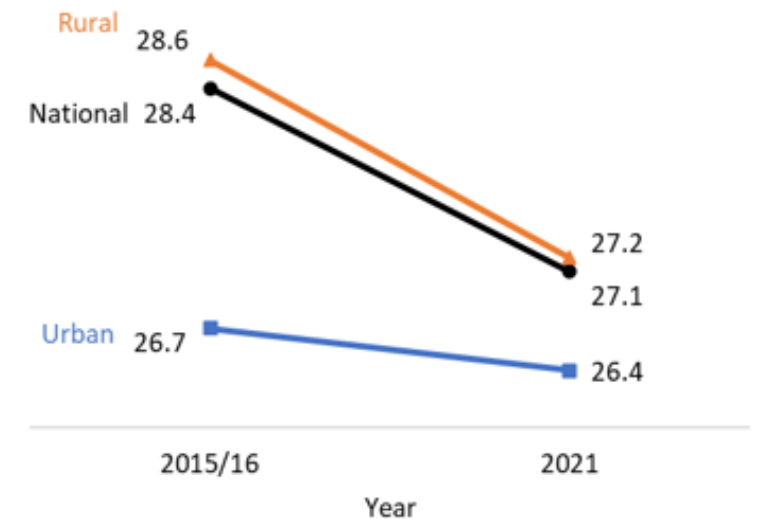
Poverty and inequality dropped from 2015/16 to 2021

- The poverty rate decreased from 27.4 percent in 2015/16 to 20.6 percent in 2021.
- Inequality, measured by the Gini Coefficient, also decreased during the same period.

(A) Poverty trends, 2015/16 to 2021



(B) Inequality trends, 2015/16 to 2021



Non-monetary poverty also fell

- Living standards improved between 2015/16 and 2021.
 - % of people with flush toilet: 82 to 89 percent
 - % of households owning a car: 37 to 55 percent
 - % of households owning a mobile phone: 82 to 97 percent
- The official multidimensional poverty rate dropped from 27 to 24 percent.



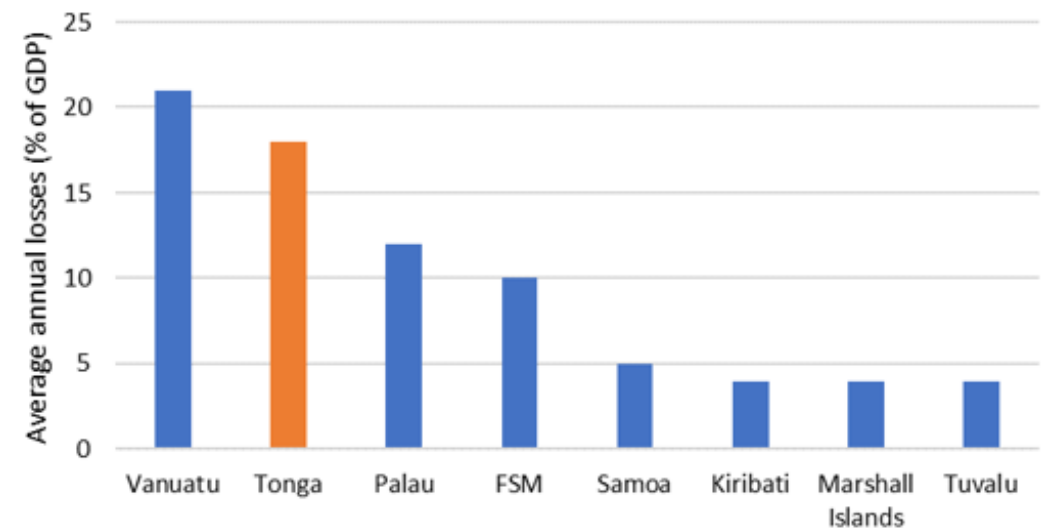
[ABC Pacific, February 1, 2024](#)

Why has monetary well-being improved despite the multiple shocks?

Tonga experienced multiple economic shocks

- Tonga was hit by tropical cyclones (TCs) Gita in 2018 and Harold in 2020—the damages equivalent to 38 and 23 percent of GDP, respectively.
- COVID-19 pandemic outbreak in 2020, accompanied with border closures
- The Hunga-Tonga Hunga-Ha'apai (HT-HH) volcanic eruption and subsequent tsunami in 2022, the damage assessed to be equivalent to 18.5 percent of GDP.

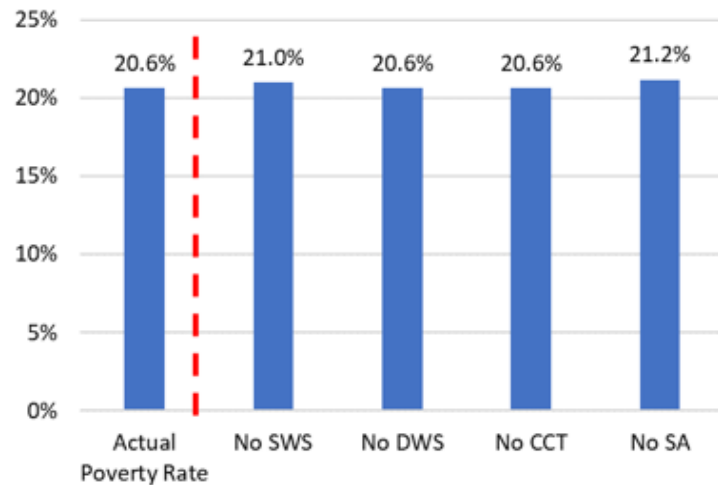
Average annual losses due to disasters as a percentage of GDP



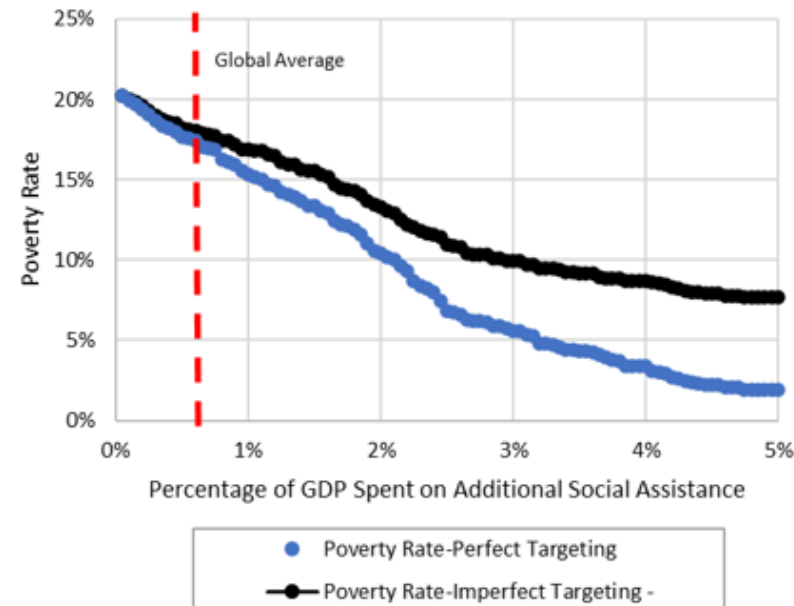
Social assistance (SA) programs are unlikely to be the key driver of poverty reduction

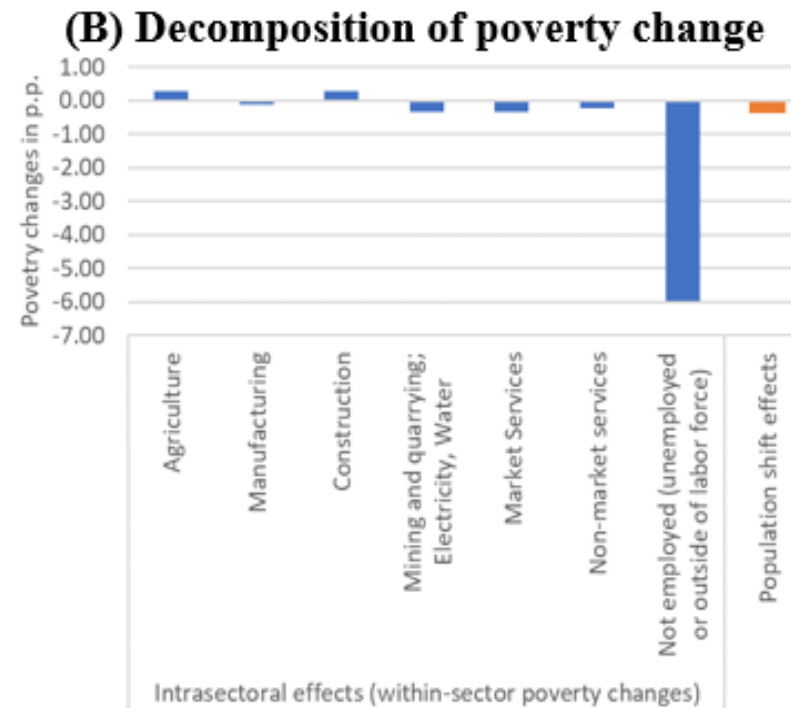
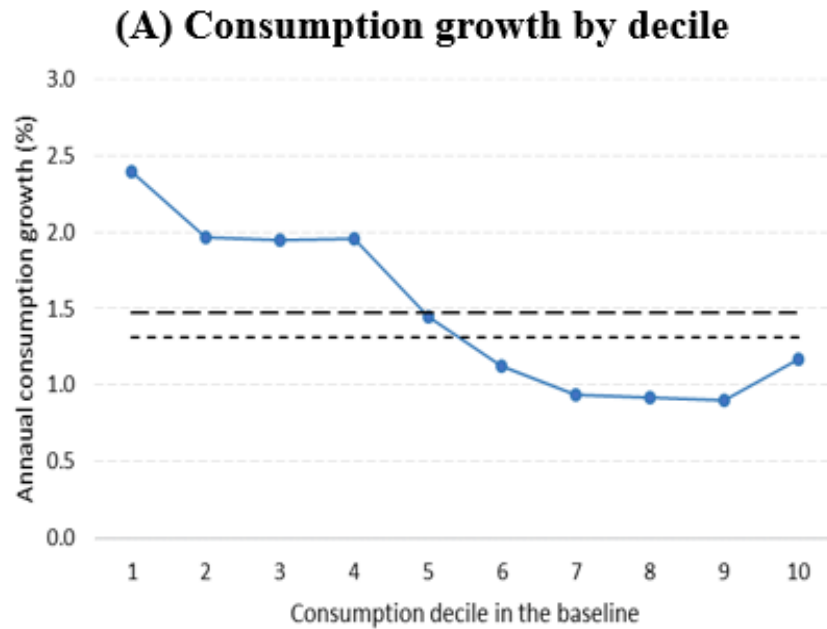
- None of the major social assistance programs—the Social Welfare Scheme (SWS), the Disability Welfare Scheme (DWS), and the Conditional Cash Transfers (CCT)—are estimated to have a significant impact on the poverty rate.
- The government needs to devote 3.5 times more than is currently spent on SA to poverty-targeted cash transfers to achieve the same level of poverty reduction as experienced between 2015 and 2021.

(A) Poverty rates in absence of SA programs



(B) Simulated poverty rates with poverty-targeted cash transfer



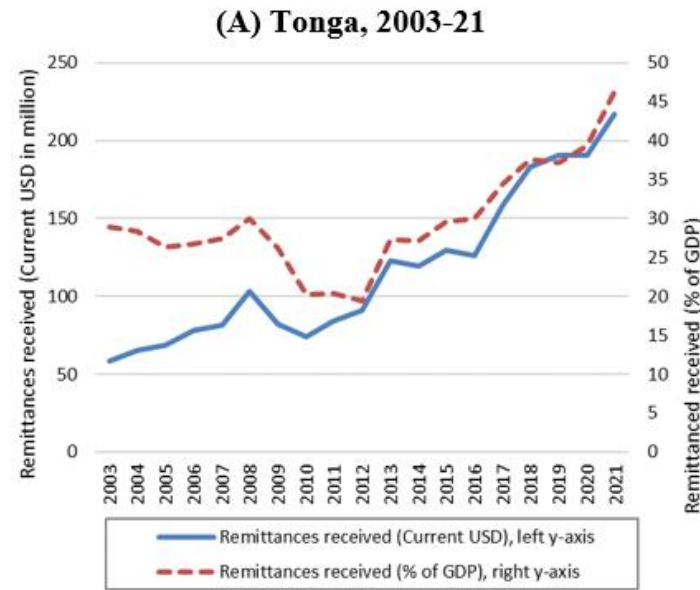


Instead, significant increases in another form of cash transfers, remittances, supported poverty reduction

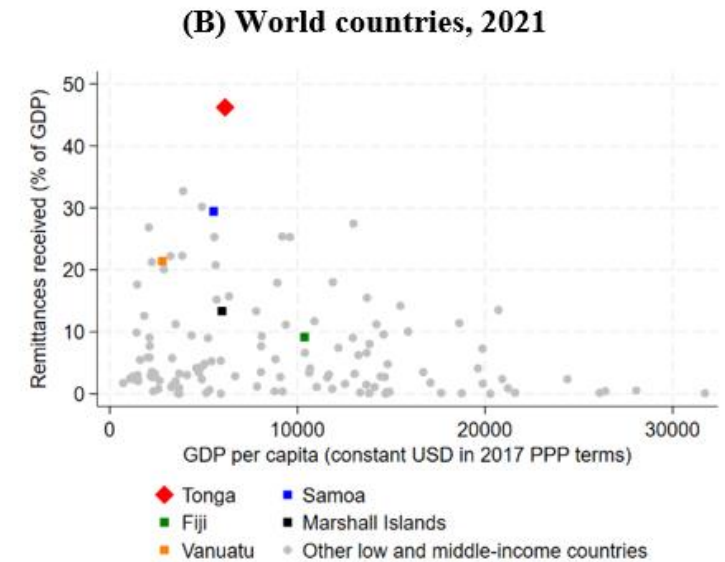
- Poorer households, including those with no employment, experienced stronger consumption growth between 2015/16 and 2021.

Remittances received have been fast rising, with the GDP share in Tonga becoming the world's highest

- More than half of Tongans live outside Tonga. The number of visas granted to workers participating in temporary labor schemes in Australia and New Zealand nearly doubled from 2018 to 2023.
- In tandem, the amount of remittances received as a share of GDP has increased from 30 percent in 2015 to 45 percent in 2021.



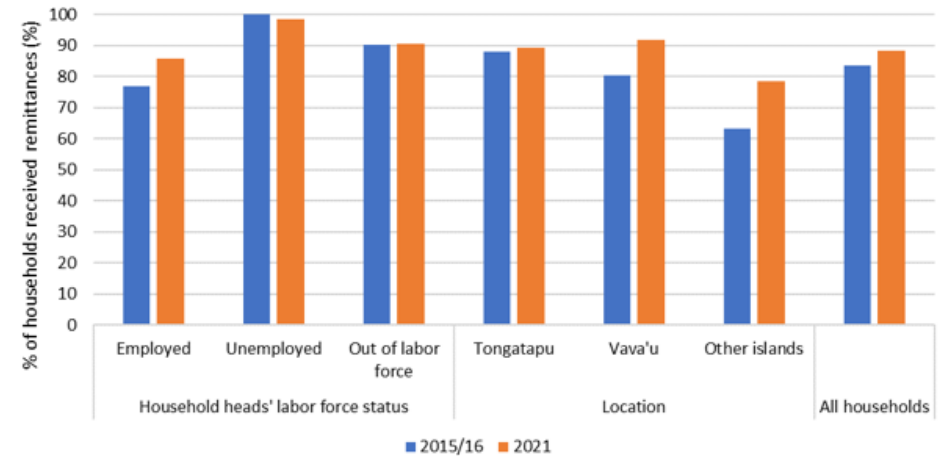
Source: Staff calculations using World Development Indicators.



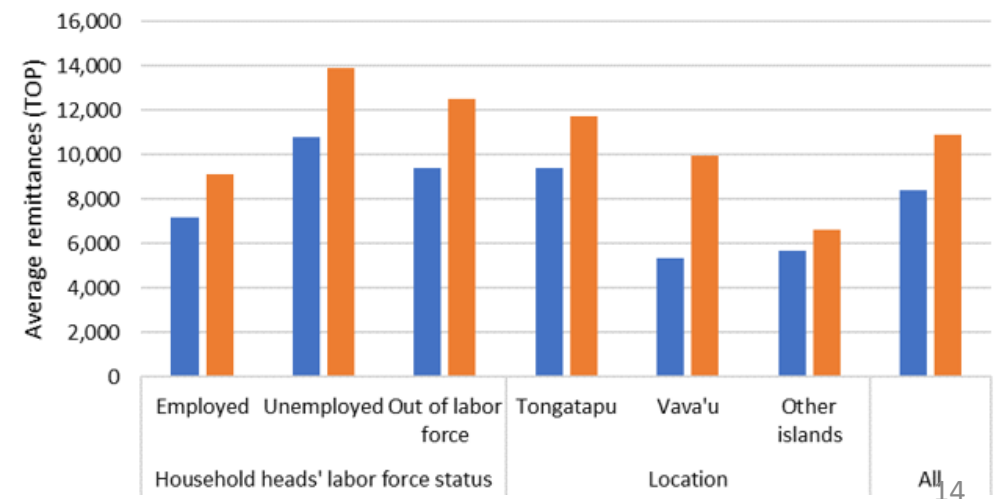
Remittances received increased both in terms of percentage of households and the average amount

- 88 percent of households received in 2021, a slight increase from 84 percent in 2015/16.
- The average amount of remittances received during the last 12 months increased from TOP 8,400 in 2015/16 to 10,900 in 2021.
- Nearly 40 percent of households relied on remittances as the primary source of income, a jump from 19 percent in 2016.
- It is simulated that without remittances, an additional 50 percent of people could have been in poverty.

(A) % of households having received remittances



(B) Average amount of remittances (TOP in 2021 prices)



What risks need to be considered to ensure sustained poverty reduction?

- While remittances significantly contribute to poverty alleviation by enhancing households' income levels, there are various risks.
- Another consideration is natural hazards. The consumption losses among households facing a severe TC are simulated to be large, reaching upwards of 20 percent were it not for any support provided.



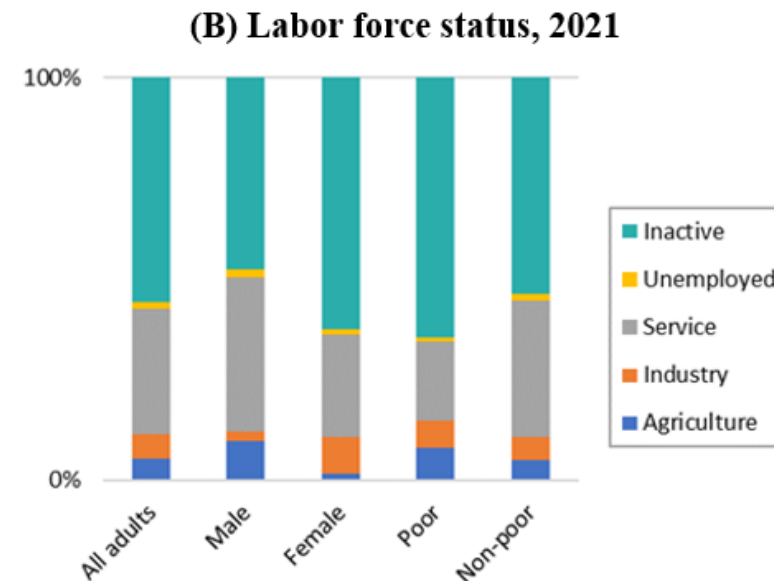
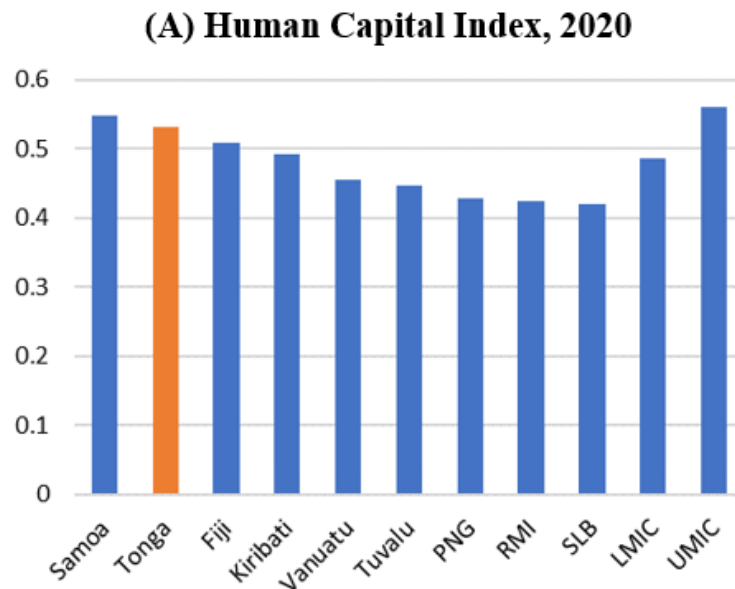
Tonga has made significant progress in reducing poverty during a tough time. **However, to ensure further progress in the coming years, a more sustainable approach is needed.**

The way forward



Tonga's insufficient human capital contributes to skills mismatches in the domestic labor market.

- According to the WB Human Capital Index, the average child born in Tonga will be only 53 percent as productive when they grow up, compared to a scenario assuming optimal health and education.
- Labor force participation remains low, particularly among the poor and females.
- Jobs in sectors and occupations with high growth prospects—notably tourism—requires skills that are currently insufficient.



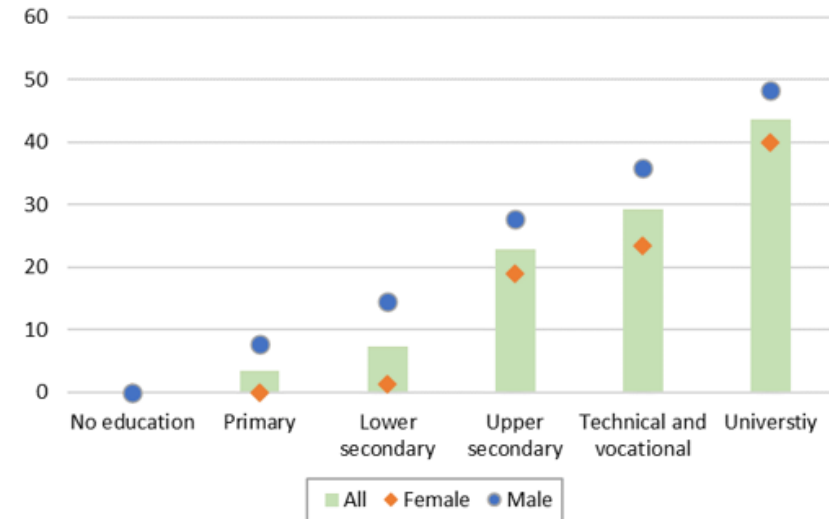
Note: LMIC and UMIC indicate the average scores for lower-middle-income and upper-middle-income countries, respectively.
Source: Staff calculations using World Development Indicators and HIES 2021.

Enhancing the human capital base is essential to facilitate economic diversification in Tonga's domestic economy and labor migration.

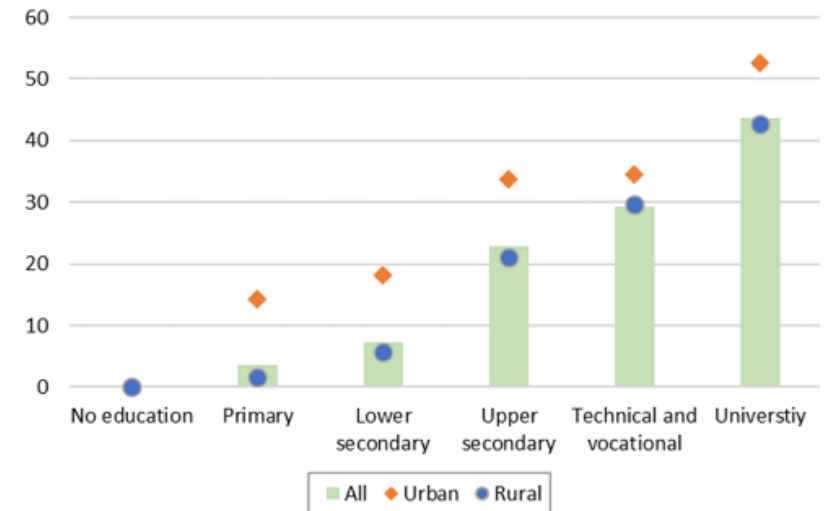
- Improving the quality of education and promoting Technical and Vocational Education and Training (TVET) are crucial to reduce skills mismatches in the domestic economy.
- Digitalization can support productivity gains, job growth, and human capital development.
- Social protection also has a vital role in maintaining and building human capital over the life cycle, linking it to education and health outcomes and economic diversification in the long run.

Consumption returns to education (consumption gain compared to no education, %)

(A) By gender

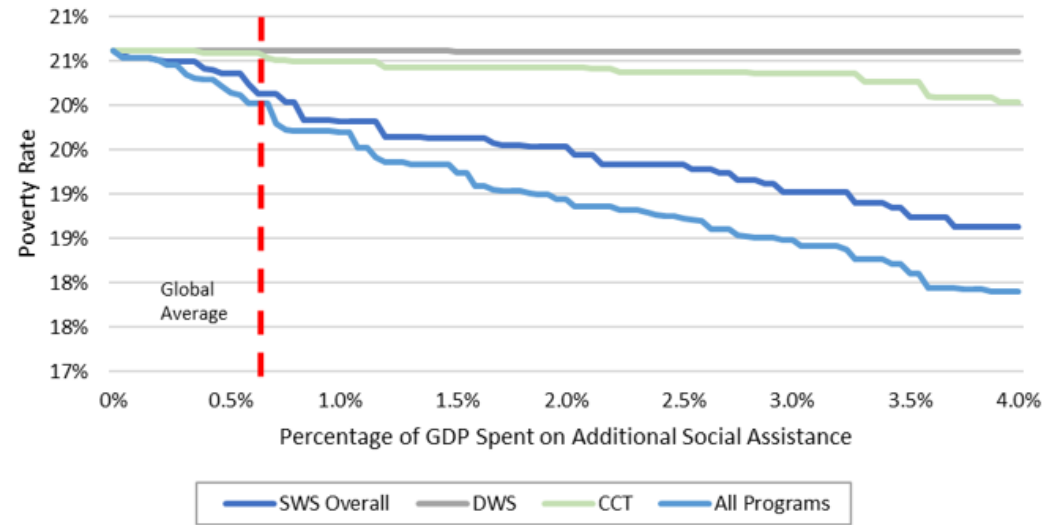


(B) By urban/rural



Developing effective social protection systems is crucial to safeguarding vulnerable populations

Simulated poverty rates from increasing current transfers (size of benefits) by percentage of GDP



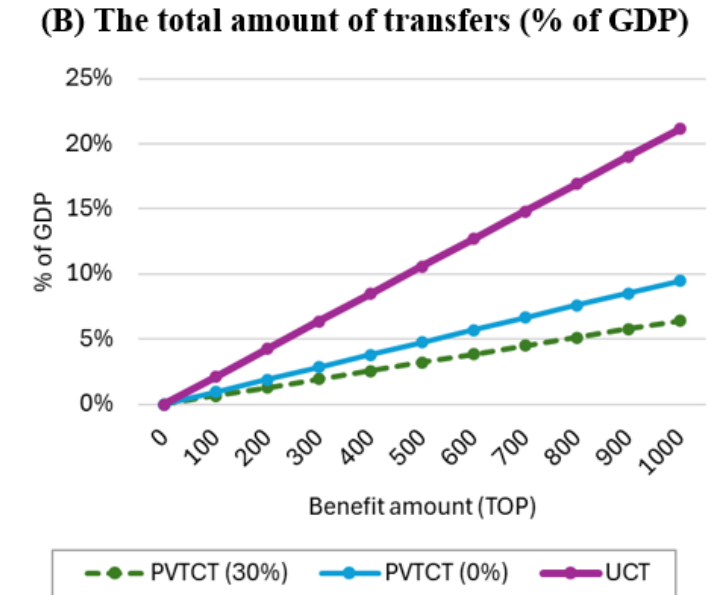
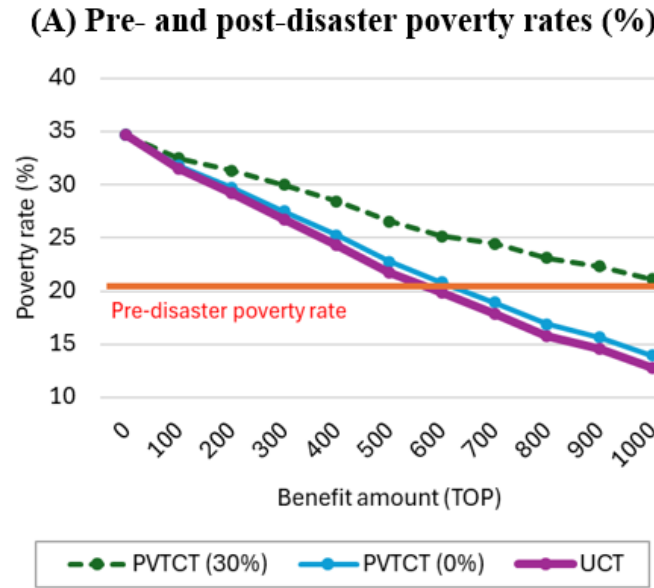
Note: Poverty is measured with the national cost-of-basic-needs poverty line.

Source: Staff calculation using the 2021 HIES.

- Increasing benefit amounts based on the current targeting would not reduce poverty much primarily due to low coverage of the poor.
- Both increasing benefit size and improving targeting through an additional hypothetical poverty-targeted transfer will reduce poverty more significantly.

Adaptive social protection (ASP) is necessary to reduce the poverty impacts of natural disasters

Simulated poverty rates after a TC (10-year return period) with SA benefits and the total amounts of transfers



Note: Poverty is measured with the national cost-of-basic-needs poverty line. The post-TC poverty rate is based on the simulation in Section 3.1. PVTCT (30 percent) is a new poverty and vulnerability-targeted cash transfer targeting households who were poor and vulnerable (based on the poverty line * 1.5) prior to the TC with 30 percent exclusion errors. PVTCT (0 percent) assumes no targeting error.

Source: Staff calculation using the 2021 HIES.

- Poverty-targeted cash transfers would be able to reduce post-disaster poverty more efficiently than a universal cash transfer.
- In the event of a disaster, the social registry becomes invaluable as it enables authorities to quickly identify and prioritize those most in need of assistance.

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Appendix



Poverty measurement

This report relies on the consumption aggregate and monetary poverty prepared by the TSD and SPC based on the HIES 2021.

The 2021 HIES: The TSD conducted the latest HIES in 2021 with financial support from the WB and technical support from the SPC. The 2021 HIES was collected in person from 2,130 households during the 10-month fieldwork from January 19 to November 23, 2021. The HIES is a nationally representative survey designed based on a two-stage stratified random sampling with the following six strata: Urban Tongatapu, Rural Tongatapu, Ha'apai, Vava'u, 'Eua, and Ongo Niua. Unlike the previous HIES, Computer-Assisted Personal Interviews were conducted in the 2021 HIES.

Consumption aggregate: Following the regional standard developed by the Pacific Statistics Methods Board (PSMB) with technical support from SPC, TSD aggregates for each household's food and non-food consumption expenditure were recorded in the 2021 HIES. The main food consumption module in the 2021 HIES was designed as a 7-day recall, unlike the 2-week diary in the previous 2015/16 HIES. Food away from home was also recorded. Non-food consumption includes non-durables, such as clothes, reported with different recall periods depending on item types. The use values of durables, such as motor vehicles, are also calculated and added to the household consumption aggregate following the PSMB guideline. The consumption aggregate also includes imputed housing rents, estimated based on a hedonic model. The consumption aggregate was adjusted for the variation in cost of living across island groups and interview timing by a spatial-temporal deflator. Finally, the household consumption aggregate was converted to per-adult-equivalent consumption using an adult-equivalency scale.

Poverty line: The TSD constructed the official national poverty line following the cost-of-basic-needs approach (TOP 6,058 per adult per year). In the process, a food poverty line was developed (TOP 2,783 per adult per year) based on a basket of 60 goods, which covers 90 percent of food expenditure. The caloric target was set to 2,100 calories per adult per day following the PSMB recommendation. The non-food component of the national poverty line was calculated based on the amount of non-food expenditure among the households in the reference group (11th to 35th percentile in consumption distribution).

Survey-to-survey imputation for poverty trends

The lack of comparability in consumption information between the 2015/16 and 2021 HIES makes it challenging to estimate a poverty trend. Household consumption measures are sensitive to the design of the survey questionnaire and survey instruments. Consumption measures between the 2015/16 and 2021 HIES datasets are presumably not comparable due to several changes in survey design and instrument, including switches from Paper-Assisted Personal Interview to Computer-Assisted Personal Interview data collection and from 14-day diary to 7-day recall.

This report employs a survey-to-survey imputation approach (SWIFT) to establish comparable household consumption aggregates and poverty measures between 2015/16 and 2021. SWIFT is a tool for rapidly estimating poverty, employing a combination of machine learning and traditional statistical modeling. The methodology behind SWIFT involves training models on a comprehensive household survey encompassing household expenditures and poverty correlates. Subsequently, it utilizes these trained models to impute household expenditures within a different survey lacking such details.

In the context of Tonga, the consumption aggregate of urban households was imputed based on a model developed from the 2021 HIES with the following predictors: household size, the proportion of household members who have attended school, and asset ownership (water heater, washing machine, car, and truck). The rural imputation model consists of the following predictors: household size, dependency ratio, the marital status of household heads, the employment status of household heads, and asset ownership (water heater, washing machine, car, truck, generator, and refrigerator).

As with any model-based approach, the SWIFT method relies on several important assumptions and caveats. First and foremost, the quality of SWIFT-based poverty estimates relies on the quality of both the training and target datasets. Training datasets need to be sufficiently large, have a sufficient variety of variables to use as poverty correlates, and be representative of the population relevant to the estimation exercise. Similarly, the target dataset must be of good quality and be comparable to the training dataset. In practice, this means that there is reasonable confidence that the survey questions are similar between the two datasets. Additionally, model-based poverty projections like SWIFT often struggle with estimating poverty rates following significant shocks or crises, as well as accurately portraying the distribution of household expenditures. However, recent advancements in the SWIFT method have notably enhanced its ability to assess poverty after a shock and improve its accuracy in analyzing distributional properties.

Social assistance programs

National Social Protection Policy 2023-2033: The policy sets a vision for an inclusive, sustainable, and prosperous nation with a comprehensive, adaptive, and integrated social protection system. The policy provides guiding principles, objectives, strategic direction, delivery systems, and implementation arrangements to effectively and efficiently support the most vulnerable populations to manage risks. The National Social Protection Policy considers the development of an ASP Framework to ensure an appropriate response to the needs of those experiencing shocks and disasters by building resilience among the vulnerable population to respond to challenges and to prepare and adapt to deal with future shocks.

Social Welfare Scheme (SWS): A person older than 70 who resides in Tonga is eligible for a monthly payment of TOP 80 to 100. In the 2021/22 fiscal year, 4,569 people received benefits under the SWS.

Disability Welfare Scheme (DWS): A person with at least one form of disability who resides in Tonga is eligible for a monthly payment of TOP 50 to 100, depending on the level of disability. In the 2022/23 fiscal year, 2,256 people received the DWS benefit.

Conditional Cash Transfer (CCT): Poor and vulnerable families identified as the poorest 10 percent of the population based on a proxy means test are eligible to receive TOP 250 quarterly. The number of beneficiaries reached 2,395 families in the 2021/22 fiscal year.