

Child Poverty in Tonga

Nuku'alofa, Kingdom of Tonga

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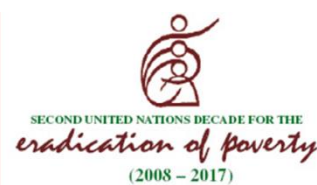
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Abstract

This paper presents results of the first ever study of child poverty in Tonga using the 'Consensual Approach'. The nature of the approach is multidimensional, and it considers the range of deprivations faced by children in Tonga today. It shows the extent to which children lack certain basic necessities because their parents or care givers lack the resources to provide them. Our findings show there is a remarkable degree of consensus about what constitutes the necessities of life and an adequate standard of living for children in Tonga. Following Townsend's concept of relative deprivation, the paper shows how a reliable and valid index of multiple deprivation was created on the basis of social consensus to reflect multidimensional poverty.

Key words Poverty, deprivation, consensual approach, child poverty, Tonga

Introduction

Poverty is a central policy issue with wide-ranging and negative impacts on children. While the impact on an adult falling into poverty temporarily may be felt immediately, for children the effects can last a lifetime; children rarely get a second chance at an education or healthy start in life. Child poverty costs society in terms of missed opportunities and wasted potential. The United Nations Children's Emergency Fund (UNICEF) has been promoting international child welfare, and in 2006 got the United Nations General Assembly to agree an international definition of child poverty. UNICEF, in support, noted : “ *Measuring child poverty can no longer be lumped together with general poverty assessments which often focus solely on income levels, but must take into consideration access to basic social services, especially nutrition, water, sanitation, shelter, education and information*” (UNICEF, 2005).

It is therefore crucial to understand child poverty to the fullest extent and to do this requires more appropriate approaches to measuring it.

Generally, it is possible to construe the meaning of poverty in one of two ways. The first focuses on a limited *definitional* sense, or what poverty *means* to those who study it. Alternatively, the meaning of poverty can be considered from a more *outcome-oriented* perspective which explores what poverty means to those who experience it (Bradshaw and Sainsbury, 2000). The consensual approach address the latter which measures deprivation, which is the outcome of poverty. It not only involves a democratic element by including the views of the general public but also contains scientific processes of defining and measuring of poverty (Gordon and Townsend, 2000, Pantazis et al., 2006a).

This report presents analysis to inform the new Tonga child poverty measure, using the 'Consensual Approach'. First, it gives a background information and general review of poverty and what has been done in the past for Tonga. This is followed by a brief outline of the methodology used for the first time in the Kingdom, highlighting key findings with discussion of possible anti-poverty policies for children in Tonga.

Background

The literature on poverty in Tonga is limited, with almost nothing written on child poverty. Tonga was not included in global studies of poverty like UNIEF's Global Study of Child

Poverty and Disparities or in earlier work done for UNICEF by the University of Bristol (Gordon et al., 2003). However the discussion on poverty (particularly on national level) is influenced by some traditional held beliefs (Kidd, 2012). These include the ideas of 'Affluence Subsistence' where Pacific islands (Tonga included) still rely on subsistence agriculture and fishing for their livelihood (Lam, 1982), along with strong extended family structures and community support systems acting as safety nets, where no one is seen as falling into extreme poverty (Yari, 2003), and where hunger is believed to be absent (Abbott and Pollard, 2004). Arguably, these traditional ideologies are changing and being challenged. For example, the spread of the cash-based economy has restructured national and household obligation priorities, which result in many people with little access to subsistence production (Yari, 2003) falling into poverty or hardship. In addition, the continued outflow of migrants from the outer islands not only to Nuku'alofa but to other countries steadily depopulate the remote outer islands which increases the dependency of those remaining (Zuñiga-Carmine and Bank, 2004). Regionally, Lightfoot and Ryan, (2001) show that throughout the Pacific, there are people (communities, families and individuals) living in deep poverty despite the traditional (non- formal) support systems (Lightfoot and Ryan, 2001).

One question we must ask ourselves is do these transitional changes and other changes to Tongan society bring disadvantage to our citizens? Findings from the work done by the Asian Development Bank (Carmine and ADB, 2010) shows that hardship means more than not just having cash income for many Tongans. It is about poor quality services and few opportunities to improve people's lives, or of being unable to realize their own potential and aspirations. This is not a surprising result as there has been a general consensus in recent years that poverty is relative to time and place, and that the absolutist notions of subsistence-based poverty lines are no longer tenable in the twenty- first century. This is because people's needs have expanded along with their rights and entitlements to freedom from starvation and destitution (Nandy and Pomati, 2014, Donald and Mottershaw, 2009). This is recognised in various international conventions like the 1948 Universal Declaration of Human Rights and the 1989 United Nations Convention on the Rights of the Child (UNCRC). What is common in these conventions is that they all preserve people's rights to an adequate standard of living, assistance in times of need, basic social security (Townsend,

2009), and more recently, to principles and services exemplified by the ILO-supported minimum social protection floor¹ (Nandy and Pomati, 2014). The UNCRC, for example, contains many of these: Article 24 concerns basic health care; Articles 26 and 27 concern the obligations of governments and families to provide adequate physical resources for children's survival and healthy development. The 1995 World Summit on Social Development, increasingly emphasises non-monetary aspects of poverty about which measures and indicators are being required (Nandy and Pomati, 2014). In many countries, there has been a shift from the monetary approach to a multidimensional approach so as to provide a holistic and wider method not only to capture non-monetary dimensions of poverty but to measure it directly. In high income countries such a shift of focus includes moving from absolute poverty to relative poverty, from income poverty to dimensional analysis, from indirect to direct measure of poverty, from poverty to wellbeing and social exclusion (United Nations, 2010). In contrast, in Tonga, the monetary approach is still dominant despite the global shift in poverty measurement. In reality, the experience of poverty has other dimensions such as social, environmental, relational etc.

The first attempt to measure poverty in Tonga was in 2001, using a monetary approach and data from the 2001 Tonga Household Income and Expenditure Survey (HIES) (Tonga Ministry of Finance and National Planning, 2010). The second of its kind was in 2010, again using Tonga 2009 HIES data, which was a requirement for the MDG country report (Tonga Ministry of Finance and National Planning, 2010). However, these data (HIES) were not collected with poverty or hardship in mind or analysed fully for their implications (Abbott and Pollard, 2004). One limitation of the monetary approach is that it assumes that all dimension of poverty can be measured by money (income) alone. This is hugely challenging in Tonga, since remittances form a large part of the household income and are not recorded well. Tonga is highly reliant on remittances which vary from 30% to 55% of the GDP (Lin, 2011); around 90% of households receive remittances either from overseas or within Tonga (Tonga Statistics Department, 2008). In addition, there is much exchange using barter or in kind transfers, without money involved. It is normal practice for households share their goods with neighbours and relatives. Therefore, in my view, the structure of Tongan society

¹ <http://www.socialprotectionfloor-gateway.org/>

has a common norm of informal redistribution of resources which is part of the culture of sharing resources from those who have access to those who may need them.

In such circumstances and contexts, it is clear that a direct method is required to identify the life experience of the poor and their needs. A participatory assessment study, conducted by the Asian Development Bank in the Pacific (Tonga included) found that poverty and hardship are real issues in the lives of many people in the Pacific islands (Abbott and Pollard, 2004).

Most Small Islands Developing States (SIDS) face particular challenges associated with small size (population, resources, formal labour market etc.), openness, and vulnerability to natural disasters. Geographical isolation results in high communication and transportation costs, limited employment, poor services and problems of transparent and accountable governance. These factors, among others, create problems related to the economic and livelihood of the population (Briguglio, 2003). The potential of people is seriously undermined by '*poverty of opportunity*' in the form of socio-economic obstacles (United Nations, 2010). Abbott and Pollard describe these disadvantages as "*conditions and circumstances that give rise to poverty of opportunityare the causes of income poverty*" (Abbott and Pollard, 2004); I argue that such disadvantages are also causes of material and social deprivation.

Consensual Approach

The Consensual Approach analyses poverty by looking at its direct outcomes – deprivation and low standard of living (Gordon and Pantazis, 1997b). It is a wider approach that captures not just material needs but also social, environmental and others. Poverty is best assessed using direct measures such as people's standard of living. This approach is based on the work of Professor Peter Townsend, and in particular his concept of relative deprivation. He defined poverty in the following way:

“Individuals, families and groups in the population can be said to be in poverty when they lack the resources to obtain the types of diet, participate in the activities and have the living conditions and amenities which are customary, or are at least widely encouraged or approved, in the societies to which they belong. Their resources are

seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary living patterns, customs and activities” (Townsend, 1979 , pg.31)

Mack and Lansley applied Townsend’s theory and definition in their development of a method to assess poverty, using *socially perceived necessities* or *consensual deprivation* indicators. It was a refinement of Townsend’s work (1979) and involved the direct measurement of poverty (Halleröd, 1994). There were two important refinements made: first, the use of people’s opinion on what items/activities everyone in society should be able to afford, and second the measurement of people’s deprivation due to an inability to afford them (Anderberg, 1973 ;).

The approach as applied to Tonga devised indicators appropriate for both children and adults, is outcome-focused and county-specific, considering non-monetary aspects of deprivation of particular relevance to children (Roelen et al., 2012). Adults were asked, through the 2012 Tonga Demographic Health Survey (DHS), which from a list of items and activities they considered essential for children in Tonga today. Essential items and activities refer to the ones which no one should have to go without. People were counted as deprived if they lacked sufficient resources to afford to have or do items perceived as necessities by a majority of the population.

The empirical application of the consensual approach in measuring poverty comes in two stages: the first concerns definition, to identify the necessities which a majority of the population believe no one should be without; the second concerns measurement, to identify who lacks these items because they cannot afford them (Mack and Lansley, 1985).

The aim of the definition stage is to obtain a set of items which the adult population generally agrees to be essential for children to have an acceptable standard of living (Barnes, 2009). A decision on what percentage of the population must regard the item as essential for it to be classified as socially perceived necessity (SPN) was made at 50% as according to Mack and Lansley (1985).

Data and methodology

The data used is the 2012 Demographic Health Survey (DHS) for Tonga which included a module specifically designed to improve poverty measurement in Tonga. The DHS began in 1984 by the United States Agency for International Development (USAID) as a follow up project to the World Fertility Survey and the Contraceptive Prevalence Survey projects (Rutstein and Rojas, 2006). Since 1997, the DHS program has implemented more than 130 surveys in 70 countries. Most countries conducted multiple DHS to establish trend data and monitor progress. Tonga held its first DHS in 2012. This was as a result of agreements by Heads of Planning and Statistics in the Pacific in a meeting in 2005 to conduct DHS in all countries in the Pacific with the aim of filling data gaps, improving quality and monitoring social statistics in the region. DHS data are often used by researchers and organization such as the United Nations to assess people's living conditions (Corsi et al., 2012, Gordon, 2003, Vaessen, 1996).

In the special module mentioned above, respondents were asked, from a list of 23 items and activities (10 related to children, 8 adults and 5 households) which they considered to be essential to for a decent standard of living. This report presents some results on the extent of child poverty using information on the child and household items and activities. The construction of the list of possible necessities for an acceptable standard of living was done based on items which have previously been tested and used successfully in other countries. The list was carefully refined taking into consideration the relevancy of items to the context of the Tongan society. The fact that respondents did decide which items from the list were necessary but they did not decide the range of items from which they could choose was due to the nature of the study. However alternative approaches that had been practice in many countries that will allow the general public to decide on what should be included in the list can be done by conducting a focus group discussion (See eg. Minujin, 2012).

A socially perceived necessities definition of poverty for children in Tonga

Having asked respondents for their views on which items/activities on the list they considered to essential for children, then it is necessary to decide on what percentage of the

population that must regard an item as essential for it to be classified as a socially perceive necessities (SPN). Based on this proportion, a list of SPN can be compiled and statistical tests run to check the reliability of this set of items (Barnes, 2009). In fact, any threshold by which an item is regarded as SPN is contentious, and Mack and Lansley (1985) argue any threshold is essentially arbitrary. Instead, they settled for a simple majority, such that any item which defined as essential by 50% or more of the population was acceptable as this introduced a democratic element as it was the opinion of the majority of the people, not just “experts”. In common to many of the studies using the consensual approach, a 50% majority is used as a threshold for the following analysis. Table 1 shows all the items for children and households (where households’ items apply to all members including children) met the criteria of a simple majority. Therefore all these items are classified as SPNs. Furthermore, there almost unanimous agreement for all items (90%+ agreement).

Table 1 - Percentage of respondents defining items/activities as ‘essential’ for children

Items for Children	Essential
One meal with meat, fish or vegetarian equivalent daily	99%
Three meals a day	99%
Enough beds and bedding for every child in the household	98%
All school uniform and equipment required	97%
New properly fitting shoes	97%
A suitable place to study or do homework	96%
Celebration on special occasions	96%
Some new not second-hand clothes	95%
Participate in school trips and school events that costs money	95%
Bicycle	77%
Household items	Essential
All medicine prescribed by your doctor when you are sick	98%
Regular savings for emergencies	97%
Having your own means of transportation (e.g. Car, boat, etc.)	95%
Enough money to replace any worn out furniture	95%
Enough money to repair any broken goods (e.g. Refrigerator)	94%

Therefore the 15 items in Table 1 not only pass the criteria for SPNs and thus are included in a deprivation index. These items relate to basic needs, for example for food, clothing, and household goods.

Is there consensus?

It is important to demonstrate consensus about the items for the deprivation index. This is due to the fact that the validity of the consensual approach rests on the assumption that there are no large or systematic differences in the definition of necessities amongst different groups within the society (Gordon and Pantazis, 1997a); without consensus the definition of a necessity would be the opinion of one group against another (Pantazis et al., 2006b). Therefore consensus implies here refers to agreement in the judgement or opinion reached by a group as a whole i.e. different demographic groups all agree that a particular item is essential or necessity. Hence we need to check whether the overall majority support is consistent with systematic differences of views based on factors such as gender, age, or geographical location.

There is no agreed way of establishing whether or not a consensus exists simply because any such decision must rest ultimately on a judgement about whether or not the observed patterns are consistent with the existence of a consensus (Saunders, 2011). In order to inform such a judgement, it is important to document the extent of the differences that exist and one way of doing this is to use heat maps; items with high proportion of respondents identifying it as essential ranges from red (100%) and gradually changing through orange to dark yellow on an ascending order down to green (0%). **Table 2** presents a heat map for Tonga, and shows the high degree of consensus across all social and demographic groups.

Table 1: Heat map for children's necessities by different groups

Children's items	Gender		Age group		Standard of living		Keeping up with bills		Top-bottom quintiles (Asset index)		Geographical location			Highest level attended	
	Male	Female	young (16-25yrs)	Old (60+)	Below average	Above average	Struggling or falling behind	No problems	Poorest	Richest	Urban	Rural Tongatapu	Rural islands	Primary	Vocational
One meal with meat, fish or vegetarian equivalent daily	99%	99%	100%	99%	98%	99%	99%	99%	98%	99%	99%	100%	98%	100%	98%
Three meals a day	99%	99%	100%	99%	96%	99%	98%	99%	98%	99%	98%	99%	99%	99%	99%
Enough beds and bedding for every child in the household	98%	98%	100%	99%	98%	99%	98%	99%	97%	100%	99%	99%	98%	99%	99%
All school uniform and equipment required	97%	98%	92%	97%	95%	99%	97%	98%	96%	99%	98%	98%	96%	97%	97%
Celebration on special occasions	96%	96%	96%	97%	91%	99%	95%	98%	93%	100%	98%	96%	96%	93%	96%
New properly fitting shoes	96%	97%	100%	97%	95%	98%	96%	97%	96%	98%	95%	97%	97%	97%	95%
A suitable place to study or do homework	96%	97%	88%	97%	95%	99%	96%	97%	94%	99%	97%	97%	95%	96%	97%
Some new not second-hand clothes	96%	94%	96%	96%	92%	97%	95%	96%	94%	97%	93%	96%	95%	95%	96%
Participate in school trips and school events that costs money	95%	96%	96%	95%	93%	97%	95%	96%	93%	98%	96%	96%	95%	94%	96%
Bicycle	79%	73%	76%	83%	70%	83%	75%	81%	69%	85%	80%	75%	79%	74%	79%
All medicine prescribed by your doctor when you are sick	98	97	97	98	95	99	97	99	96	99	97	99	96	98	98
Regular savings for emergencies	97	97	97	98	94	99	97	98	95	99	97	98	96	97	99
Having your own means of transportation (eg. Car, boat, etc)	95	95	95	95	88	98	93	97	89	100	95	95	94	94	98
Enough money to replace any worn out furniture	95	94	95	96	91	96	94	95	93	97	95	95	93	94	97
Enough money to repair any broken goods (eg. Refrigerator..)	94	95	95	96	90	96	94	96	91	99	96	94	93	94	97

Validity and Reliability of indicators

In order to construct deprivation indices, it is crucial that each item is a valid and reliable measure of poverty (Gordon, 2006). The idea behind this is to be able to show that the selected items are good indicators of deprivation. It is necessary now to show how the validity of each item in the deprivation index is tested against three variables known to relate to poverty. These three validators were:

1. Standard of living, which refers to the respondent's own evaluation of their household standard of living: the probability of being deprived for those children who live in households whose standard of living is considered '*below average*' is compared with those whose is '*above average*'.
2. How respondents are keeping up with bills and repayments: the probability of being in a household that is '*struggling or falling behind*' with their bills is compared with those who have '*no problem*' in paying their bills.
3. The wealth index of the respondents: the respondent's quintile on the DHS household wealth index is used to compare the probability of being deprived for the bottom 20% and the top 20%.

Clearly, there is face validity for the deprivation index, knowing the fact that the items which go into making it up are related to children's everyday living conditions and their needs for food, clothing, material and social.

Given all the 45 possible combination (15 items by 3 validators) shown in Table 3, the probability of being deprived is higher for those in the most disadvantage category compared to those in the much better off category. For example, using the standard of living validator, respondents who rated their standard of living as '*below average*' were 14 times more likely not to be able to afford to buy "*new properly fitting shoes*" for their children compared to those who reported their standard of living as '*above average*'. Using the wealth index, the poorest quintile group are 24 times more likely to not afford one meal with meat, fish or vegetarian equivalent daily compared to the richest quintile. Therefore, this means that all items for children are good indicators and valid measures of child deprivation in Tonga.

Table 2: Relative risk ratios for children’s items by external validators

Children's items	Standard of living	Keeping up with bills	Wealth index
New properly fitting shoes	14	3	11
One meal with meat, fish or vegetarian equivalent daily	12	4	24
Three meals a day	12	7	_*
Celebration on special occasions	10	5	28
Some new not second-hand clothes	10	4	15
Enough beds and bedding for every child in the household	10	4	27
Participate in school trips and school events that costs money	9	7	30
All school uniform and equipment required	8	11	_*
A suitable place to study or do homework	5	5	21
Bicycle	4	3	7

* Note: There was no one deprived in the top 20% wealth quintile whose children lacked three meals a day and having all school uniform, thus their relative risk is effective infinite.

Scale reliability was tested using a classical test theory model by calculating Cronbach’s Alpha to show that the children items form a reliable scale. Reliability explains as the capacity to produce the same results repeatedly which refers to the consistency of the measure. Hence the Cronbach’s coefficient Alpha (Cronbach, 1951) aims to test the internal reliability by examining the inter-item correlations. It measures the average correlation of the full set of 15 SPNs (i.e. relating to items in the deprivation index) with other hypothetical sets of items of equal length (Nandy and Pomati, 2014).

Table 4 - Reliability analysis of the child and household deprivation index

	Cronbach's Alpha if Item Deleted
Three meals a day	0.881
All school uniform and equipment required	0.881
Bicycle	0.881
New properly fitting shoes	0.880
One meal with meat, fish or vegetarian equivalent daily	0.880
Having your own means of transportation (e.g. Car, boat, etc.)	0.880
A suitable place to study or do homework	0.879
Enough beds and bedding for every child in the household	0.878
Participate in school trips and school events that costs money	0.878
Some new not second-hand clothes	0.877
All medicine prescribed by your doctor when you are sick	0.877
Regular savings for emergencies	0.877
Celebration on special occasions	0.876
Enough money to replace any worn out furniture	0.876
Enough money to repair any broken goods (e.g. Refrigerator)	0.874
Total Alpha	0.886

For the set of SPNs the scale reliability coefficient alpha is 0.886 and the square root of the coefficient is 0.941. As according to Nunnally (1981), reliability coefficients of 0.7 or higher are sufficient, thus with an alpha of 0.886 this set of items is considered to be highly reliable.

Measuring deprivation of children in Tonga

Deprivation exists when children are prevented from obtaining essential items because their parents or care givers cannot afford them (Saunders, 2011). Table 5 shows the prevalence of child deprivation (don't have and cannot afford) alongside with the number of children in the population; proportion of respondents who have the items and proportion of respondents perceived them as essential. Extra information on those who choose not to possess these items (don't have, don't want) is also demonstrated. Clearly the 5 household items have high rates of deprivation despite the fact that respondents highly regard them as essential and that children in particular should not live without them. For the items that were specifically for children, about one in every four children in Tonga lacked a bicycle

because their families could not afford one. Around 8% of children were in households who could not afford three meals a day or one meal with meat, fish or vegetarian equivalent daily despite almost everyone (99%) perceived these items to be essential.

Table 5 – Essential, ownership, percentage and estimated number of children deprived because they cannot afford.

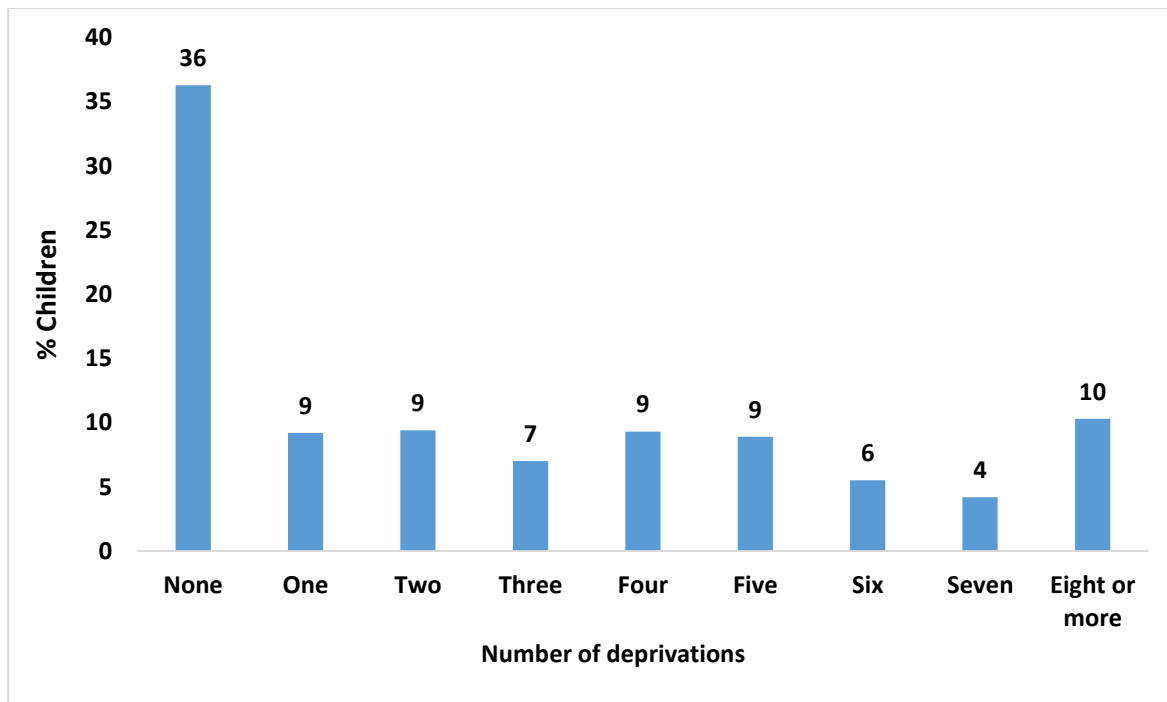
Children's items	% Essential	% Has	% of children being deprived	Number of deprived children
One meal with meat, fish or vegetarian equivalent daily	99%	91%	8%	3,341
Three meals a day	99%	90%	8%	3,301
Enough beds and bedding for every child in the household	98%	88%	11%	4,360
All school uniform and equipment required	97%	88%	6%	2,445
New properly fitting shoes	97%	85%	12%	4,767
A suitable place to study or do homework	96%	84%	10%	3,912
Celebration on special occasions	96%	80%	17%	6,764
Some new not second-hand clothes	95%	80%	15%	5,990
Participate in school trips and school events that costs money	95%	81%	11%	4,319
Bicycle	77%	50%	24%	9,942
Household items				
Enough money to repair any broken goods (eg. Refrigerator..)	98%	51%	43%	17,440
Enough money to replace any worn out furniture	97%	48%	44%	17,847
Having your own means of transportation (eg. Car, boat, etc)	95%	65%	33%	13,243
All medicine prescribed by your doctor when you are sick	95%	72%	24%	9,902
Regular savings for emergencies	94%	65%	32%	13,161

Source: Tonga 2012 Demographic Health Survey

Having discussed how items were identified as SPNs and selected for the final deprivation index it is important to show how deprivation is patterned across Tonga. **Figure 1** shows the pattern of deprivation experienced by children.

Over a third (36%) of children in Tonga reported not being deprived of any of the 15 items on the index. About 40% were deprived of at least four items, while 10% lack eight or more items.

Figure 1: Numbers of deprivations children experience.



Domains of children's deprivation

It is hard to draw a comprehensive picture of children deprivation in the Kingdom which may be needed for international comparisons. Essentially, the interest here is not so much in the individual items per se but more so in the underlying situation of generalised deprivation that these items help to capture (Atkinson, 2009). One way to do this is to carry out a dimensional analysis of the structure of the list of the selected items (SPNs) that will inform the decision on how to aggregate into homogeneous dimensions of deprivation. Factor analysis is often carry out which is the analysis of correlation between a large set of manifest items of deprivation to identify a limited number of unobservable dimensions of deprivations. Because the technique is data driven as there is arbitrariness in choosing the number of factors and the fact that the response variable is not continuous, this paper does not present a dimensional analysis of the children's deprivation items. The items are grouped instead more simply, according to their underlying characteristics. These SPNs items can be grouped to identify deprivations in specific domains of children's lives². These

² It is important to note that these indices are not independent, meaning that they contain overlapping items.

include food³, clothing⁴, children’s facilities⁵, social⁶, material⁷, and household⁸. Children are considered deprived within a domain if they experience an enforced lack - meaning that their family cannot afford at least one item or activity within that particular domain.

Figure 2: Proportion of children deprived on each domain.

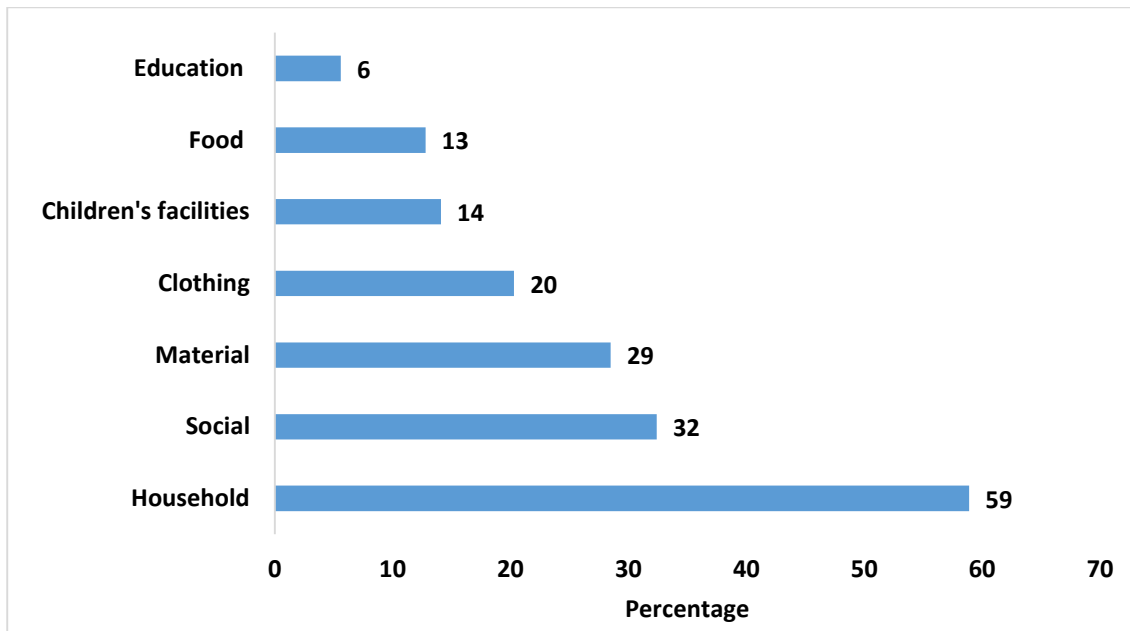


Figure 2 shows the proportion of children deprived in each domain. About 3 in every 5 children (59%) are living in deprived households; one-third are socially- deprived and 29% experience material deprivation. In particular, two in every five children have an enforced lack with regards sufficient clothing. More than one in ten children experienced an enforced lack of food (13%).

Setting a threshold to decide who is ‘poor’

One of the key problems in scientific study of poverty is how to correctly identify the poverty line or threshold (Gordon and Pantazis, 1997b). Such difficulty has led some commentators to argue that poverty is ‘in the eye of the beholder’ because the poverty line

³ Comprising 3 meals a day; daily meal with fish, meat or vegetarian equivalent.

⁴ Comprising shoes; clothes; school uniforms

⁵ Comprising beds; study place

⁶ Comprising celebration; school trips; bicycle

⁷ Comprising 3 meals; clothes; daily meal with fish, meat etc; school uniform; beds; study place; shoes

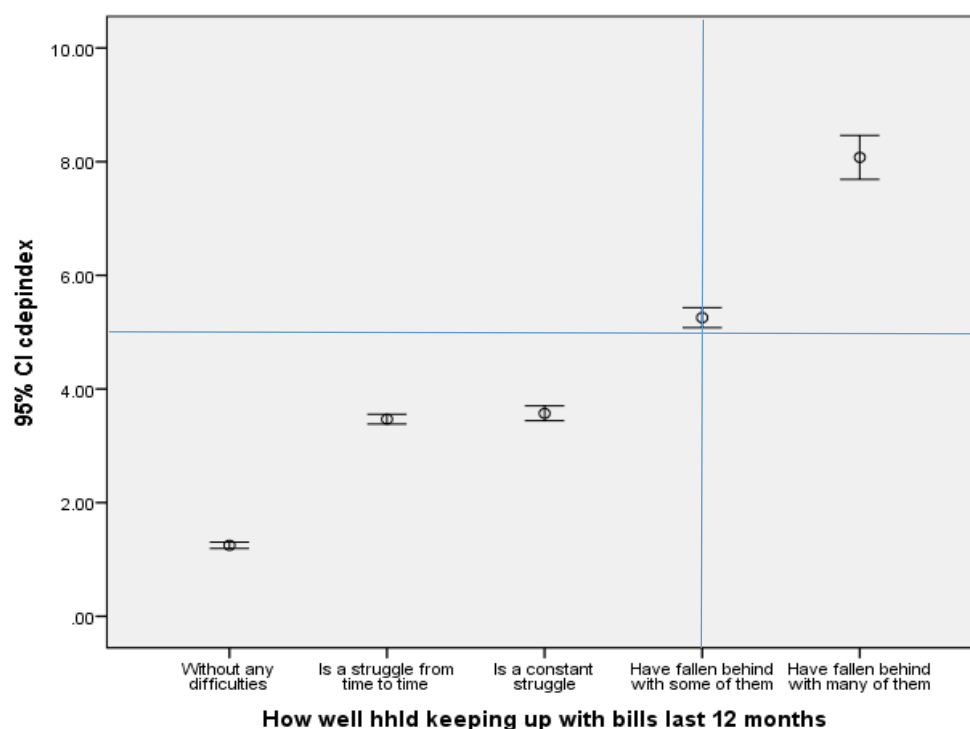
⁸ Comprising medicine; savings; transportation; replace furniture’s; repair broken goods.

suffers being mainly or wholly arbitrary. For example, the World Bank's US\$1 a day PPP poverty line, European Union (EU) relative poverty line of 60% median equalised household income 'at risk of poverty' line and others (Minujin and Nandy, 2012). In fact a small change in where a poverty line is set may result in many people being shifted from poor to non-poor and vice versa.

However, Townsend (1979) argued that additional information (external and varies with income/resources) is required in order to 'objectively' identify a correct and justifiable poverty line. He showed that there is a clear relationship between the resources people have and their ability to avoid the consequences of poverty, deprivation (Townsend, 1979, Gordon and Pantazis, 1997b). He developed a deprivation index and graphically compared it against a measure of income, to show that below a certain level of income, the experience of deprivation(s) increased rapidly (Townsend, 1979). Poverty studies using the consensual approach, such as the 2012 Poverty and Social Exclusion in the UK study use a combination of household income (as a measure of resources) and deprivation, and follow Townsend's method. People are understood to be no longer able to satisfy their basic needs below this level of income, and where the result of this multiple deprivation is undeniable poverty (Nandy and Pomati, 2014).

DHS surveys, including the Tonga 2012 DHS, do not however collect information on household income, which prevents us from doing a similar analysis to identify such a threshold. We can, however, make use of the validators to graphically show where a suitable threshold might lie. In this case, I use the validator which asked about how well households are keeping up with their bills (**Figure 2**). Clearly, there is a relationship as expected between deprivations and how well the households are keeping up with their bills meaning the more difficult they find to keep up with their bills the higher the number of deprivation. Below a certain point on how households keeping with their bills (x-axis), the number of deprivation experiences (y-axis) increases rapidly, where this point is to set the poverty line (if income was on the x-axis). However, it is to be noted that how well the households keeping with their bills is a categorical variable and not continuous but in this instance, the best point happens at deprivation score of 5. If we take this as the threshold, then we find around 29% of the children in Tonga are living in poverty (i.e. as they experience 5+ deprivations).

Figure 2: How well household keeping up with bills



Multiple deprivation

The Consensual Approach adopts a holistic view towards child well-being, focusing on the access to various items and activities which are crucial for their survival and development. It recognizes that a child's experience of deprivation is multi-faceted and interrelated, and that such multiple, overlapping deprivations are more likely to occur, and with greater adverse effects, in more socio-economically disadvantaged groups (Donald and Mottershaw, 2009). Table 6 shows a profile of children's multiple deprivation within different social groups in Tonga. Focussing on those who experience 5 or more deprivations (final column), overall, 29% of the children in Tonga are being deprived, (36% were not experiencing any deprivations, and 45% experience three or more deprivations. Those whose standard of living was rated as *'well below average'* face a significantly higher risk of deprivation, with 73%, while this proportion decreases to none in the *'well above average'* group. Similarly high rates of deprivation can be seen when considering both the wealth index and how well the households are keeping up with their bills. Rates of 5+ deprivation are nearly twice as high among children living in the rural islands compared to children in urban Tongatapu.

Table 6 - The patterns of children multiple deprivation in Tonga across population groups

Variables	% No deprivation	% 1-2 deprivations	% 3-4 deprivations	% 5+ deprivation
Total	36	19	16	29
standard of living				
Well below average	0	0	27	73
Below average	4	8	17	71
Average	36	22	18	24
Above average	70	16	7	8
Well above average	84	11	5	0
Wealth index quintile				
Poorest	5	12	16	67
Poorer	17	22	27	34
Middle	37	25	18	20
Richer	56	21	12	12
Richest	78	14	6	2
Keeping up with bills				
Have fallen behind with many of them	0	0	21	79
Have fallen behind with some of them	5	8	23	63
Is a constant struggle	28	14	19	40
Is a struggle from time to time	23	22	20	36
Without any difficulties	61	21	10	8
Region				
Urban	46	19	15	20
Rural Tongatapu	37	19	16	28
Rural islands	28	17	18	38

Discussion, possible policy recommendation and conclusion

This paper has provided results from the first study of poverty/deprivation that specifically relates to children in the Kingdom. Using the Consensual Approach has been shown to provide a more meaningful and contextual understanding of the life experiences of poor children in Tonga, taking into account people's conceptions about what constitute basic needs for children in Tonga today. It assessed poverty in terms of its outcome – deprivation -and goes beyond narrow conventional definitions which have been traditionally imposed using income indicators. Child poverty is widely understood as deprivation of the material,

spiritual and emotional resources needed for children survival, development and thrive (Delamonica and Minujin, 2007, Roche, 2009, De Neubourg et al., 2009). This has been reflected in the results presented.

The resulting analyses have demonstrated that the items and activities are highly reliable and valid and that they are good measure of deprivation for children in Tonga. It was also shown that there exists a clear consensus about what constitutes basic needs for children across different social-economic groups.

The characteristics of the poor can be assessed by examining the rates of poverty and its composition across socio-demographic variables. For example where do deprived children live? Table 7 shows that children in the rural islands experienced a much higher rate of food deprivation compared to those in the main island of Tongatapu (about 3 times more than those in the Urban, and double those in the Rural Tongatapu). In particular, in every 5 children in the rural islands, there is one child whose parents or care giver cannot afford to give them three meal a day or a daily good meal (including meat, fish or vegetarian equivalent).

Table 7 – Profile of deprivation domain by location.

	% Overall	% Urban	% Rural Tongatapu	% Rural islands
Food	13	7	10	20
Household goods	14	12	11	19
Clothing	20	13	17	28
Material	29	21	24	37
Social	32	25	29	39
Household	59	46	56	64

Nutritious food and regular time interval for children’s meals are important components of their development in order for them to become healthy and productive adults. These children need to be targeted for early development support initiatives, and such investments in young children are, in my view, an essential part for the development of the national economy. A possible intervention could be food vouchers as are used in Fiji. Free meals for children using traditional working mechanism of *‘kautaha’* – working together as being done in local communities - can also be an option to formalize. This is in line with the fact that primary schools are mostly funded by Parents and Teachers Associations (PTAs),

where other traditional methods such as sharing can be very much practiced in order to effectively operate a free meal service for the children at school.

In conclusion, this paper provides the first analysis and report on child poverty in Tonga. Children not only experience poverty different from adults especially with regards to development needs (Donald and Mottershaw, 2009) but even if poverty exists in households its impact on children is quite different compared to adults. Children's needs are different from their parents (De Neubourg et al., 2013) and the Consensual Approach can measure poverty/deprivation specific to children separately from adult.

The approach has been shown to fit in well to a country that had recently (2010) changed to a more democratic system where people are allowed to raise or say things about the kind of society they want to have. Its transitional stage allows the methodology which has a robust nature that changes as the societal characteristics change. The highly reliable and valid results not only shed new light on the most essential elements of child development but also allows policy makers to develop anti-policy programmes to address the needs of these dependent children today.

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