REMITTANCES AND DEVELOPMENT IN THE PACIFIC: EFFECTS ON HUMAN DEVELOPMENT

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Based on joint research at University of Queensland, in particular Dr Eliana Jimenez.

REMITTANCES IN PACIFIC ECONOMIES

OUTLINE

- BASED ON SURVEYS IN 2005 FOR WORLD BANK
  - FIJI
  - TONGA
- FOCUS ON AMOUNTS, CHANNELS, DETERMINANTS AND IMPACTS OF REMITTANCES AT HOUSEHOLD LEVEL
- RECENTLY COMPLETED SIMILAR STUDY FOR ADB IN CENTRAL ASIA AND SOUTH CAUCASAS
  - ARMENIA
  - AZERBAIJAN
  - KYRGYZSTAN
  - TAJIKISTAN

REMITTANCES IN PACIFIC ECONOMIES

OUTLINE

- THIS PAPER EXAMINES IMAPACTS ON VARIOUS ASPECTS OF HUMAN DEVELOPMENT IN SOUTH PACIFIC:
    - SOCIAL PROTECTION (DETERMINANTS)
    - POVERTY
    - WEALTH
    - EDUCATION
    - HEALTH
- FINDINGS FROM CENTRAL ASIA/SOUTH CAUCASAS STUDY VERY SIMILAR DESPITE VERY DIFFERENT CONTEXT

Preliminary Observations

- Most migrants remit, even the poorest
- In Tonga, high proportion of households receive remittances (>90%), even those without migrants
- Fiji, despite being most developed Pacific island country, is becoming increasingly dependent on remittances

Size and Composition of Remittances

- Remittances take many forms, cash and in-kind
  - •formal bank transfers
  - •informal cash transfers eg couriers or hand carried
  - • in-kind transfers eg. clothing
  - • payments on behalf of third parties
  - • donations to organisations
  - • migrants' own assets
- Remittances sent through a variety of channels, formal and informal - one-third to one-half of total through banking system

Value of Remittances Received

(US$ 2004 per receiving household)

	Fiji	Tonga
With Migrant(s)	1600.05	3900.17
Without Migrants	689.27	1597.08
Total	1327.86	3066.91

Estimates of Total Remittances
(US$ 2004)

	Fiji	Tonga
Per Capita Remittances	**$370.88**	**$753.02**
Population	**836,002**	**98,322**
% Recipients	**42.0%**	**90.9%**
Total Remittances (US$ `000)	**$130,343**	**$67,330**
As % GDP	**6.2%**	**41.8%**
As % Exports	**8.3%**	**154.2%**

Remittance Motivations

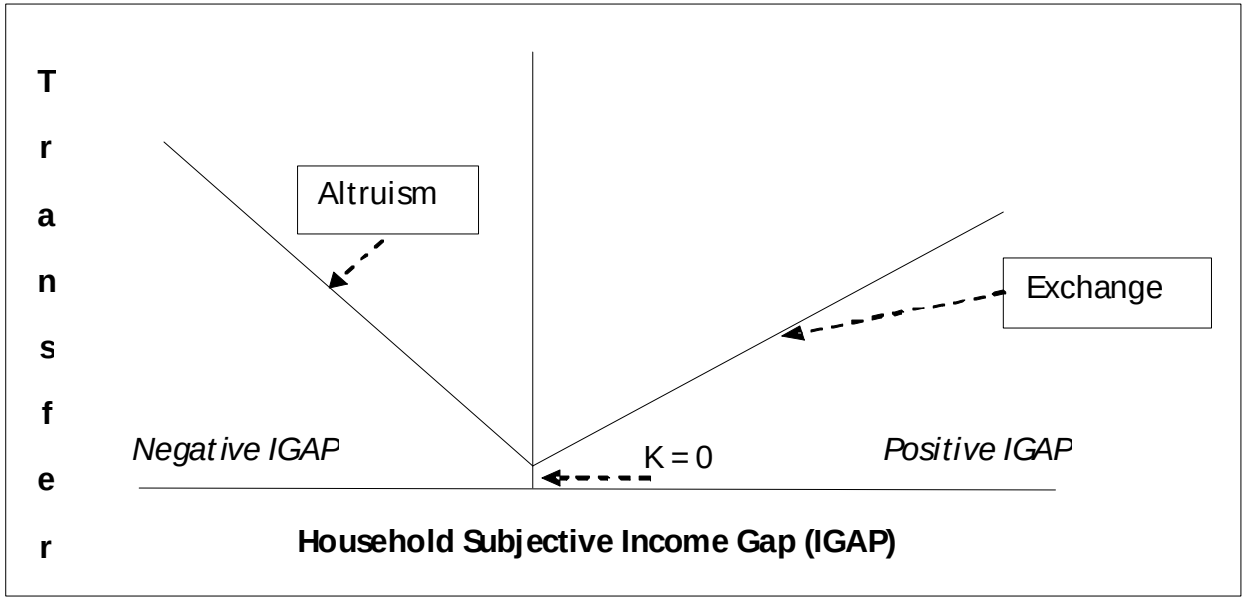
WHAT DRIVES REMITTANCES?

- Migrants make a personal decision to remit driven by
- **Altruism**:
  - Migrants value their families' utility in their own utility function
  - The **lower** the household income, the **higher** the remittances received
- **Self-interest:**
  - Migrants buy services from their families (e.g. insurance, property maintenance) or buy the right to inherit
  - The **higher** the household income, the **higher** the remittances received

Remittance Motivations

Model of mixed motivations

Figure 1 Relationship between Transfers and the Subjective Income Gap



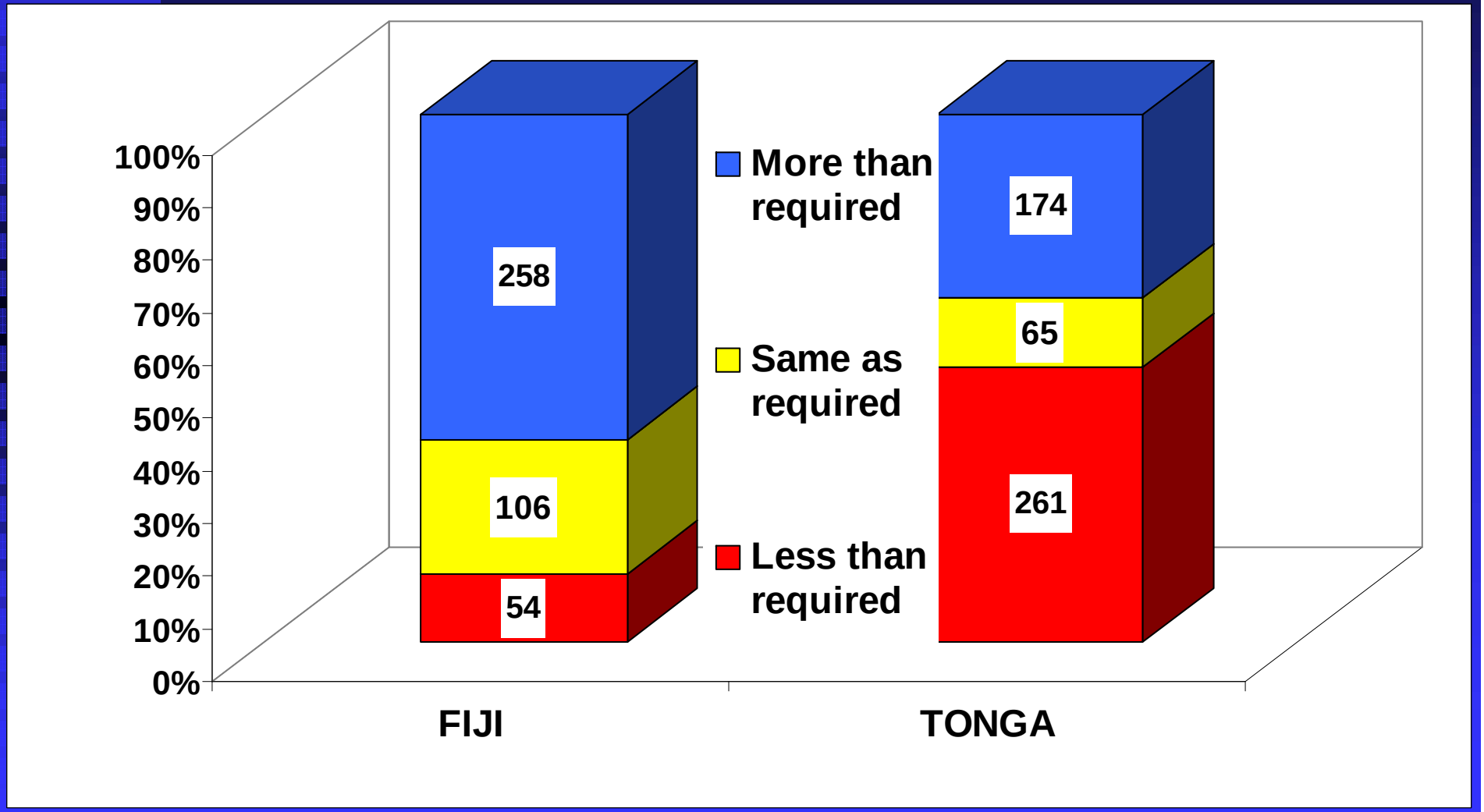
Source: Brown and Jimenez (2008b).

Subjective Deprivation

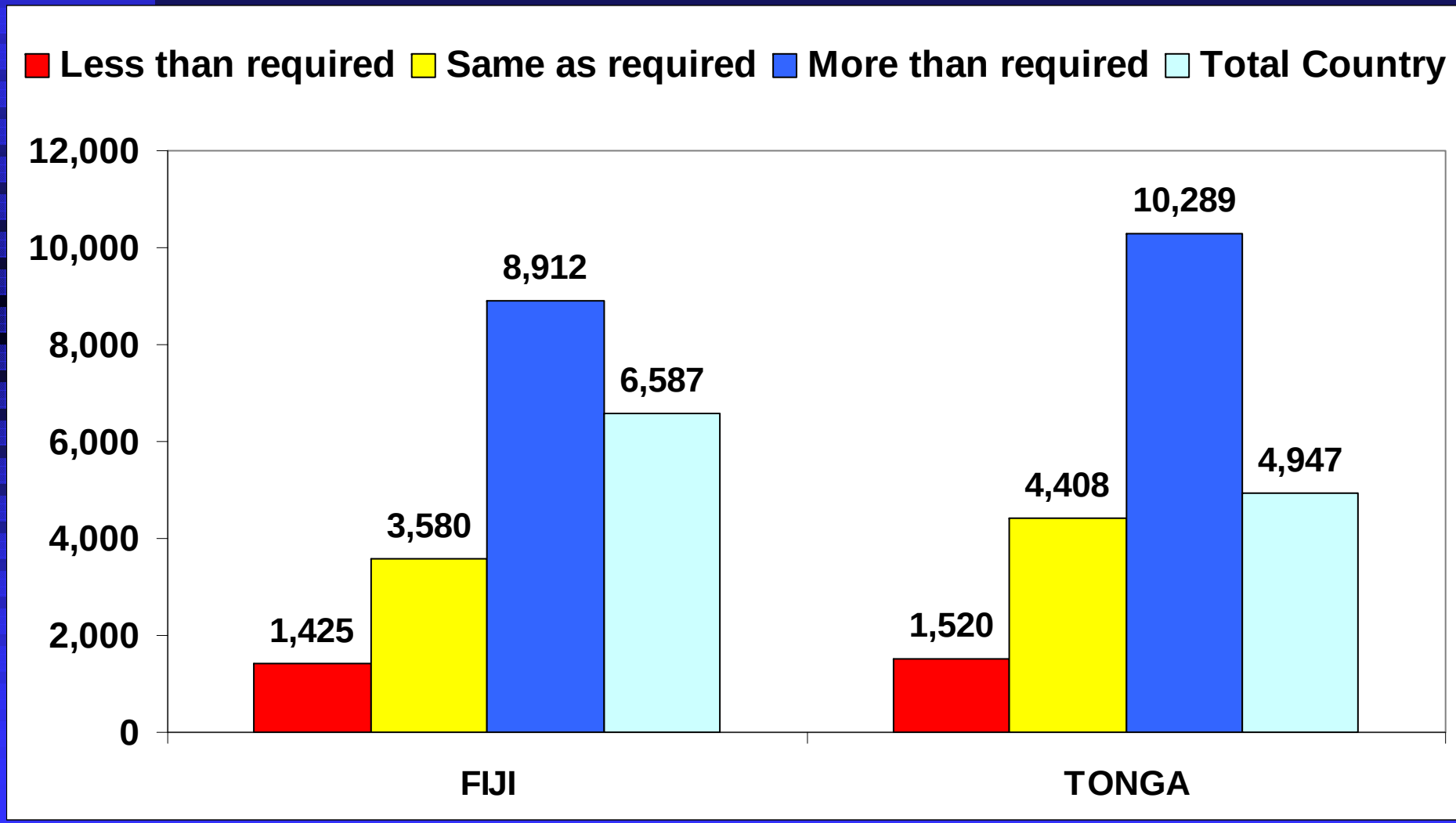
“REQUIRED INCOME TO GET BY”

- Households were asked:
  - How much money does a family like yours require just to get by?
  - Whether or not their actual income (excluding remittances and other transfers) was the same/more/less than required
- Households were classified into 3 categories (Same/More/Less than required)

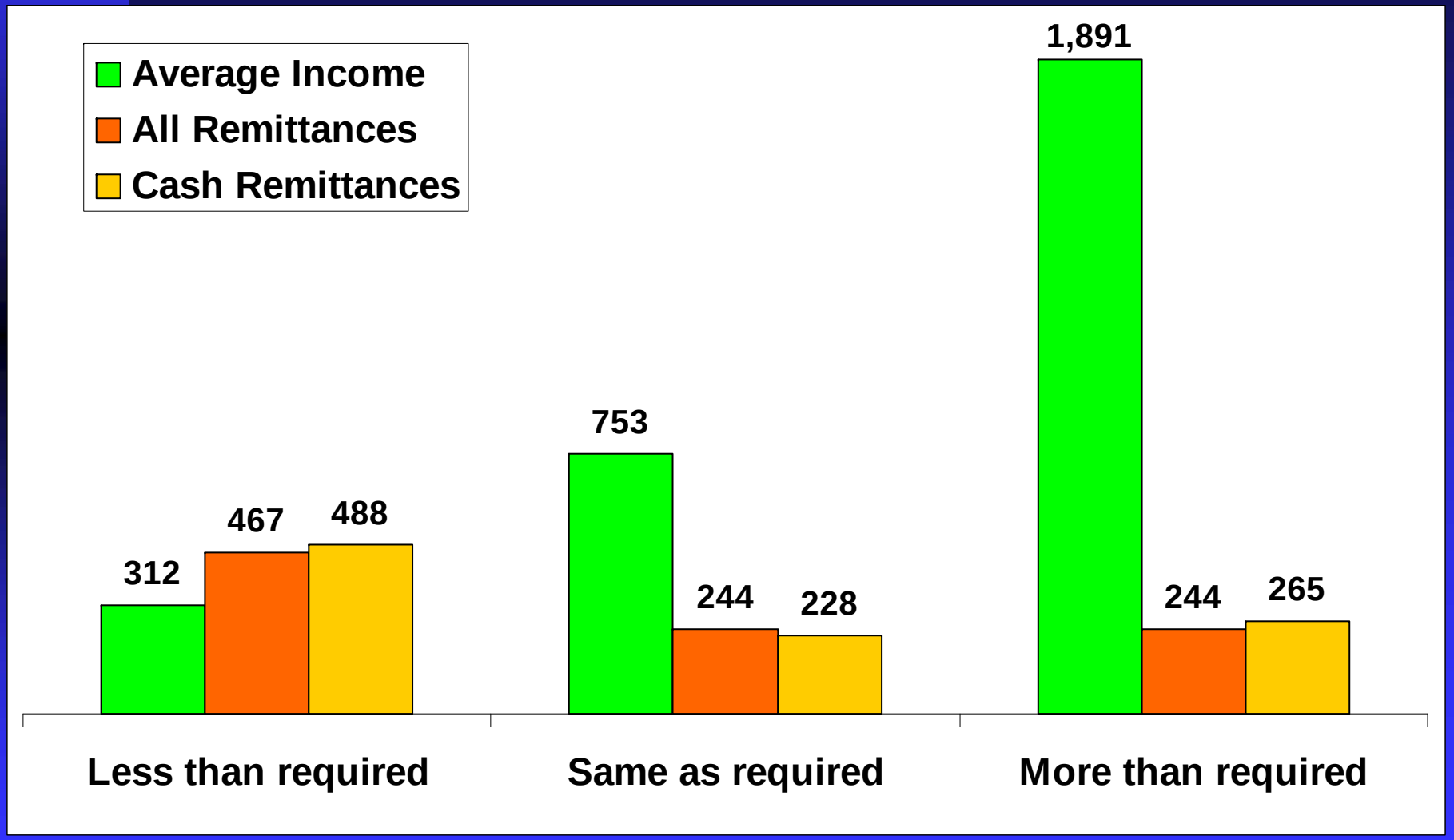
Subjective Deprivation



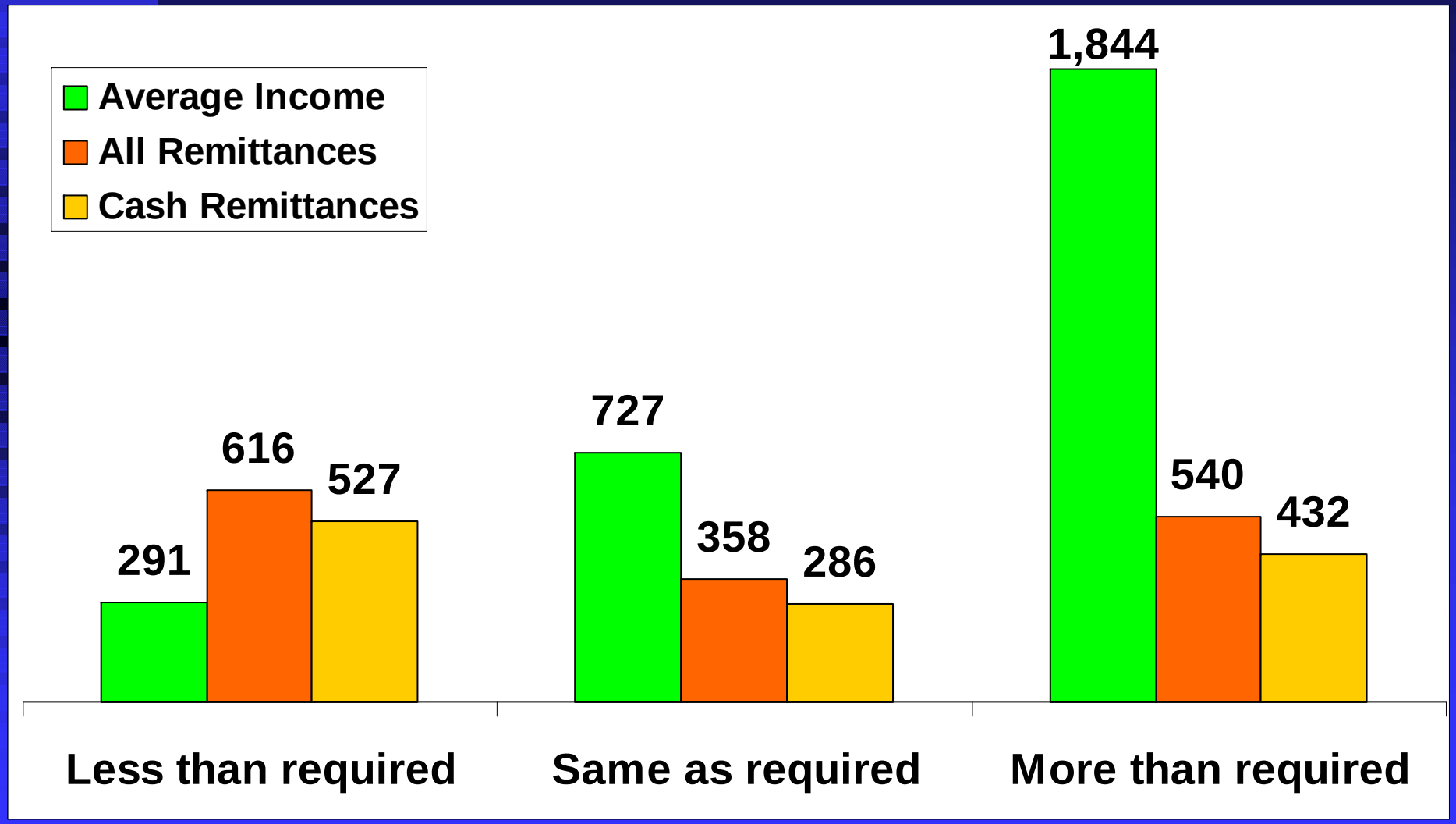
Who had less than required ? (Income US$2004)



Fiji: Income and Remittances (US$ 2004)

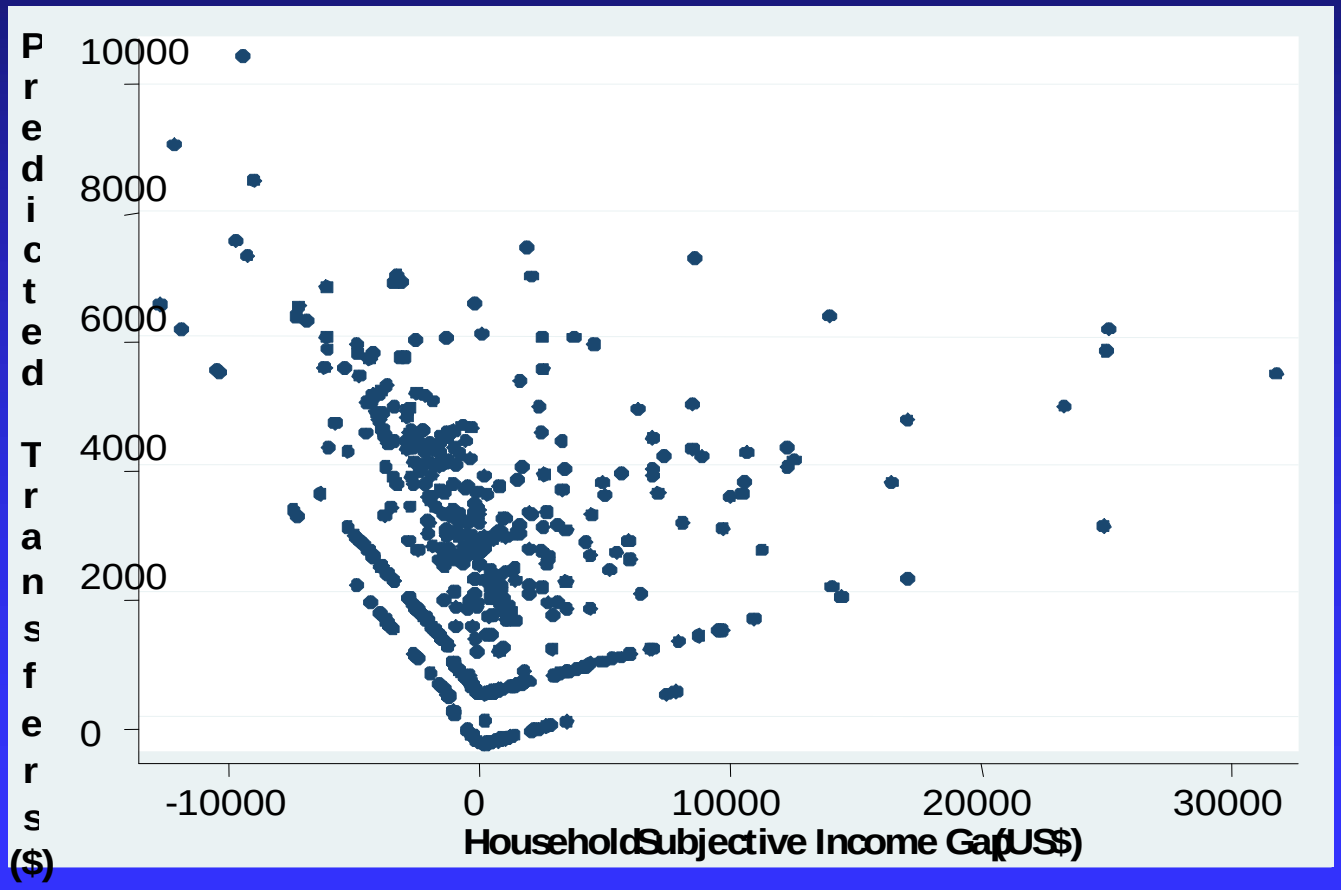


Tonga: Income and Remittances (US$ 2004)



Remittance Motivations

Figure 2 Predicted Transfers and the Subjective Income Gap : Tonga



Source: Brown and Jimenez (2008b)

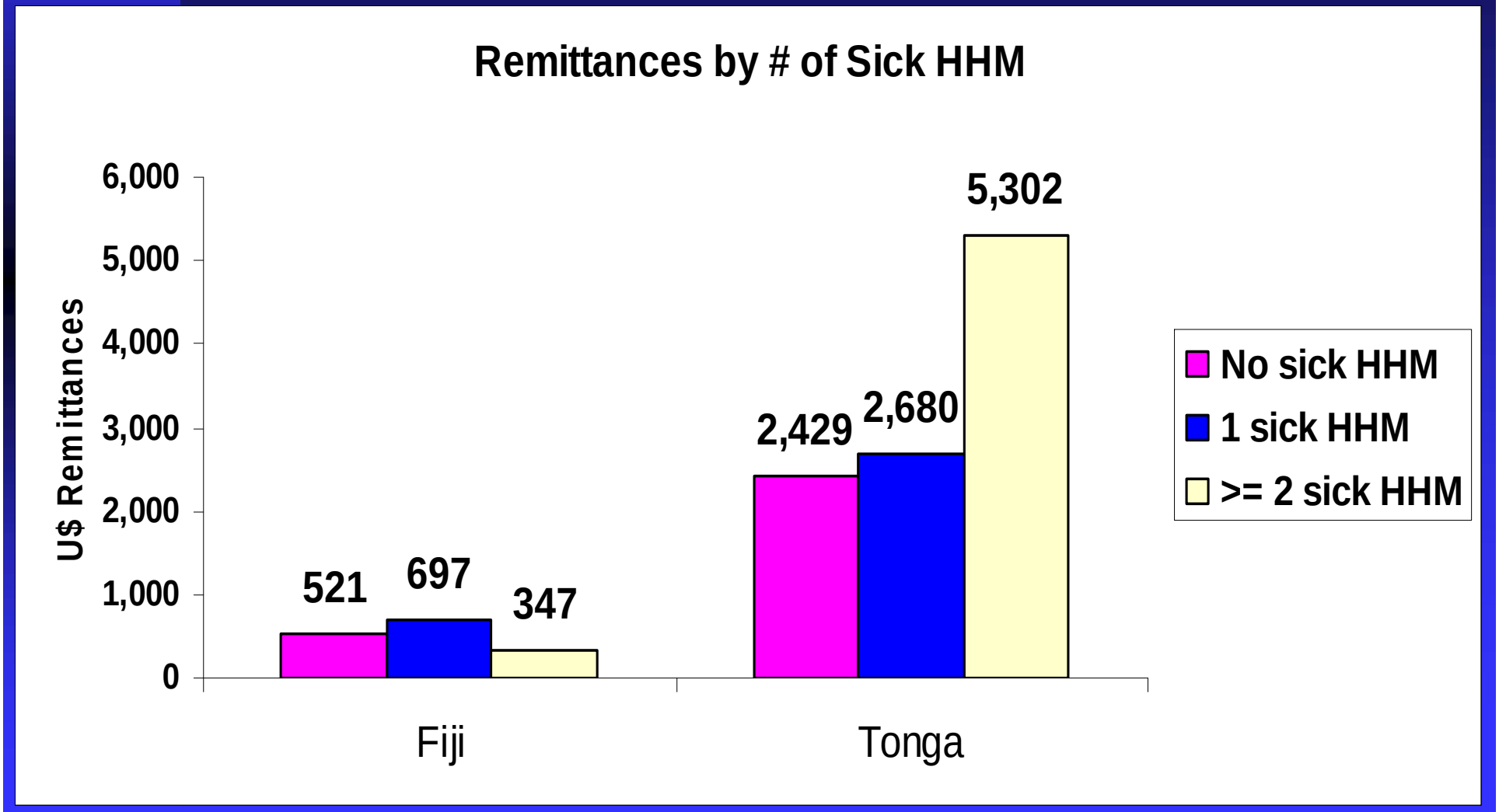
Motivations: Regression Results

- Principal Motivations to Remit
  - Altruism: $100 decrease in subjective income gap leads to $47-$30 remittances increase in Tonga and $8-$9 in Fiji
  - Exchange: $100 increase in subjective income gap leads to $11-$6 remittances increase in Tonga and $1 in Fiji

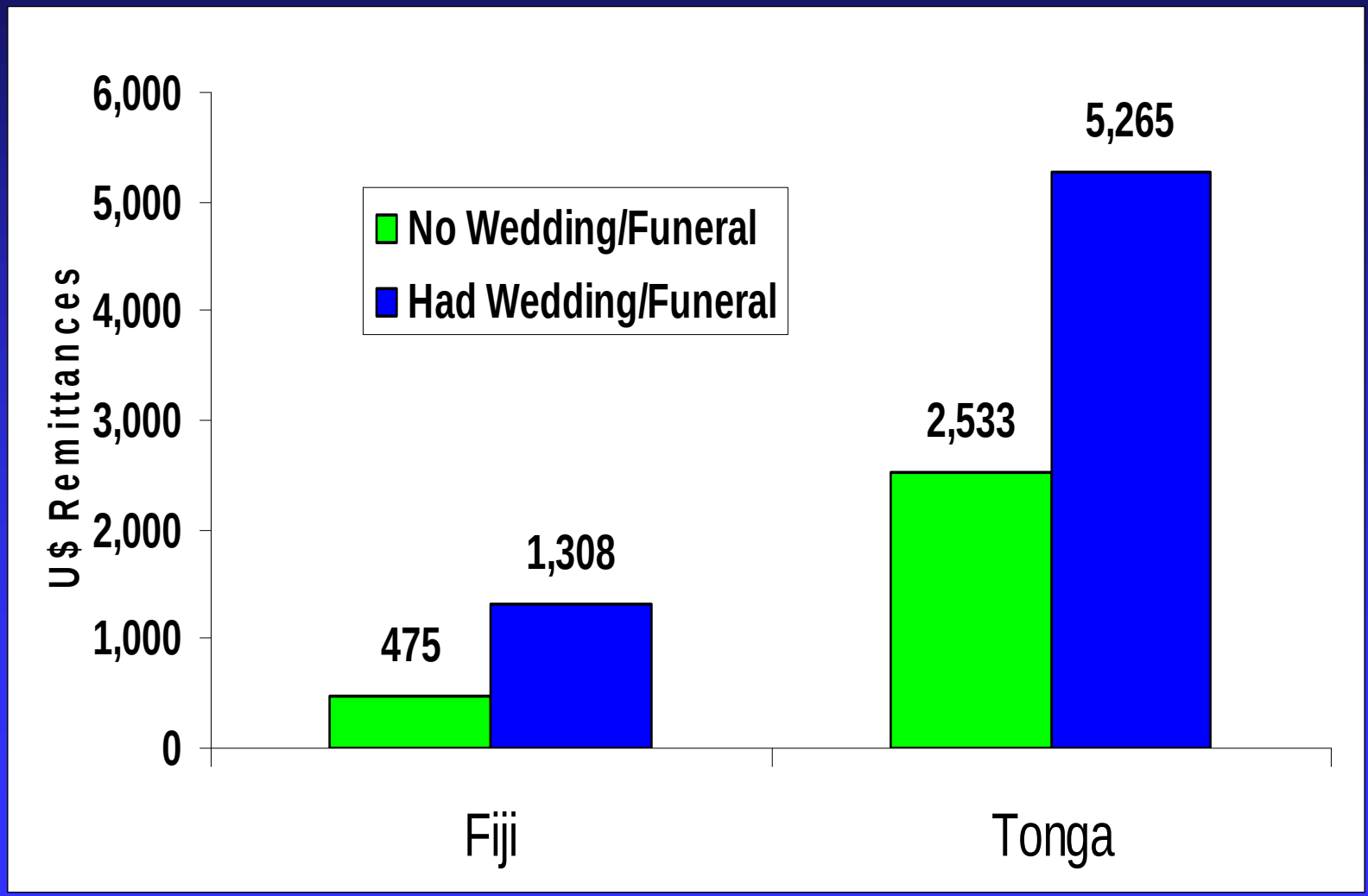
Motivations: Regression Results

- Other significant motivators:
  - Presence old person increased remittances by U$562 in Tonga, but not in Fiji
  - Major social ceremony increased remittances by $1518 in Tonga and $354 in Fiji
  - The number of HHM with medical incapacity for more than 30 days increased remittances ($300) in Tonga, but had not significant effect in Fiji

Remittances by Numbers of Sick in HH



Remittances and Major Social Ceremonies



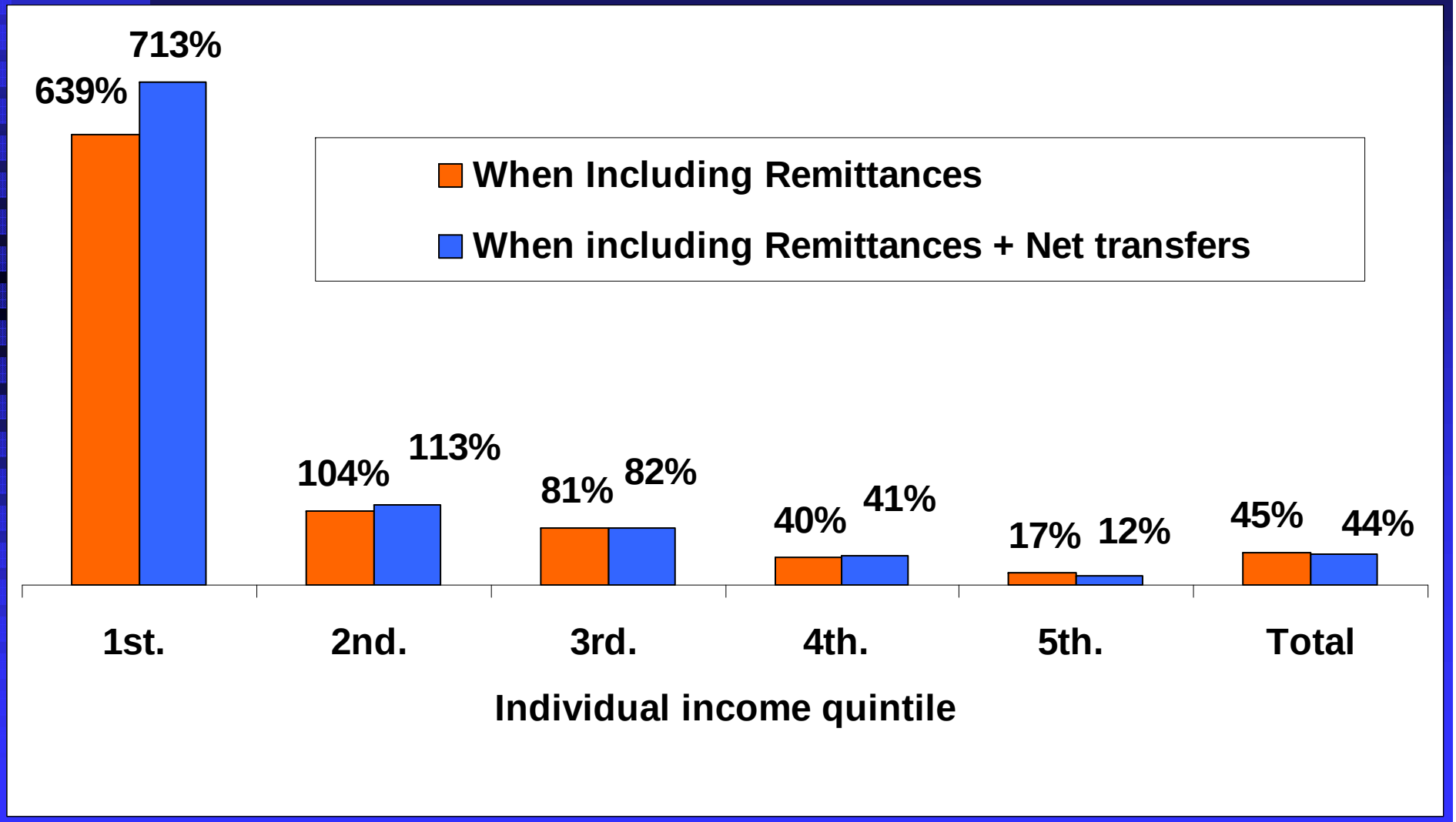
Uses and Effects of Remittances

- How are remittances used? What impacts on variables of interest eg. Income, wealth, health, education, etc.?
- Issue of ‘fungibility’: cannot simply ask ‘how’ remittances were used. Need for counterfactual income estimation for comparisons
- From an analytical point of view we need to establish that it is remittances that cause these effects
- Why? Because it could be that the same factors that ‘cause’ migration (and remittances) could be causing these effects, or, these factors could be causing migration and remittances; eg. education

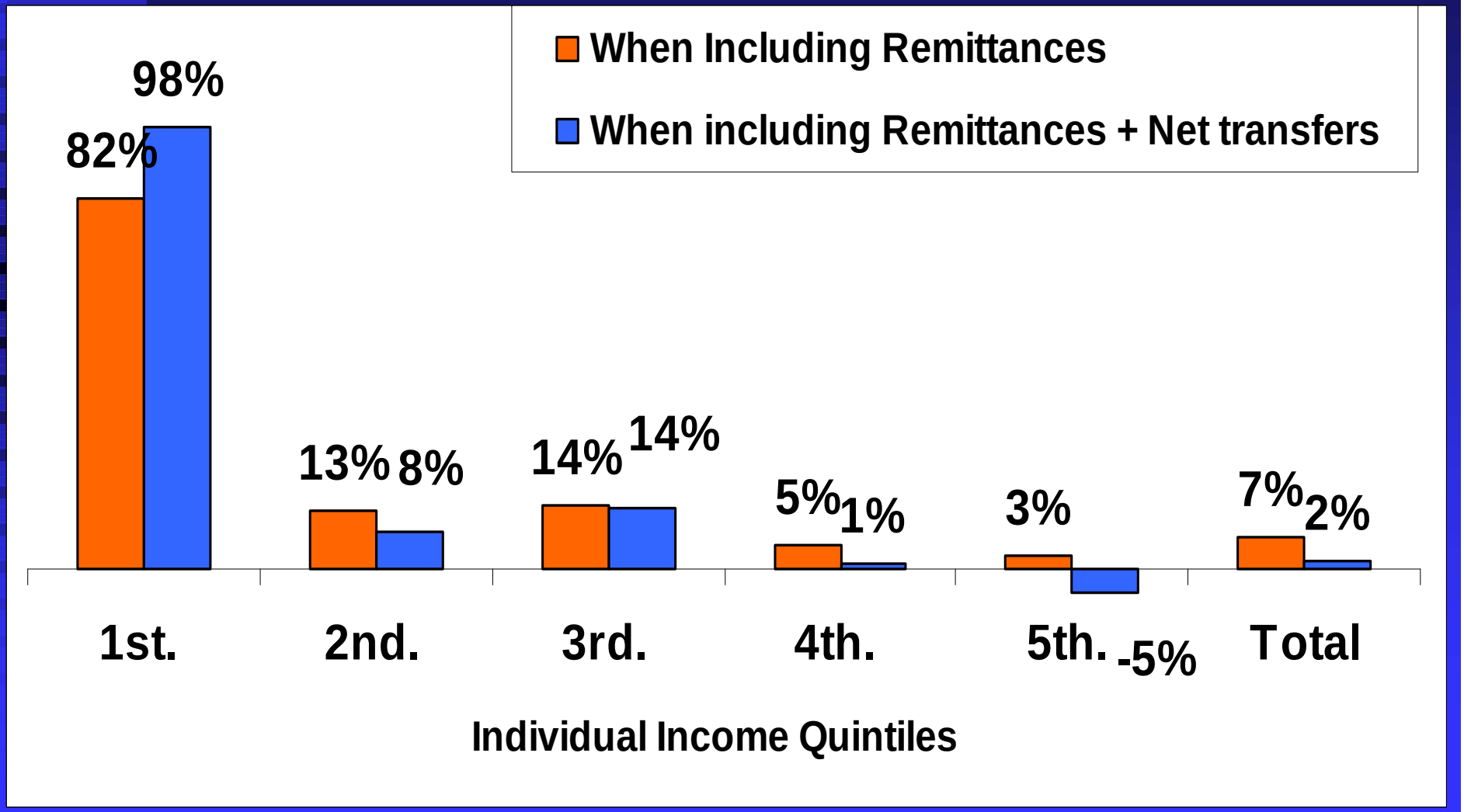
Effects on Income
Remittances Received by Income Category
(2004 US$ per receiving household)

		<$1.5K	$1.5-3K	$3-4.5K	$4.5-6K	$6-7.5K	>$7.5K	Total
N=	Fiji	70	78	64	57	41	107	417
	Tonga	168	109	66	37	26	94	500
With Migrants	Fiji	30.00	29.49	21.88	42.11	36.59	43.93	34.53
(%)	Tonga	54.76	57.80	60.61	67.57	53.85	60.64	58.2
Remittances Received	Fiji	40	37.18	28.13	43.86	46.34	56.07	42.93
(%)	Tonga	91.67	86.24	96.97	89.19	80.77	87.23	89.6
Value (Cash & In-kind)	Fiji	2125.88	1317.29	1311.39	904.92	831.13	1297.77	1327.86
	Tonga	3027.75	2337.24	3247.89	2961.15	3269.58	3824.89	3066.91
Mean Value (Cash only)	Fiji	1970.72	1147.89	1163.06	763.42	553.85	1041.37	1124.63
	Tonga	2612.23	1884.09	2511.33	2354.17	2543.95	3007.66	2494.42

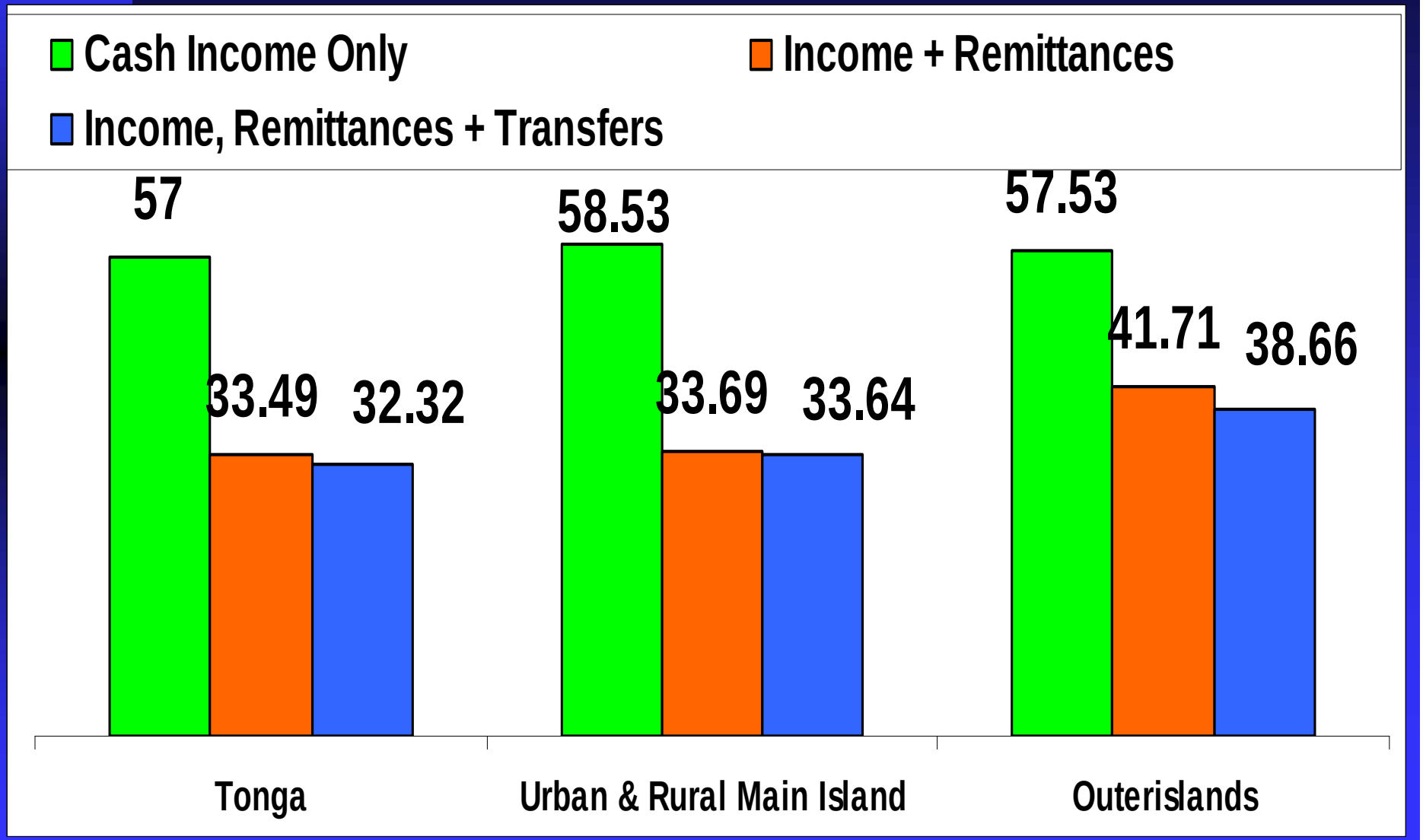
Tonga: % Change in Average Income



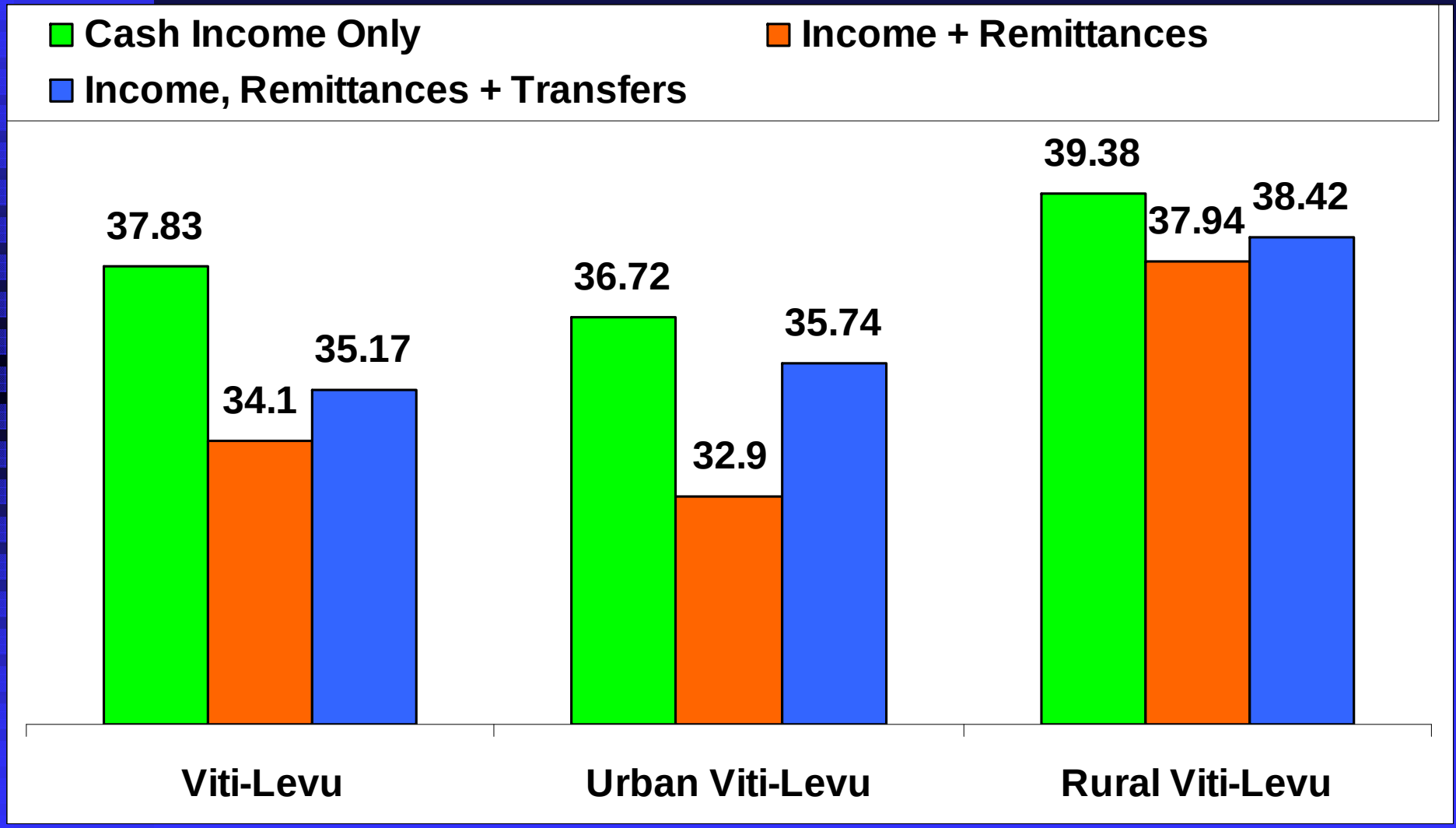
Fiji: % Change in Average Income



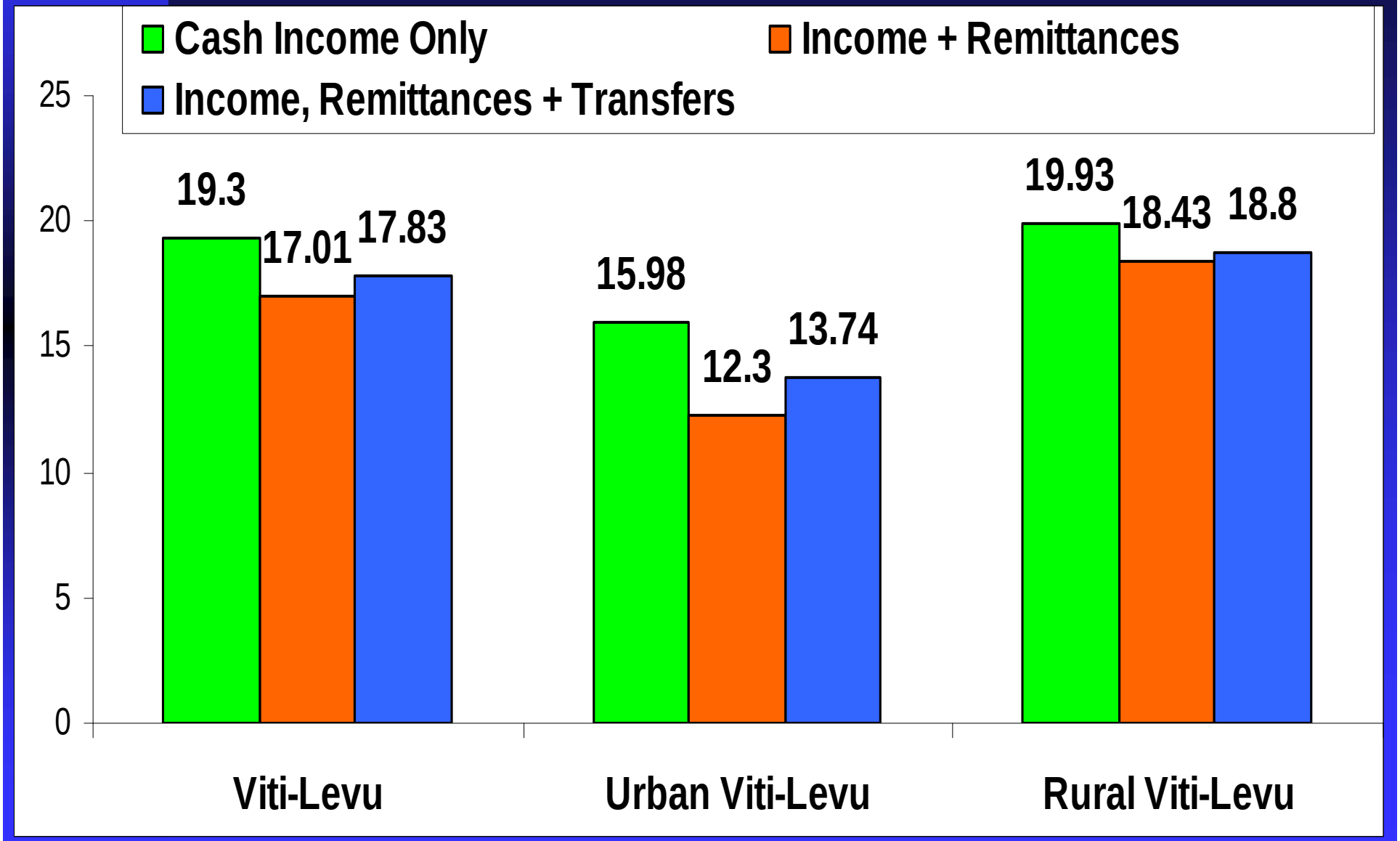
TONGA: HEADCOUNT RATIO



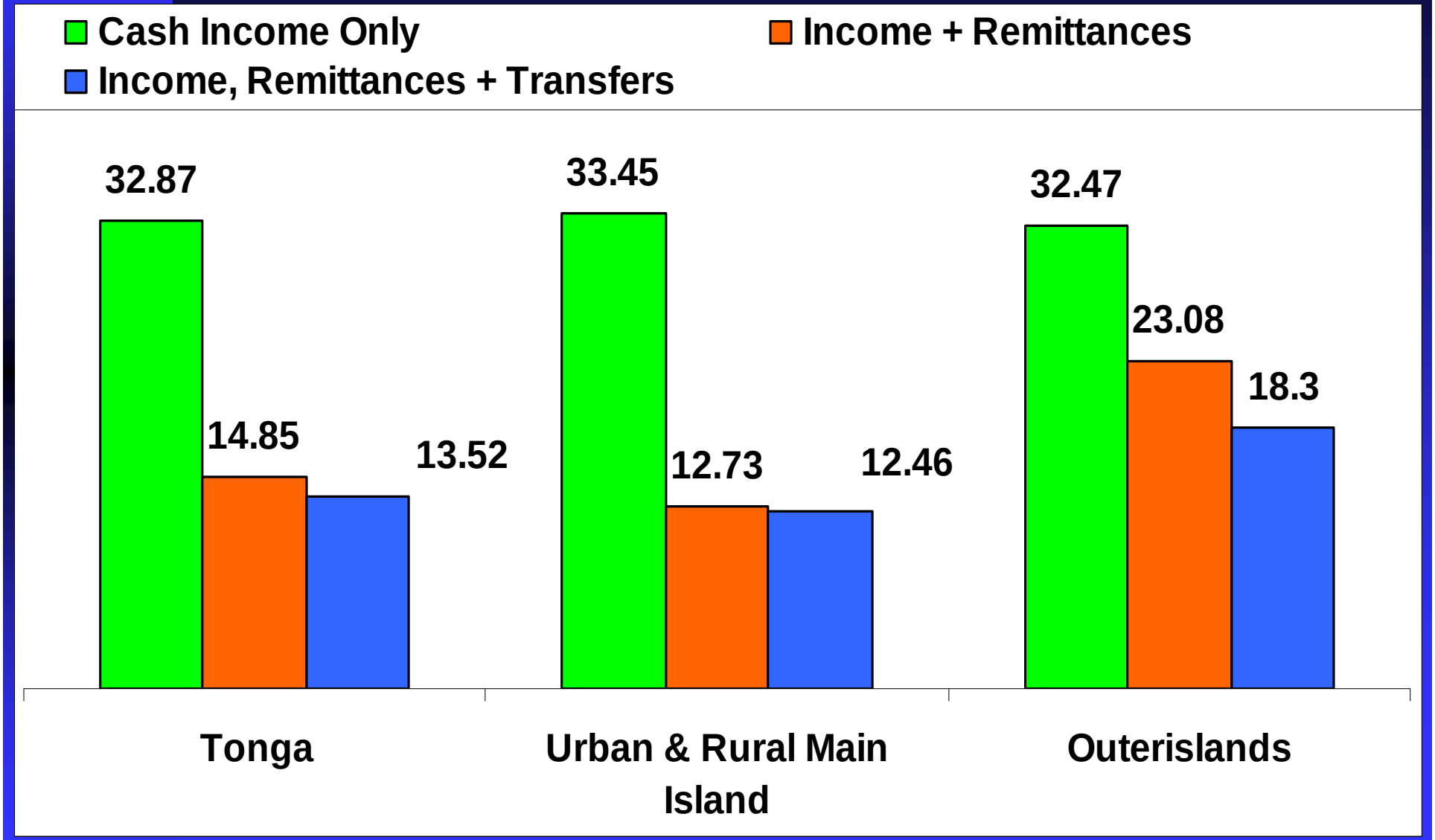
FIJI: HEADCOUNT RATIO



FIJI: GAP RATIO



TONGA: GAP RATIO



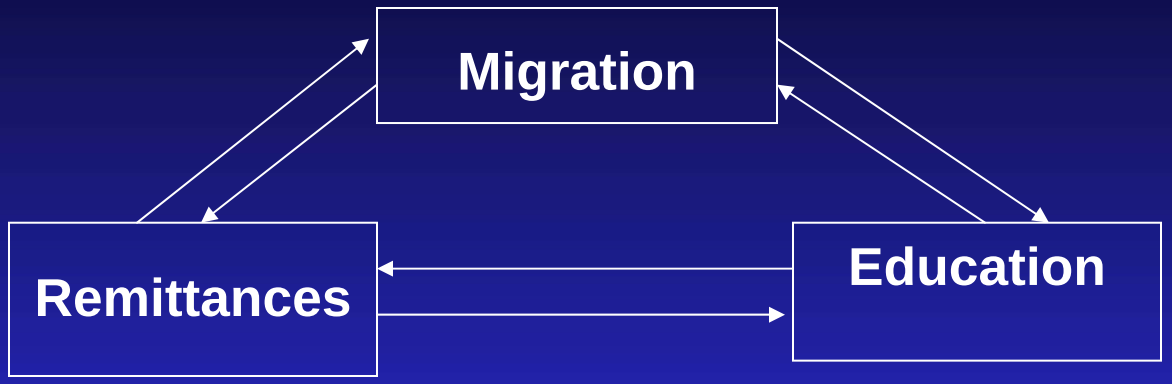
POVERTY AND INEQUALITY Regression Results

Table 3 Poverty and Income Inequality Indicators with and without Remittances

	Without Migration Counterfactual		**With Migration Observed**
	Method 1 Observed income without remittances	Method 2 Counterfactual income	Observed Income Including Remittances
Poverty Headcount Ratio			
Fiji	38.4%	42.9%	34.1%
Tonga	54.7%	62.1%	32.4%
Poverty Gap Ratio			
Fiji	18.2%	17.3%	15.1%
Tonga	27.5%	27.1%	11.6%
Gini Coefficient			
Fiji	0.51	0.47	0.50
Bias Corrected+	0.47 – 0.54	0.43 – 0.52	0.47 – 0.54
Tonga	0.53	0.42	0.46
Bias Corrected+	0.47 – 0.59	0.39 – 0.47	0.42 – 0.51

* Estimated poverty line in Fiji = US$765 and US$879 in Tonga per adult per annum.
+ At 95% confidence interval
Source: Brown and Jimenez (2008a)

Remittances and Education



Migration/remittances increase HC investment

2 possible relationships:

(i) indirect:

lure of remittances > HC > migration

(ii) direct:

Receipt of remittances > relieves budget/credit constraint > spending on HC

Education Levels of Migrant Households

(Years schooling completed)

	All Households		All Members		Adult Members	
	All Members	Adult Members	With Migs	w/o Migs	With Migs	w/o Migs
Fiji	8.77	10.17	9.31	8.49	10.78	9.84
Tonga	10.78	12.97	11.19	10.2	13.04	12.87

- Tongans better educated than Fijians
- Tonga a less developed economy, but one which has been migration and remittance oriented much longer
- Households with migrants have higher education levels than those without
- Econometric evidence supports this finding
- Consistent with studies from other countries; “brain gain” with “brain drain”

Remittances and Education Regression Results

Table 5 Schooling and Remittances IV Probit Results: Fiji
(p-values in brackets)

	Extra Education
Remittances	0.0003
(instrumented)	(0.08)
Indo-Fijian	0.8956
	(0.01)
Observations	158
Wald Chi-sq (p-value)	36.69
	(0.00)

Source: Brown *et al.* (2006)

Table 6 Tertiary Education and Migration Probit Results: Fiji and Tonga
(p-values in brackets)

	Fiji (IV probit)	Tonga (probit)
Migration Intentions	0.2546	-0.09
	(0.00)	(0.43)
Indo-Fijian	-0.3377	
	(0.02)	
Wald Ch-sq	111.26	48.76
	(0.00)	(0.00)
Observations	1121	1376

Source: Brown *et al.* (2006)

Remittances and Wealth

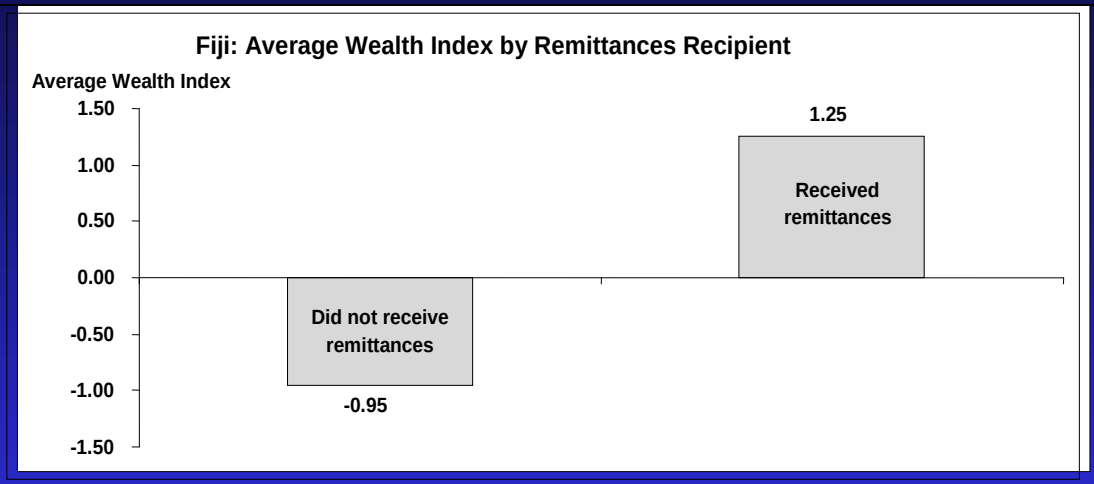
Remittances, Saving and Assets by Household Income Category (US$ 2004)

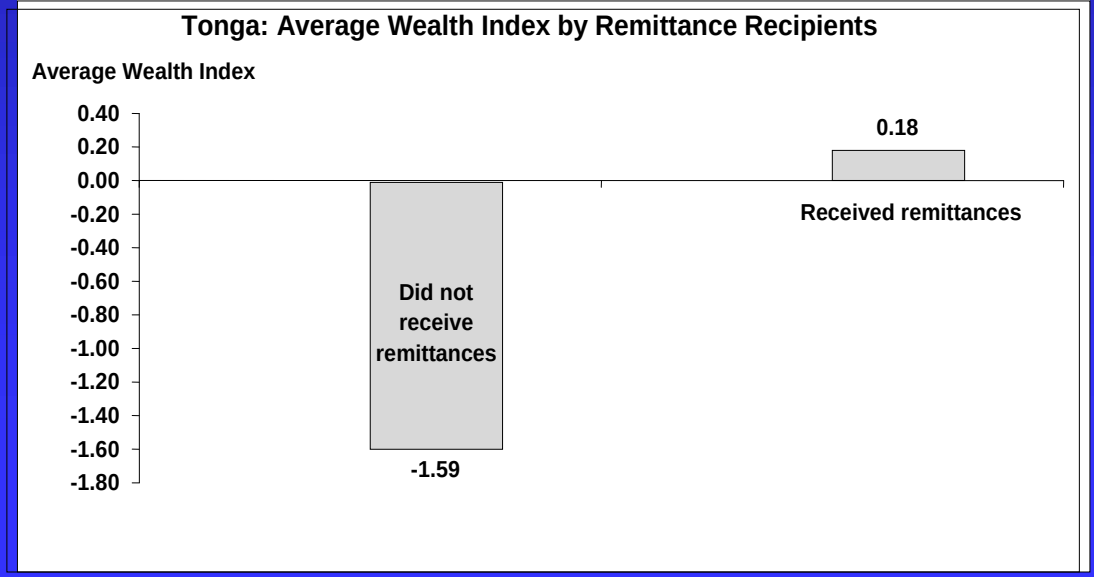
	Household Income Level						
Saving (2004)	**<$1500**	**$1500-3000**	**$3000-4500**	**$4500-6000**	**$6000-7500**	**>$7500**	**Total**
Remittances Recipients	999.01	605.07	1231.96	1238.95	1872.96	4075.66	1726.93
Non-Recipients	112.51	559.08	753.95	873.99	1047.34	5434.19	1581.48
Assets (2004)							
Remittances Recipients	10885.51	13554.96	24420.95	21154.04	24492.41	41436.16	21916.28
Non-Recipients	4869.74	9171.63	9039.72	19700.73	18603.54	45676.94	17931.23

Measuring Wealth

- Collected information on 22 types of assets and housing characteristics
  - Agricultural and non-agricultural land, buildings
  - Household consumer durables such as white goods and vehicles.
  - Number of rooms; floor, roof and wall materials; sources of water and lighting and type of toilet.
- Principal Components Analysis (PCA) was used to build a wealth index
- Once the index was built, its robustness and internal coherence was assessed.

REMITTANCES AND WEALTH





Wealthy and Healthy in Fiji

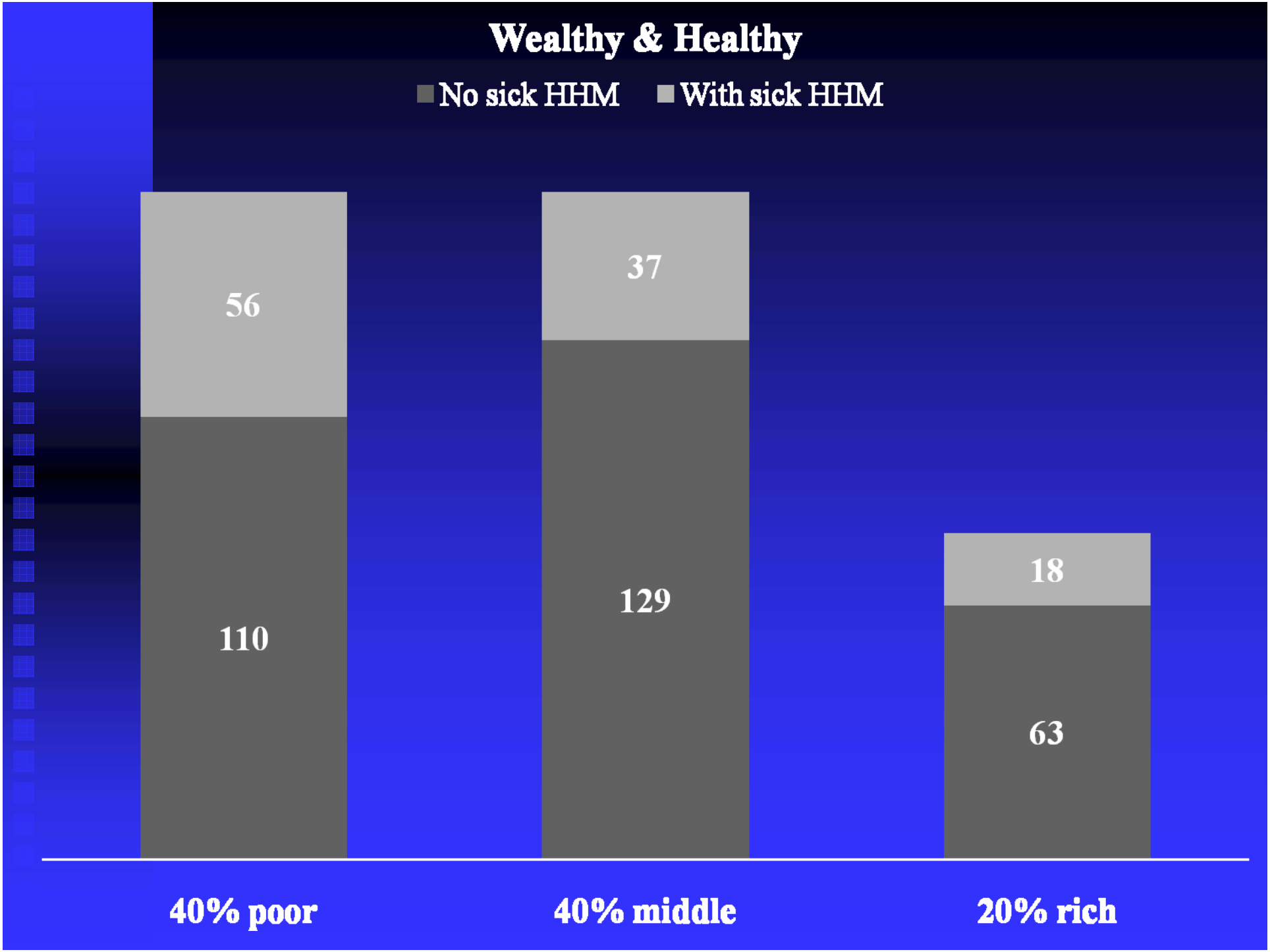
- The research question:
  - What is the impact of wealth on household health ?
- Methodology
  - Use cross-sectional data on households living in Viti Levu, the main island of Fiji
  - Data on household assets used to construct a wealth index
  - Data on number of household members unable to carry out their daily duties for more than 30 days used to construct a self-reported indicator of household health
  - Use Instrumental Variable techniques to control for potential endogeneity

Wealth and Health

- Relevance for public policy
- If there is a causal relationship between economic welfare and health, income transfers might be one of the keys to improve the health status of the poor
- Increasing interest in the analysis of inequality in the distribution of health access/outcomes across different socio-economic groups
- Focus on strengthening health services delivery in difficult to reach areas

Self-Reported Measure of Household Health

- Based on the ‘healthy day’ measure used by the US Center for Disease Control and Prevention to assess health-related quality of life
  - Respondents were asked to identify HH Members that due to illness and poor health in general were unable to do their daily activities such as working, cooking, attending school, etc.
  - Number of days during the survey year was recorded
  - Identified those with more than 30 days of incapacity.


Wealthy & Healthy
No sick HHM
With sick HHM
56
110
37
129
18
63
40% poor
40% middle
20% rich

Wealth and Health in Fiji
Regression Results

Variable	Marginal Effects	Z-stat
Wealth (Instrument)	-0.04	-1.94 **
HH Size	0.05	4.04*
Female Ratio	0.32	3.31*
Dependency Ratio	0.17	1.78***
Capital City	0.02	0.23
Indo-Fijian	0.06	1.05
HH Head post-sec. education	0.06	0.77
Predict = 0.25 Actual = 0.27		

Summary Conclusions

- Remittances provide social protection to poorest
- They reduce incidence and depth of poverty
- They contribute positively to household material wealth
- They result in higher education among those remaining
- They contribute to improved health of those remaining

Cautionary Comments

- If remittances are performing these important functions why are we so concerned about their direct contribution to investment and growth? Why do we expect migrant households to become entrepreneurs?
- As it turns out, despite these social roles, also substantial evidence that remittances contribute positively to saving
- At present they are fulfilling these functions through largely informal, family-based relationships? Why try to change this?
- Most of our work and formal analysis focuses on the welfare of the households left behind. What about the welfare of the migrants?