

Improving the Measurement of Poverty in the Pacific
The Case for a HIES Poverty Module
Standardized Household Income and Expenditure Survey
Planning for the PICTs

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Viliami Konifelenisi Fifita

Townsend Centre for International Poverty Research

School for Policy Studies

University of Bristol, UK

www.bristol.ac.uk/poverty



University of
BRISTOL



- ***Poverty and hardship are real issues in the lives of many people in the pacific islands*** – ADB Report 2004 - *Hardship and Poverty in the Pacific*, www.adb.org/publications/hardship-and-poverty-pacific



- As producers of information (managers of the HIES) we need to produce high-quality, policy-relevant, accurate and timely information on the issue of poverty in the region. Are we currently doing this with the HIES?

Outline

- What is proposed – a HIES poverty module
- How it works
- Why is this important for PICTs?
- What can policy makers, national statistical offices, researchers do with it?

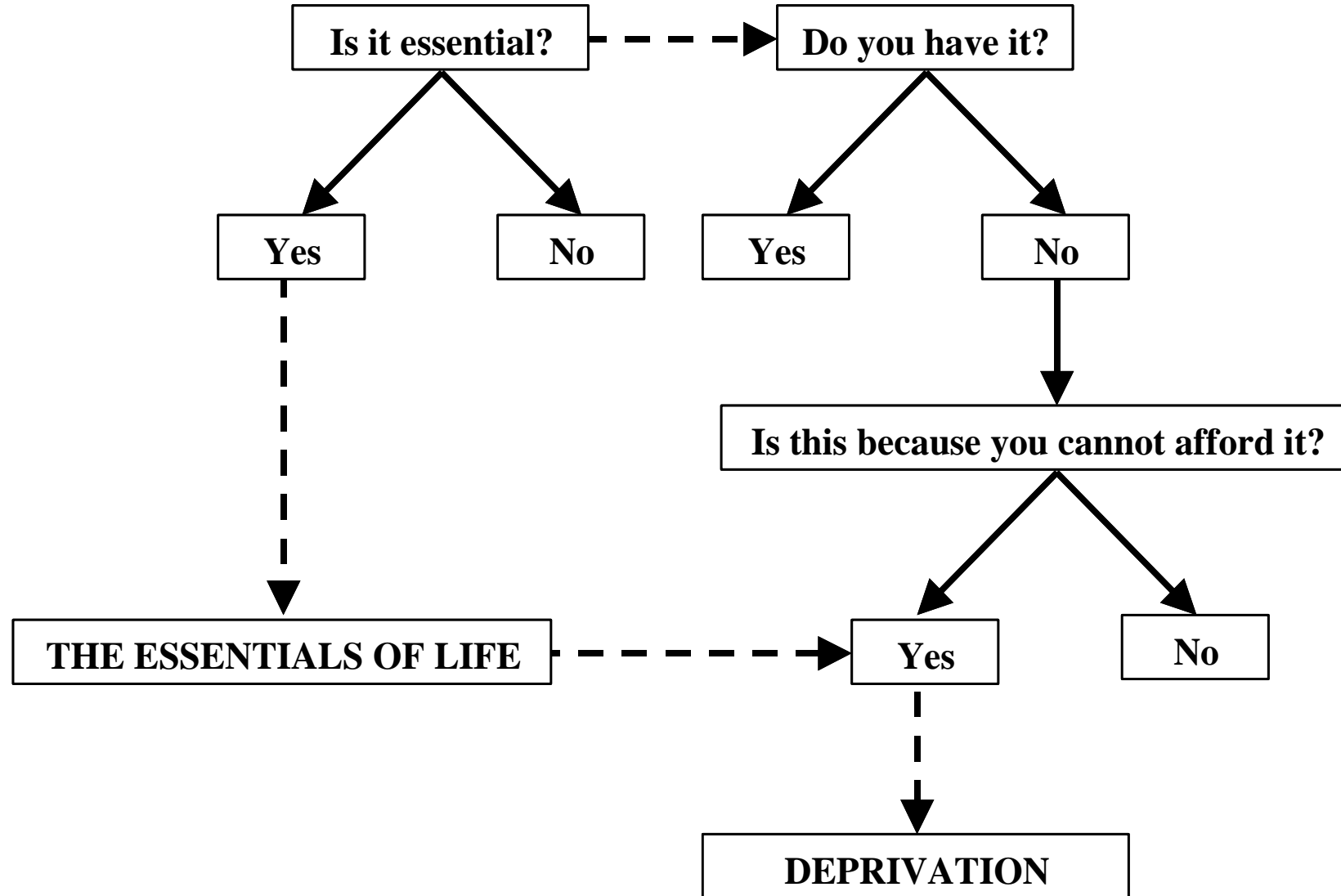
What is proposed? A Poverty Module for HIES

- The module assesses what people think are the “necessities of life”, which everyone should have access to and not be deprived of because of a lack of resources (e.g. three meals a day for children, proper clothing, shelter, etc).
- Information produces a highly reliable deprivation index to reflect the outcomes of poverty, with scientifically validated indicators of poverty.
- Module already run successfully in Tonga 2012.
- Similar modules and studies run in high, middle and low income countries including the UK, European Union, Australia, Japan, Mexico, South Africa, Benin.

How it works

- Respondents asked if they consider items or activities to be ‘essential’ for everyone (in Tonga) today? *This is the definition part of the approach.*
- Respondents then asked if they have the item/do the activity.
 - If YES then move to next question.
 - If NO, they are asked if it is because they cannot afford it OR because they do not want it. *This is the measurement part of the approach.*

Identifying the Essentials of Life and Deprivation



Household items

Household				
		Is it essential for everyone in Tonga today?	Do you have it?If No	Is it because you cannot (CA) at OR Is it because you don't want
HQ1	Enough money to replace any worn out furniture	Yes1 No2	Yes 1 No2	CA 1 DW2
HQ2	Enough money to repair broken electrical goods such as refrigerator or washing machine	Yes1 No2	Yes 1 No2	CA 1 DW2
HQ3	Regular savings for emergencies	Yes1 No2	Yes 1 No2	CA 1 DW2
HQ4	All medicine prescribed by your doctor, when you are sick	Yes1 No2	Yes 1 No2	CA 1 DW2
HQ5	Having your own means of transportation (car, boat, motorcycle etc)	Yes1 No2	Yes 1 No2	CA 1 DW2
Household				
Q24	Which one of the following statements best describes how well your household has been keeping up with bills and credit commitments in the last 12 months?	Keeping up with all bills - without any difficulties.....1 Keeping up with all bills - but it is a struggle from time to time.....2 Keeping up with all bills - but it is a constant struggle.....3 Keeping up with all bills - have fallen behind with some of them.....4 Keeping up with all bills - have fallen behind with many of them.....5		
Q25	Generally, how would you rate your standard of living?	Well above average.....1 Above average2 Average3 Below average4 Well below average5		

Adult items

Adult (age 16 and over)				
AQ6	Two pairs of properly fitting shoes, including a pair of all-weather shoes	Yes1 No2	Yes 1 No2	CA 1 DW2
AQ7	Two meals a day	Yes1 No2	Yes 1 No2	CA 1 DW2
AQ8	A small amount of money to spend each week on yourself	Yes1 No2	Yes 1 No2	CA 1 DW2
AQ9	Clothes to wear for social or family occasions such as parties or special church occasions	Yes1 No2	Yes 1 No2	CA 1 DW2
AQ10	Replace worn-out clothes by some new (not second-hand) ones	Yes1 No2	Yes 1 No2	CA 1 DW2
AQ11	To get together with friends/family for a drink/meal at least monthly	Yes1 No2	Yes 1 No2	CA 1 DW2
AQ12	Presents for friends or family once a year	Yes1 No2	Yes 1 No2	CA 1 DW2
AQ13	Enough money to be able to visit friends and family in hospital or other institutions (including those who come from overseas and outer islands)	Yes1 No2	Yes1 No2	CA 1 DW2

Children's items

Children (age 1 - 15yrs)				
CQ14	New properly fitting, shoes	Yes1 No2	Yes 1 No2	CA 1 DW2
CQ15	Three meals a day	Yes1 No2	Yes 1 No2	CA 1 DW2
CQ16	Some new, not second-hand clothes	Yes1 No2	Yes 1 No2	CA 1 DW2
CQ17	Celebrations on special occasions such as birthdays, Christmas or religious festival	Yes1 No2	Yes 1 No2	CA 1 DW2
CQ18	One meal with meat, chicken, fish or vegetarian equivalent daily	Yes1 No2	Yes1 No2	CA 1 DW2
CQ19	All school uniform and equipment required (e.g. Books, pens, etc)	Yes1 No2	Yes1 No2	CA 1 DW2
CQ20	Enough beds and bedding for every child in the household.	Yes1 No2	Yes1 No2	CA 1 DW2
CQ21	To participate in school trips and school events that costs money	Yes1 No2	Yes1 No2	CA 1 DW2
CQ22	Bicycle	Yes1 No2	Yes1 No2	CA 1 DW2
CQ23	A suitable place to study or do homework	Yes1 No2	Yes1 No2	CA 1 DW2

These questions have shown to be highly valid and reliable measures of deprivation in Tonga.

- **Face validity** : Face validity is simply whether the test (at face value) measures what it claims to i.e. do our indicators reflect poverty/deprivation? We use essential and suitability analysis to show this.
- Determining what items/activities are customary: a simple majority (i.e. where 50%+ of respondents identify an items/activity as essential) to select final items in the index facilitates a democratic element of the approach – i.e. the population decides not ‘experts’.
- Consensus on what are necessities of life is apparent.

Percentage of people defining item/activity as 'essential'.

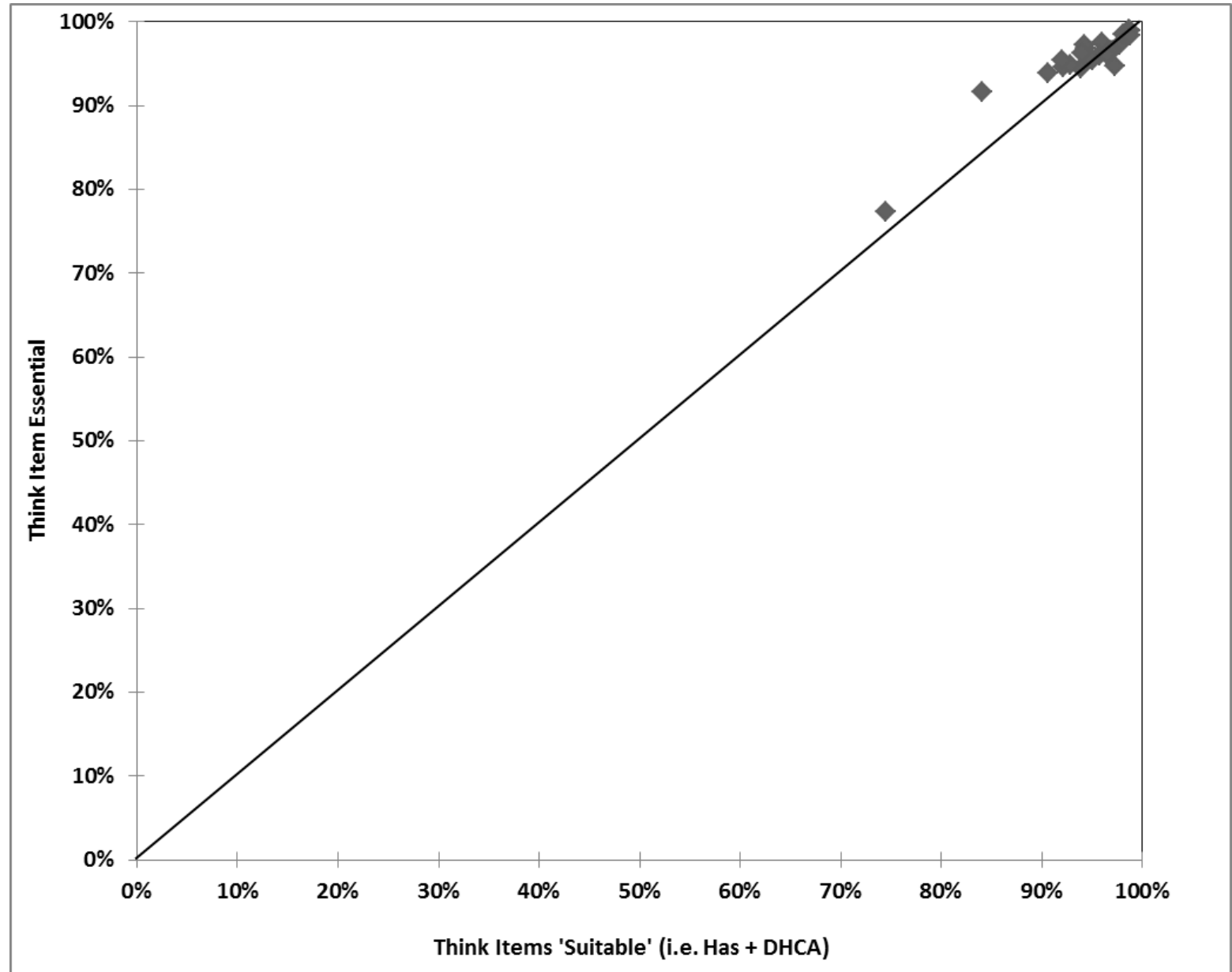
Household items	Essential
All medicine prescribed by your doctor when you are sick	98%
Regular savings for emergencies	97%
Having your own means of transportation (eg. Car, boat, etc)	95%
Enough money to replace any worn out furniture	95%
Enough money to repair any broken goods (eg. Refrigerator..)	94%
Adult items	Essential
Two meals a day	99%
Clothes to wear for social or family occasions.	97%
A small amount of money to spend each week on yourself	97%
Enough money to be able to visit families and friends	97%
Two pairs of properly fitting shoes	96%
Presents for friends or family once a wear	95%
Replace worn-out clothes by some new (not second-hand) ones	94%
To get together with friends and family for a dink/meal monthly	92%
Children's items	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%

Demonstrating Consensus

People generally agree about what it means to have an acceptable standard of living. Very little variation across different groups in Tonga, be it by age, gender, geographical location, wealth index.

Household items	Male	Female	Young (16-24)	Old (60+)	Urban	Rural Tongatapu	Rural islands	Poorest	Richest
All medicine prescribed by your doctor when you are sick	98%	98%	97%	98%	97%	99%	96%	96%	99%
Regular savings for emergencies	97%	97%	97%	98%	97%	98%	96%	95%	100%
Having your own means of transportation (eg. Car, boat, etc)	95%	95%	94%	95%	95%	95%	94%	90%	100%
Enough money to replace any worn out furniture	95%	95%	94%	95%	95%	95%	94%	93%	97%
Enough money to repair any broken goods (eg. Refrigerator..)	94%	95%	94%	95%	96%	94%	93%	90%	99%
Adult items									
Two meals a day	99%	99%	99%	99%	98%	100%	99%	99%	99%
Clothes to wear for social or family occasions.	97%	97%	97%	97%	96%	98%	96%	96%	97%
A small amount of money to spend each week on yourself	97%	97%	97%	97%	98%	97%	95%	95%	98%
Enough money to be able to visit families and friends	97%	97%	96%	97%	97%	97%	95%	93%	99%
Two pairs of properly fitting shoes	96%	96%	97%	96%	96%	97%	96%	94%	97%
Presents for friends or family once a wear	95%	95%	95%	95%	94%	96%	93%	91%	98%
Replace worn-out clothes by some new (not second-hand) ones	94%	94%	95%	94%	94%	95%	91%	90%	96%
To get together with friends and family for a dink/meal monthly	92%	91%	93%	91%	94%	92%	88%	85%	96%
Children items									
One meal with meat, fish or vegetarian equivalent daily	99%	99%	100%	99%	99%	100%	98%	98%	99%
Three meals a day	99%	99%	100%	99%	98%	99%	99%	98%	99%
Enough beds and bedding for every child in the household	98%	98%	100%	98%	99%	99%	98%	97%	100%
New properly fitting shoes	96%	97%	100%	97%	95%	97%	97%	96%	98%
All school uniform and equipment required	97%	98%	92%	97%	98%	98%	96%	96%	99%
Celebration on special occasions	96%	96%	96%	96%	98%	96%	96%	93%	100%
Participate in school trips and school events that costs money	95%	96%	96%	95%	96%	96%	95%	93%	98%
A suitable place to study or do homework	96%	97%	88%	96%	97%	97%	95%	94%	99%
Some new not second-hand clothes	96%	94%	96%	95%	93%	96%	95%	94%	97%
Bicycle	79%	73%	76%	77%	80%	75%	79%	69%	85%

Demonstrating suitability analysis



Assessing validity – Relative Risk Ratio

- *Criterion validity* refers to how well one measure estimates or predicts the values of another related measure. We use relative risk ratios with a set of independent validator variables known to be correlated with deprivation.
- **Validators used:**
 - Rate of the standard of living;
 - Keeping up with bills; and
 - Wealth index (controlling for age and gender)
- Would expect the 'poor' are more likely to lack an item than the 'rich'.

Relative Risks for Items in the Index

	Standard of living	Keeping up with bills	Wealth index
Household items			
Regular savings for emergencies	11	4	7
All medicine prescribed by your doctor when you are sick	11	5	8
Enough money to repair any broken goods (eg. Refrigerator..)	7	3	7
Having your own means of transportation (eg. Car, boat, etc)	7	3	17
Enough money to replace any worn out furniture	6	3	7
Adult items			
Two meals a day	41	6	119
Clothes to wear for social or family occasions.	20	4	8
Enough money to be able to visit families and friends	14	4	9
Replace worn-out clothes by some new (not second-hand) ones	14	3	8
Two pairs of properly fitting shoes	14	4	17
Presents for friends or family once a year	13	3	8
A small amount of money to spend each week on yourself	11	4	10
To get together with friends and family for a drink/meal monthly	11	3	7
Children's items			
New properly fitting shoes	14	3	11
One meal with meat, fish or vegetarian equivalent daily	12	4	23
Three meals a day	12	7	
Celebration on special occasions	10	5	27
Some new not second-hand clothes	10	4	14
Enough beds and bedding for every child in the household	10	4	26
Participate in school trips and school events that costs money	9	7	28
All school uniform and equipment required	8	11	
A suitable place to study or do homework	5	5	23
Bicycle	4	3	7

Reliability

- The reliability of an index/scale can be assessed using a Classical Test Theory, by calculating Cronbach's Alpha for each item, and removing items that increase Alpha if 'Item was deleted'.
- Results show all items are highly reliable
- Reliability of the scales for 'Adult + household' items and 'Children + household' items are above the recommended minimum Alpha of 0.7

Scale Reliability: Adult + Household items

Item-Total Statistics	Cronbach's Alpha if Item Deleted
Two meals a day	0.887
Having your own means of transportation (eg. Car, boat, etc)	0.882
Clothes to wear for social or family occasions.	0.881
Two pairs of properly fitting shoes	0.881
A small amount of money to spend each week on yourself	0.876
All medicine prescribed by your doctor when you are sick	0.876
Replace worn-out clothes by some new (not second-hand) ones	0.874
Enough money to replace any worn out furniture	0.874
Regular savings for emergencies	0.874
To get together with friends and family for a dink/meal monthly	0.873
Enough money to repair any broken goods (eg. Refrigerator..)	0.873
Presents for friends or family once a wear	0.872
Enough money to be able to visit families and friends	0.872
Total alpha	0.885

Scale Reliability:

Child + Household items

Child + Household items	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)	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

Why is this important for PICTs?

Townsend's Definition of Poverty

“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 so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary living patterns, customs and activities.”

<http://poverty.ac.uk/system/files/townsend-book-pdfs/PIUK/piuk-chapter01.pdf>

Poverty can be defined as: Command over insufficient resources over time.

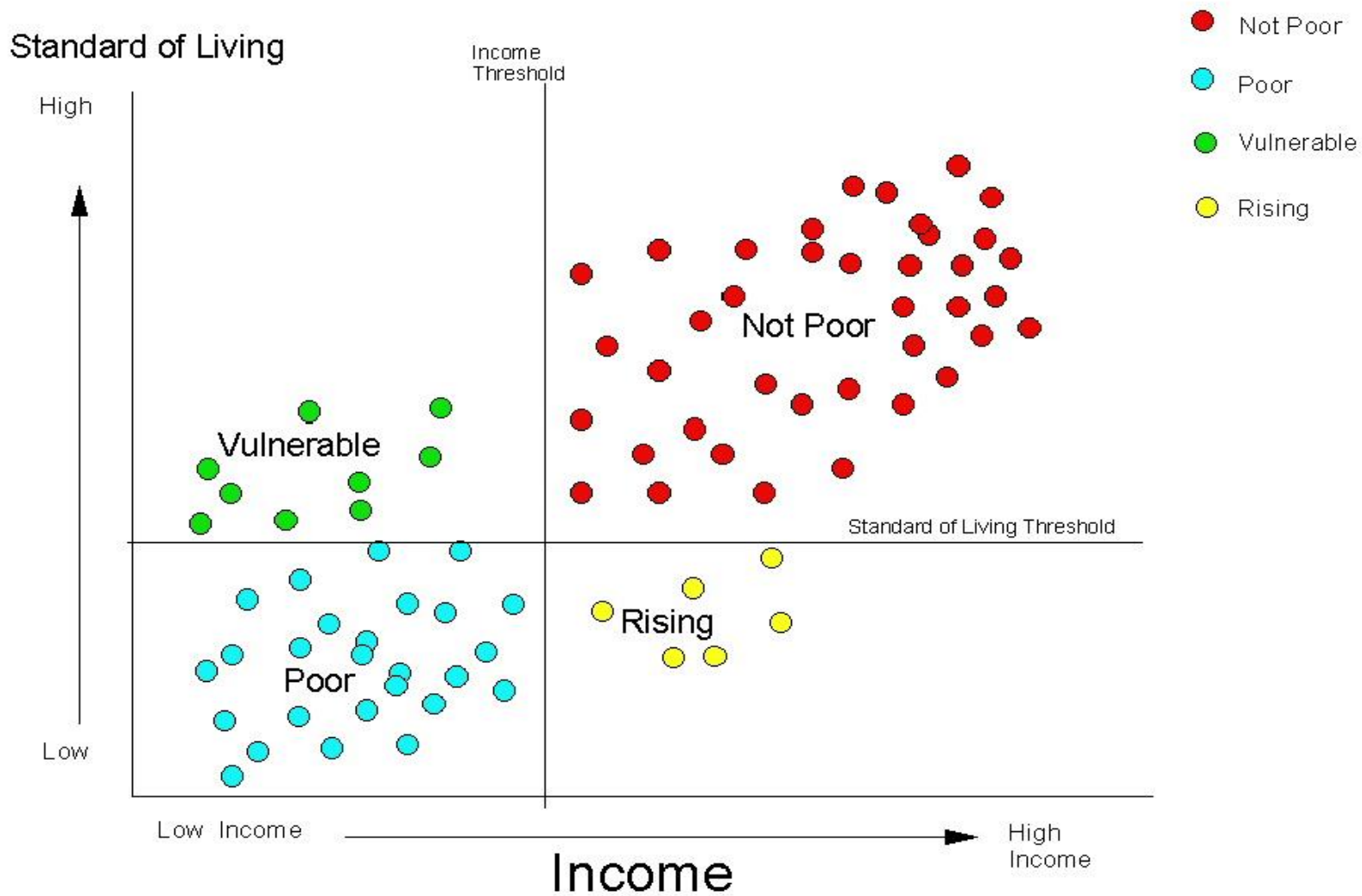
The result of poverty is *deprivation*.

Peter Townsend's concept of dynamic poverty

“poverty is a dynamic, not a static concept...Our general theory, then, should be that individuals and families whose resources over time fall seriously short of the resources commanded by the average individual or family in the community in which they live . . . are in poverty.”

Townsend (1962, p 219)

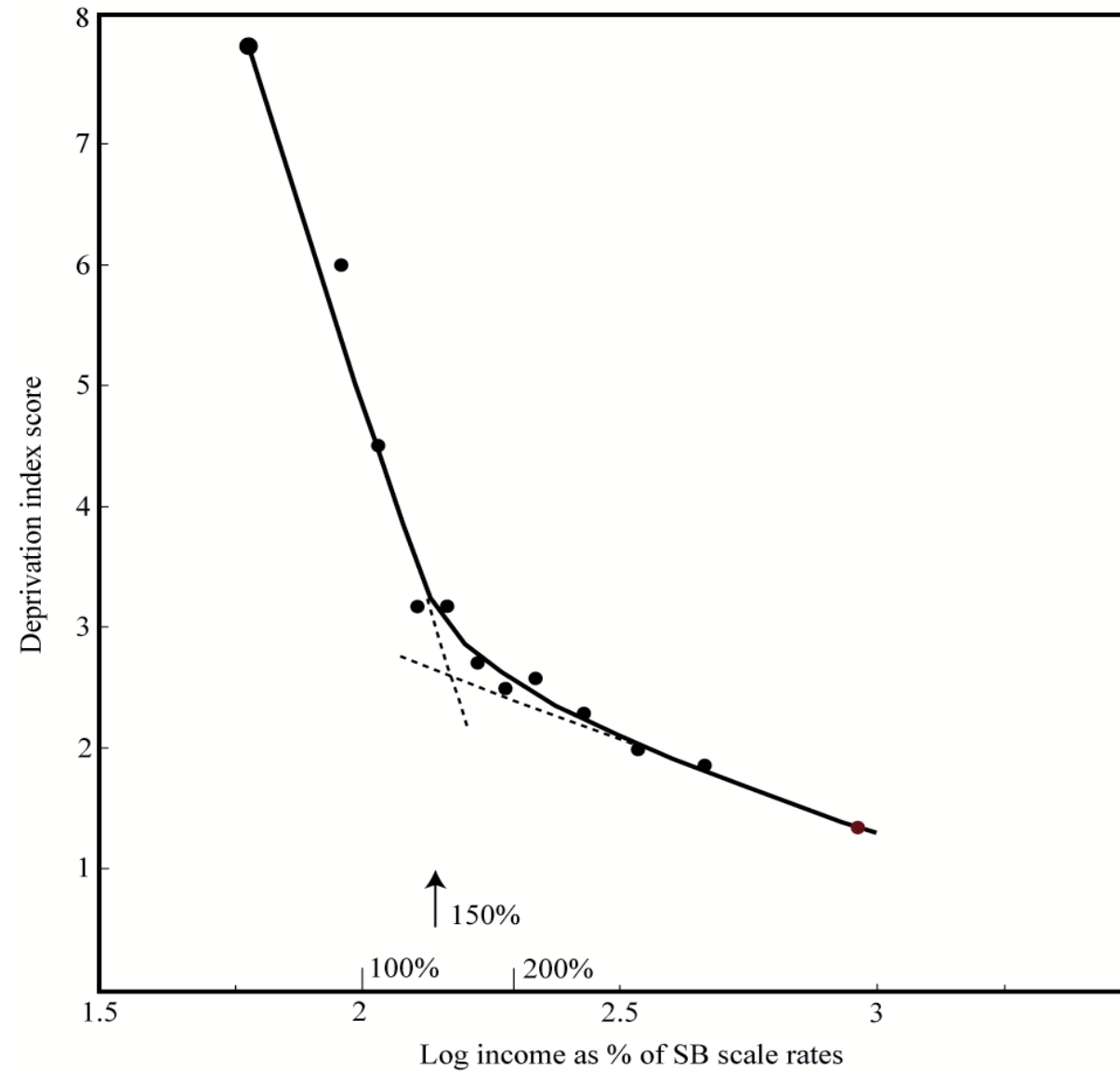
Poverty Groups



Measuring poverty – poverty line

- Finding the correct level of resources at which to separate the poor from the non-poor by using a scientific methods is an important challenge when measuring poverty.
- Townsend and Gordon have argued that to set a scientific cut off level of income/resources in a cross-sectional survey, we need to measure **both** income/resources and deprivation/low standard of living.
- Townsend developed a deprivation index and used it to suggest the necessary level of income to avoid deprivation.

Modal Deprivation by Logarithm of Income as a Percentage of Supplementary Benefit Scale Rates (Townsend, 1979)



Importance of having a HIES poverty module

- Added value of defining and measuring poverty using BOTH income and standard of living – and able to reflect important non-monetary dimensions of poverty
- HIES consistently used for poverty analysis in the Pacific but these data (HIES) were not collected with poverty or hardship in mind at the outset or analysed fully for their implications
- Income measures **alone** do not take account of personal and capital assets, remittances, income in kind, gifts and barter exchange which are common practice in the Pacific islands, so a measure of poverty appropriate for PICTs contexts is needed
- Successful application of the method in many high, middle and low income countries including the UK, Europe Union, Japan, Australia, Northern Ireland, South Africa, Benin, Bangladesh.

- Democratic element.
- Simplicity of the method
- Poverty has a moral imperative
- Comparable information

Conclusion

Real need for data on poverty in PICTs and HIES is channel to collect it

Module proposed builds on long track record of tried and tested methods

Information provided can produce adult and child specific measures of deprivation

The information proposed to collect from HIES is very important for Policy makers to tackle the real problems.

Relevant and useful resources

- Townsend Centre for International Poverty Research
 - www.bristol.ac.uk/poverty
- Poverty and Social Exclusion (PSE) in the UK 2012
 - www.poverty.ac.uk
 - Free online resources at www.poverty.ac.uk/free-resources, including PSE questionnaires, Townsend's *Poverty in the UK*, Mack and Lansley's *Poor Britain*
 - Take part in the survey: www.poverty.ac.uk/take-part
 - Explore the data: www.poverty.ac.uk/pse-research/explore-data
- PSE-Hong Kong: www.poverty.hk - multi-lingual website

Malo 'aupito

www.bristol.ac.uk

Email: ptvkf@bristol.ac.uk

Tel: 0044 117 9546755