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The Development Impacts of Pacific Migration to Australia and New Zealand

John Gibson

University of Waikato

Measuring Impacts is Difficult

- Migration is a rare event
 - Only 3 percent of world population are migrants
- Migrants differ from the general population in age, gender, education etc
- Even matching on these observable traits, most people who “look” similar to migrants don’t migrate
- Unobservable differences create a selectivity bias
 - Have to pay careful attention to the no-migration counterfactual
 - Literature generally done a poor job of this

Migrant selectivity problem

- Migrants are self-selected → not straightforward to evaluate the impact of migration
 - Comparisons of outcomes for movers and stayers may reflect differences in unobserved ability, skills, motivation, etc rather than the result of moving *per se*
 - Outcomes for existing migrants may be wrong counterfactual for policy reform calculations modelling outcomes for additional migrants from the Pacific to Australia/New Zealand

Four Levels of the Selectivity problem

Typical approach to studying the impacts of migration is to compare households with migrants to those without

Subject to up to 4 selectivity biases

- **Selection 1:** Household's decision of whether or not to have members migrate
- **Selection 2:** Among households engaging in migration, decision of whether or not to have whole household move
- **Selection 3:** Decision of whether to return migrate
- **(Selection 4):** Decision of households on the timing of when to migrate

Impacts May Vary Over Time

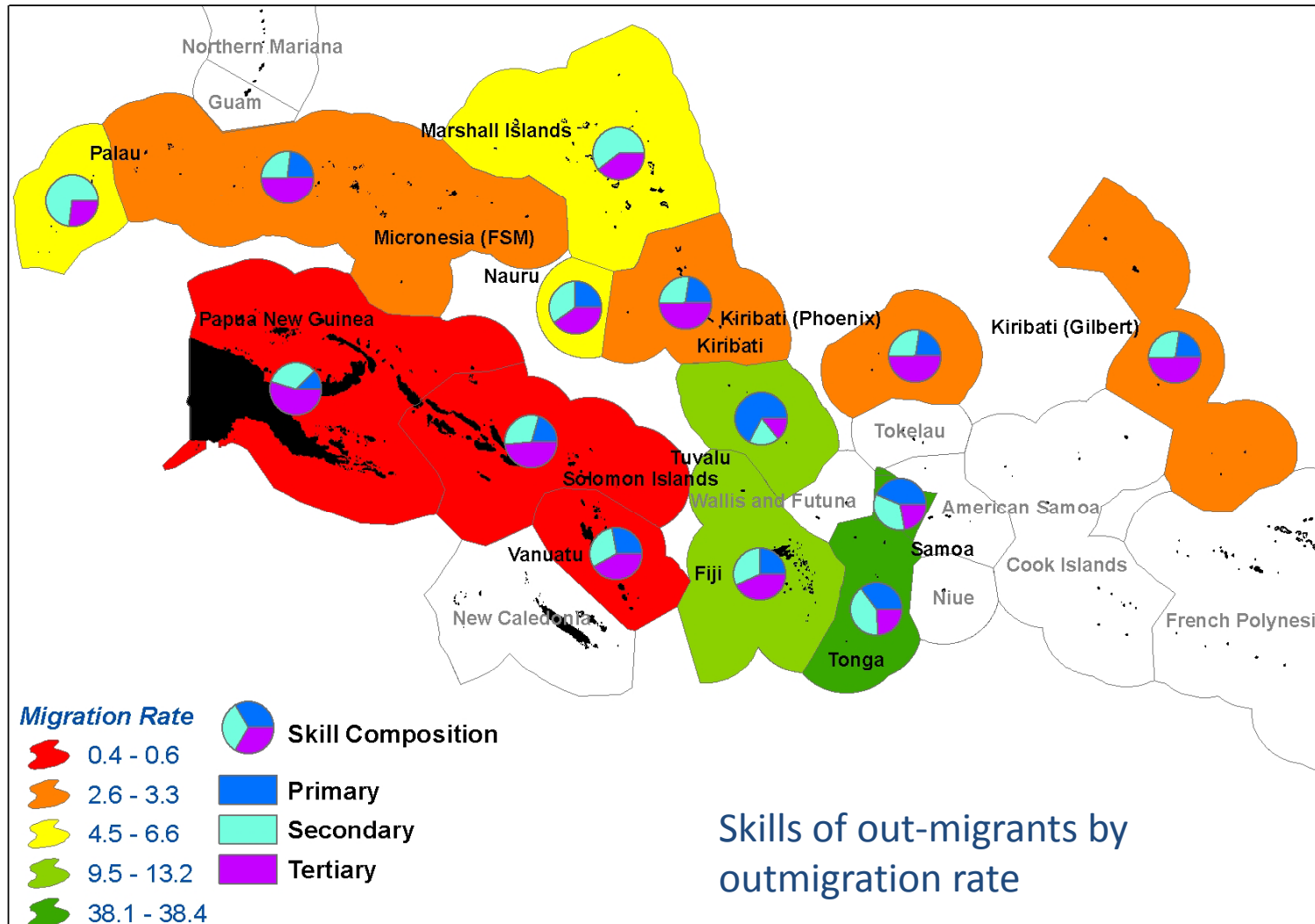
- The impact of migration on sending households is likely to vary with the duration of migration
 - In the short-term:
 - Households lose domestic income that the migrating members normally generated and perhaps have less assets due to the costs of financing migration
 - Migrants may take some time to start paying off their moving costs and to earn enough to start sending remittances
 - In the medium-term
 - Left behind household members adapt to their new circumstance and household composition may change
 - Remittances may either increase as migrants earn more or decay as migrant attachment declines with time away

Going from impacts on individual migrants and their households to broader growth and development impacts

Need to consider:

- Productivity (in host country)
 - Selectivity
 - Opportunity costs
 - Transactions costs
 - Absorptive capacity (in home country)
- ➔ Same migration flow (e.g. RSE) may bring very different results to different Pacific countries

Starting points for considering new migration are very different across the Pacific



Data sources for the results below

On-going surveys in the Pacific, Australia and NZ since 2005

- 4 waves of RSE surveys in Tonga and Vanuatu from 2007-2010
 - Baseline interviews and three follow-ups with households with RSE workers and comparison households
- Two waves of PSW surveys in Tonga and Kiribati in 2010 and 2011
- Samoa Labour Mobility Survey (2008)
- Surveys of 30 years of top students from PNG, Tonga, FSM, NZ who migrated or returned or never left home
- Two waves of surveys of Tongan settlement migrants under New Zealand's ballot schemes

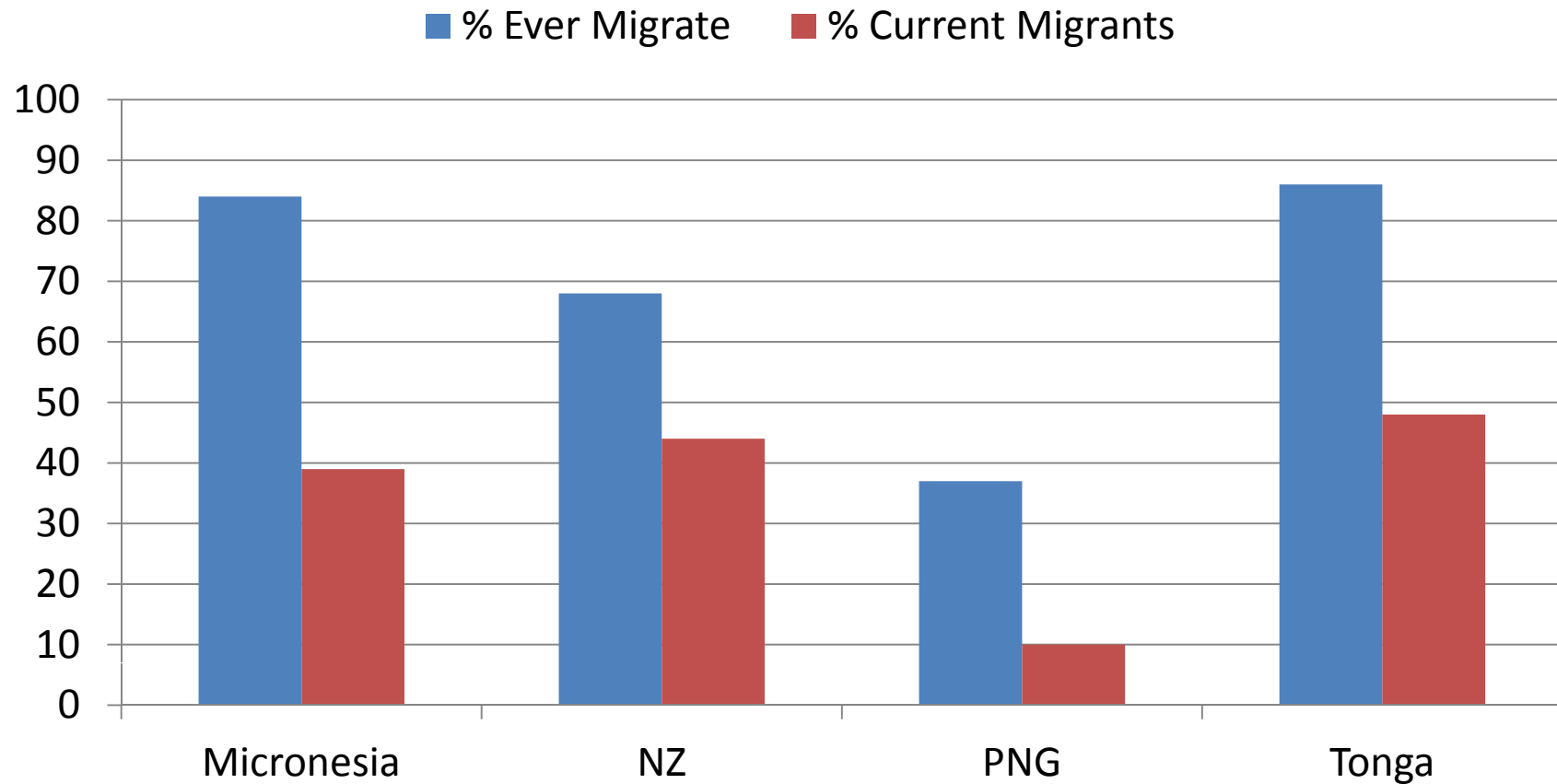
Consider all three levels of migration, but hardly a comprehensive Pacific-wide picture

	Tonga	Samoa	Kiribati	Vanuatu	FSM	Papua New Guinea	New Zealand
Highly skilled migrants	●				●	●	●
Ballot selected migrants	●	●					
Seasonal work migrants	●	●	●	●			

Highly Skilled Migrants

- Target sample of interest: “The best and the brightest”
 - individuals who were the best students in their countries at the end of high school from 1976-2004 in Tonga, FSM, PNG and NZ
- Natural counterfactual for measuring impacts
 - Outcomes for the high skilled who did not migrate
- Comparison of returnees and migrants sifts between two theories of migration
 - local attributes of the country of work make individuals more productive when they are abroad
 - workers learn how to be more productive when working abroad and can bring that knowledge back with them

High rates of migration and of return migration



➔ Mistake to think in terms of irreversible “brain drain”

Understanding the determinants

(J. Development Economics, 2011)

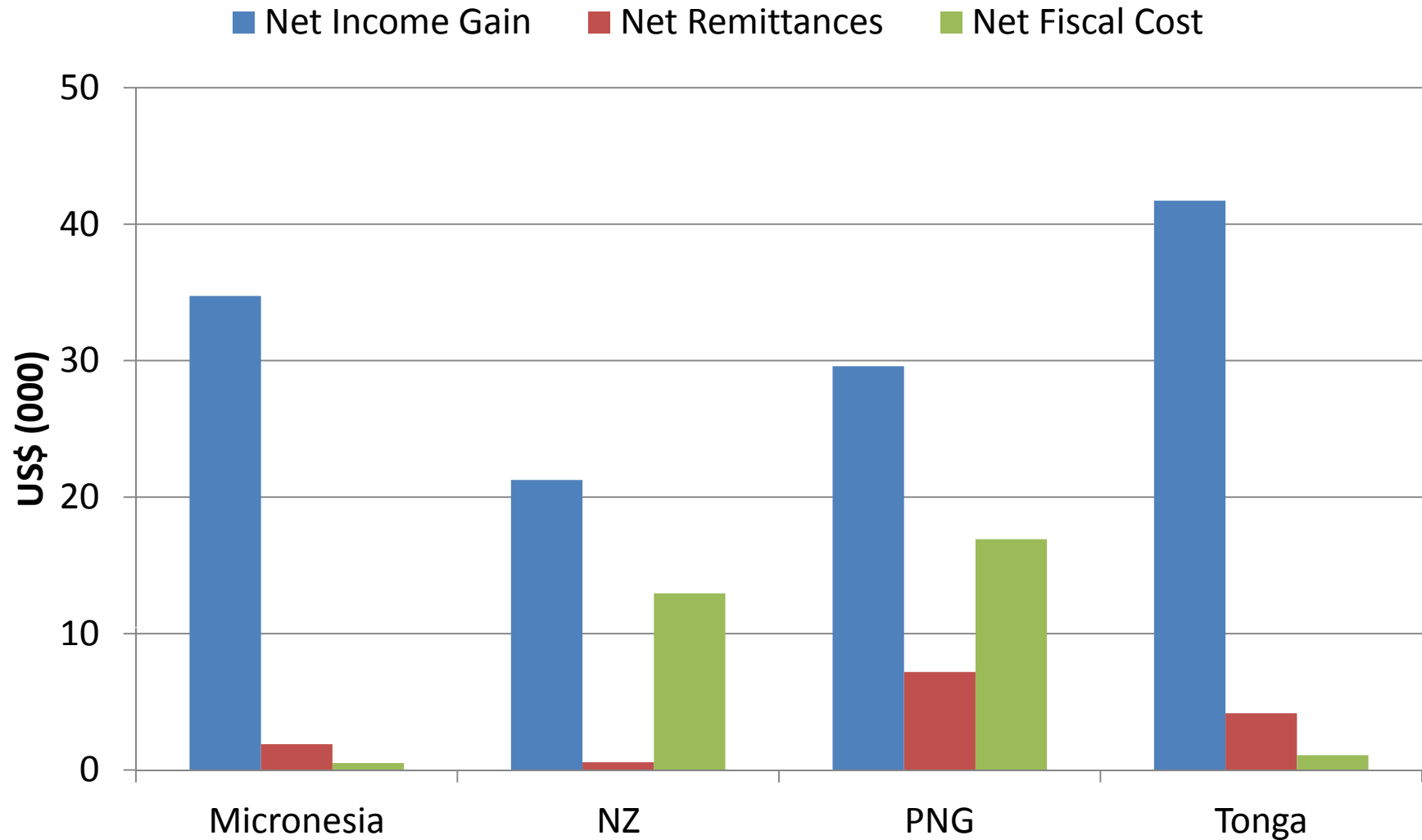
- Returnees leave behind much higher incomes and return for mainly non-economic reasons
 - Family commitments
 - Scholarship/bonding commitments
- Returnees do not have significant income premium (or productivity premium) over the similarly skilled never-migrants
 - supports view that local (non-portable) attributes of the country of work make individuals more productive when they are abroad

Measuring the consequences

(Economic Journal, 2012)

- largest gains to the migrants themselves, US\$20,000-\$40,000 per year but often ignored in the migration literature
 - Labour/immigration literature looks at impact on natives in destination (or compare with natives)
 - Development literature looks at impact on those left behind
 - Need to consider the “Income per Natural” concept in Pacific
- Also significant human capital gains
- Annual remittances exceed fiscal costs for Tonga and FSM
 - Lean public sector, flat income tax and comprehensive consumption tax are good settings for high emigration countries
 - While there are high remittances from skilled PNG migrants, fiscal costs are higher because of progressive income tax
- Very little business investment or trade facilitation
 - Remoteness and low economic density that make emigration attractive, also limit scope for business development

Gains and losses (annual) from high skilled migration



Ballot-selected migrants

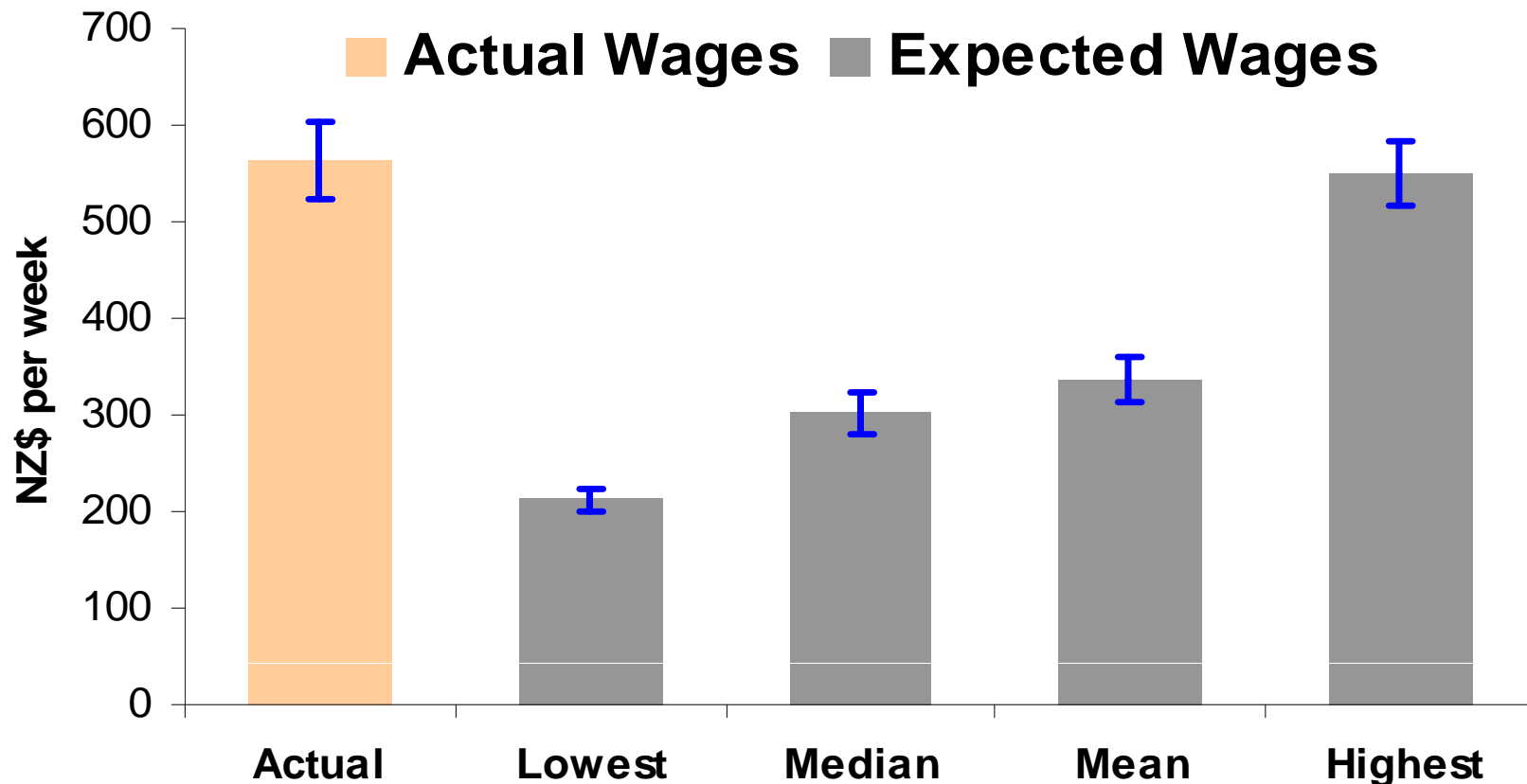
- Random ballot used by NZ immigration authorities to deal with over-subscription to Samoa Quota and Pacific Access Category
- Natural counterfactual from the outcomes for the ballot losers who stay in the Pacific
 - Still complicated by selective compliance because not all ballot winners end up migrating

Impact on the Tongan migrants

- Labour incomes go up by 263% within the first year of migrating (*J. Eur Econ Assoc*, 2010)
 - non-experimental estimators would overstate this by 20-80% due to positive selection of migrants on unobservables
- Mental health improves, especially for women and those with low initial mental health (*J Health Econ*, 2009)
- Migrant children have higher weight-for-age and height-for-age and a richer diet, while left behind children in the migrant's former household have a poorer diet and some decline in anthropometrics (*Food Policy*, 2011)
- Blood pressure and hypertension increases, with dietary change (more sodium) and more stress as likely culprits

Would-be emigrants underestimate earnings in New Zealand

(J. Development Economics, 2012)



➔ Better information on possible outcomes from migration may increase migration pressure in the Pacific

Impacts on the left behind family

(Rev Economics & Statistics, 2011)

- Emigration reduced per capita income and wealth, reduced access to financial services and caused switch to a more basic diet
- increased poverty among remaining members of households with PAC migrants
 - Impact only measured in short-term (1 year after migration)
 - Impact may turn positive in medium term
- Non-experimental estimators would wrongly imply wealth had increased

Medium term impacts – Samoa

(Economic Dev & Cultural Change, 2012)

- emigration reduced poverty among remaining members of households with Samoa Quota migrants
 - Leavers were earning less than the average of the stayers within the household, so absence is less damaging to household income than in Tonga
- suggestive evidence that the impact varies with duration since migration
 - Remittances and agricultural income decline with the duration since emigration

Why did impacts in Tonga and Samoa differ?

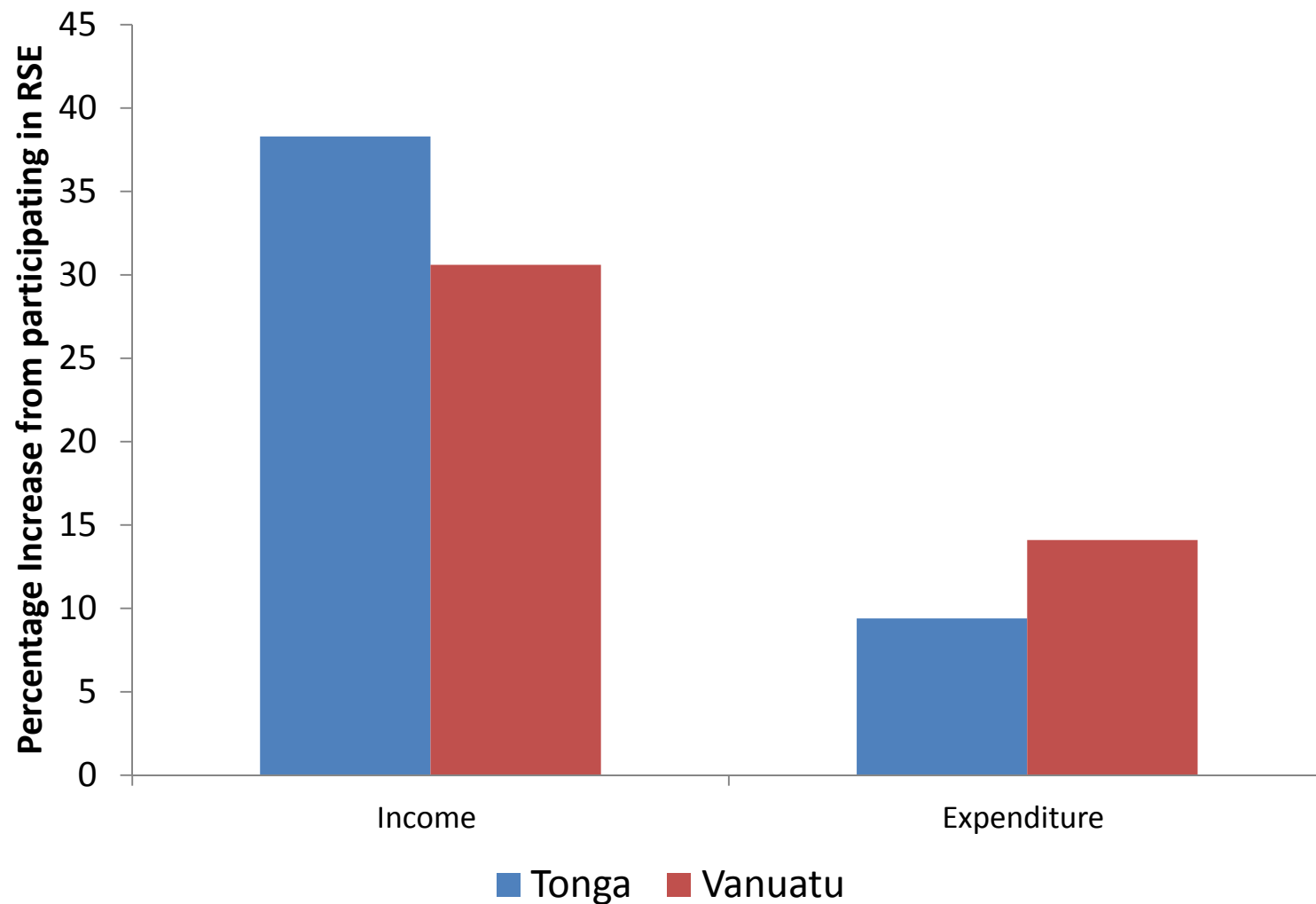
- Different within-household selectivity
 - Tongan PAC migrants earned much larger share of income of the household they left behind than did the Samoan Quota migrants
 - May reflect different vintages of the two migration streams, with the most positively selected Samoan migrants perhaps already left in earlier years, while PAC was much newer policy
- Duration
 - Impact on Tongan households may change in medium term if the migrants remit more after settling in costs

Seasonal migrants

- Although applications to RSE and PSWPS greatly exceed available slots, random selection not possible because of the interests of employers
- We measure impact by using statistical methods to match and compare RSE households to “similar” households who don’t participate
 - Then measure the change in outcomes relative to baseline, for the matched participants versus the matched non-participants
 - Average impacts of ever participating in RSE over the two-years of our evaluation calculated

Main results:

per capita income and expenditure



Is this a large or small effect?

Some migration accounting

- Migrants earned NZ\$12,000 in NZ, compared to baseline household incomes of NZ\$1400 per capita in Tonga and NZ\$2500 per capita in Vanuatu
- So if you can earn 5-7 times per capita income, why is increase “only” 30-40%?
 - 1) Migrants have costs in NZ and of airfare, so amount remitted + repatriated = NZ\$5,500
 - 2) This increase is only for one individual per household. Since average household is 5-6 members, this makes PER CAPITA increase around NZ\$1,100
 - 3) Only half the households went for 2 years, so average per capita increase over 2 years requires dividing by 1.5
 - 4) Then households face opportunity cost in terms of what migrant would have done at home

Other Economic Welfare Impacts

- Subjective welfare

“Imagine a 10-step ladder, where on the bottom step were the poorest people and the top step the richest people, state which step of the ladder they thought their household was on today, and on which step their household was on two years ago.”

- We find 0.43 step increase in Tonga and 0.65-0.77 increase in Vanuatu
- approximately 0.5 standard deviation increase in both countries.

- Households with Bank account:

- 10-14 percentage point increase in Tonga from RSE,
- 17-19 percentage point increase in Vanuatu

- Durables ownership rises for participants in both countries

- cellphones, television, DVD players, computers, stoves, boats and bicycles

Dwelling improvements

Find Tongan households 10-11 percentage points more likely to have improved dwelling over 2 years if in RSE.

Vanuatu households are 7-8 percentage points more likely (much higher baseline rate due to less permanent housing materials)

Our survey didn't capture transitions between dwelling types



Impact on Education

School fees identified as one of most important uses of money earned

-10-14 percentage point increase in proportion of 16-18 year olds attending school in Tonga;

- no significant effect in Vanuatu, partly because many attended with school fees unpaid, but barred from sitting exams



Evaluating the impacts of the PSWPS

(Asia-Pacific Viewpoint, 2011)

More difficult than for the RSE

- Small numbers in PSWPS to date have made a comprehensive statistical evaluation difficult
- Have data from surveys in Australia, Tonga and Kiribati of PSW workers, applicants and non-applicants from the same villages, of similar age and gender, in 2009/10/11
- Focus on the results from Tonga here, to get some comparison with our RSE results
- PSW earnings higher than for RSE but also taxed more, and living costs higher than for RSE
 - Best estimate of earnings less expenses over six months: A\$6,000
- Increase in capita income of \$A450 or **39 percent** for members of participating households

Economy-wide impacts

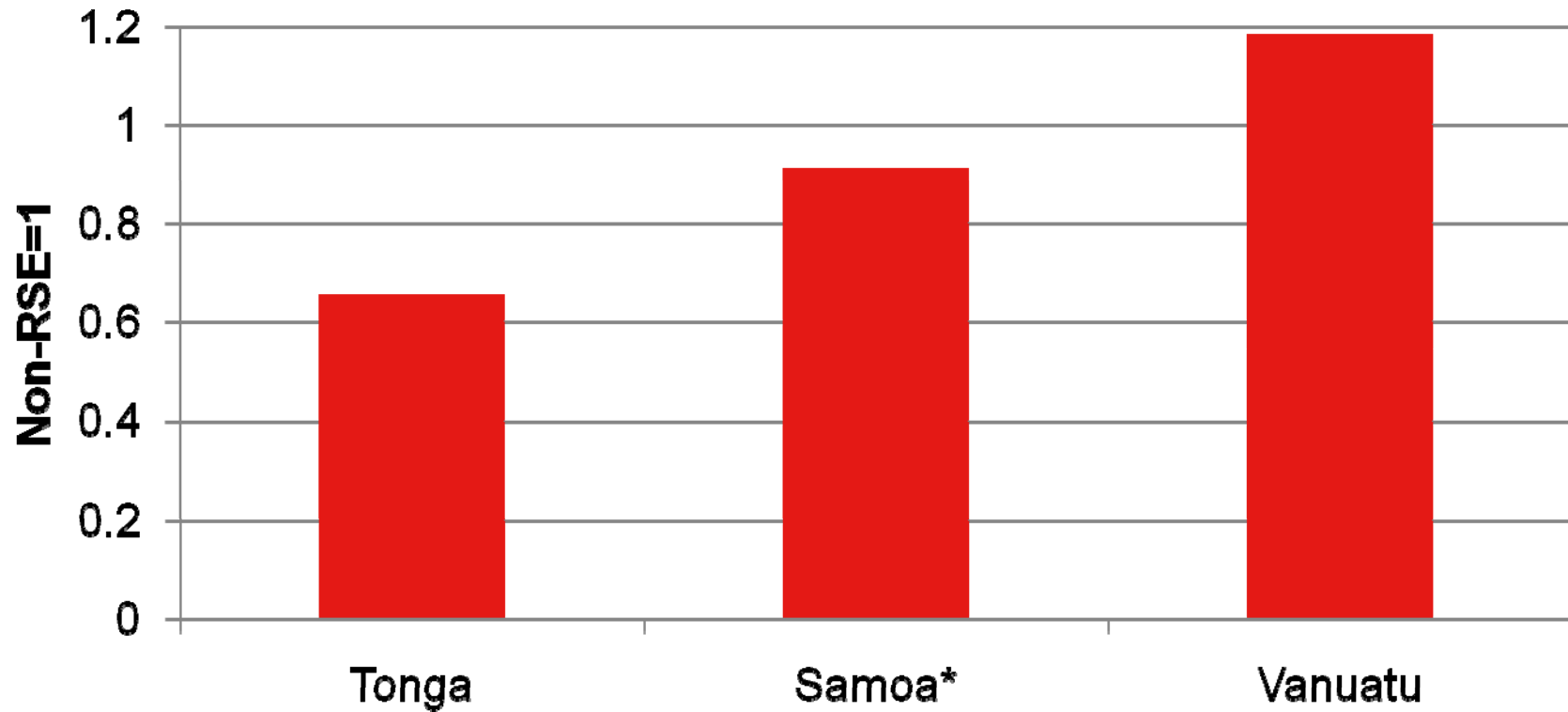
- RSE is sufficiently large to consider economy-wide impacts rather than just household-level and migrant-level impacts described above
- Pro-poor in Tonga but not in Vanuatu (*PEB*, 2008)
 - Partly due to different recruitment systems, and partly the differences in average human capital
 - Workers who are equivalent to a NZ employer drawn from lower tail in Tonga and upper tail in Vanuatu
- Opportunity costs and transactions costs also higher for Vanuatu
- No evidence on difference in productivity or absorptive capacity but only limited increases in domestic businesses from our survey data

Selectivity

- Tonga -- “negative selection” (on income)
 - RSE workers drawn from households in the poorer parts of the income distribution
 - ➔ Any positive household-level impacts likely to be pro-poor
- Samoa – “neutral selectivity”
 - RSE workers drawn from households whose income appears indistinguishable from average households
 - Claim relies on assumed lack of change in consumption since we do not have a baseline for Samoa
- Vanuatu – “positive selection”
 - RSE workers are from better-off households

Mean per capita spending (at baseline)

-- relative to mean non-RSE in each country



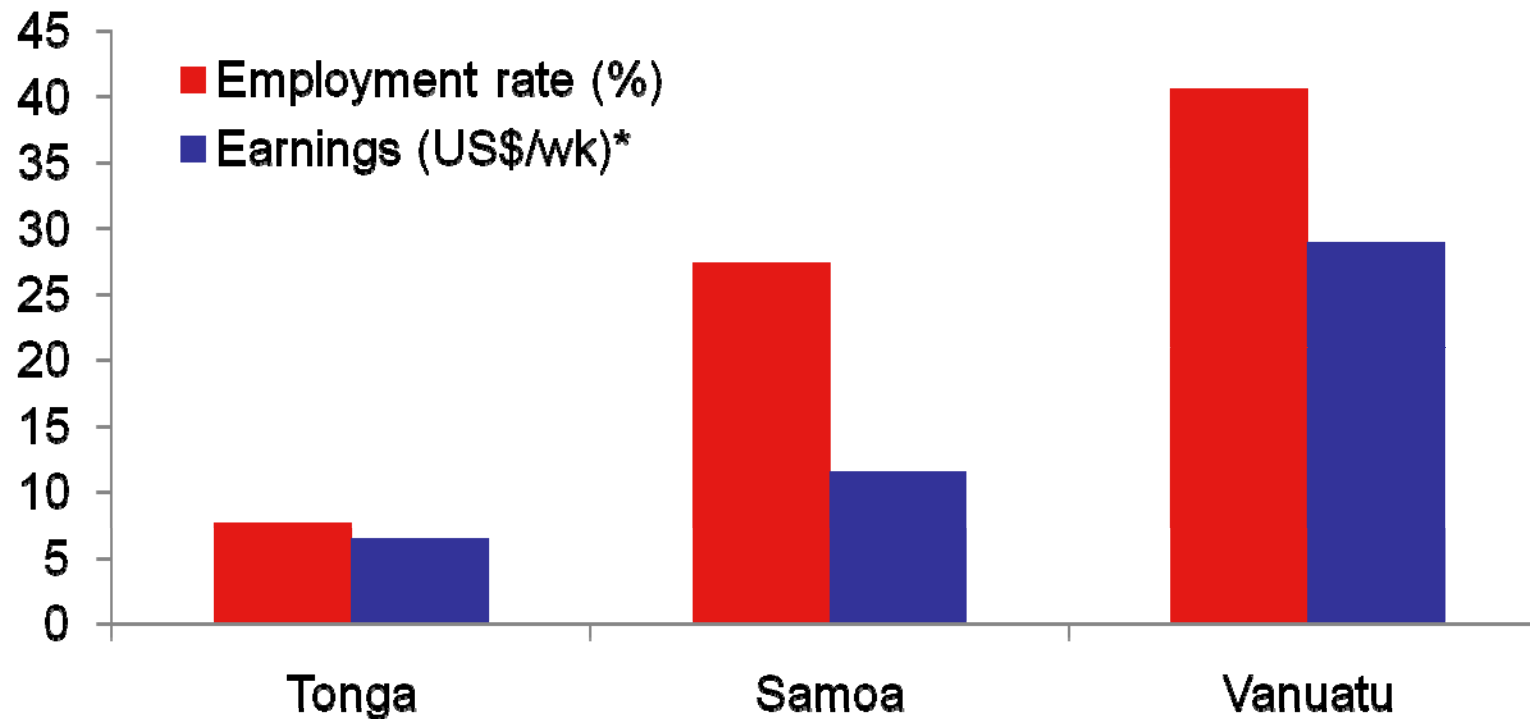
*after year 1 for Samoa

Opportunity costs

- Tonga -- low
 - Very few (8%) RSE workers in wage employment prior to leaving for work in New Zealand
 - ➔ Remaining family mainly need to replace a home production contribution rather than a cash contribution
- Samoa – moderate
 - One fifth of RSE workers employed prior to going to New Zealand
 - (Based on first six months of 2007 rather than six months prior to leaving for NZ)
- Vanuatu – high
 - Two-fifths of sampled RSE workers had been employed prior to leaving for New Zealand

Pre-RSE Employment and Earnings

-- sampled individuals who became RSE workers



*Unconditional average over all (both employed and unemployed) who became RSE workers

Transactions costs

How easy is it for the absent seasonal worker to still be active in the life of their home household?

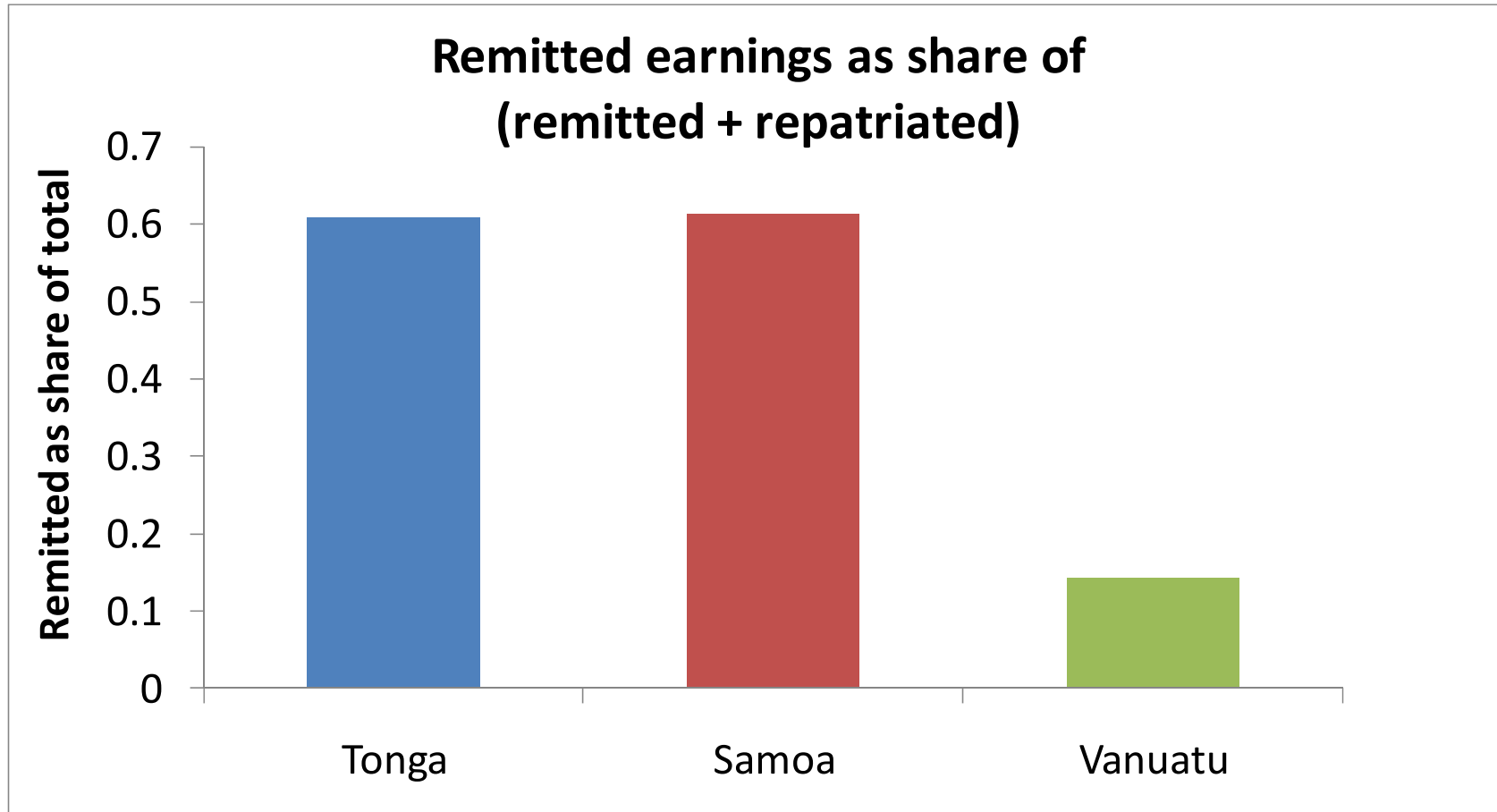
- Ease of sending money
 - Helps with consumption smoothing for the left behind family
 - Regular, smaller, remittances may avoid temptation for waste that often accompanies occasional large cash inflows
- Frequency and duration of communication with home
 - Technology can allow the absent worker a virtual presence in the life of their household

Transactions costs

- Tonga and Samoa -- low
 - Majority of RSE net earnings contributed to own household and others in home community are remitted rather than repatriated
 - High incidence and frequency of communicating with family at home
- Vanuatu – high
 - Most of the net RSE earnings are brought home in person rather than remitted during the stay in New Zealand
 - Lower rate and frequency of communicating with home
 - Reflecting the less developed banking/financial and communications infrastructure

Transactions Costs

-- remittances versus repatriated net earnings



Overall macro impacts of RSE

	Tonga	Vanuatu
Number of RSE workers in New Zealand 2007/8 and 2008/9	1971	3590
Net income gain to country from first two years of program (\$NZ)		
Recognised Seasonal Employer program	5.3 million	9.7 million
New Zealand bilateral aid received in 2009/10	12.7 million	20.7 million
Australian bilateral aid received in 2009/10	20.7 million	56.1 million
Total export earnings 2008	11.3 million	43.3 million

Use our per-worker estimates of average impacts on household income and scale up by total number of workers hired from each country

- equivalent to almost half of NZ aid to these countries
- equivalent to almost one-half of value of Tonga's exports and one-quarter for Vanuatu

Conclusions (1)

- Well short of having robust estimates of development impact of Pacific migration
- Selectivity and impacts differ between apparently similar sets of migrants
 - Quota settlement migrants from Samoa vs Tonga
 - Seasonal migrants from Tonga vs Vanuatu
- Given unmet demand for migration opportunities, scope for policy makers and researchers to work together
 - randomization can be both fair and informative

Conclusions (2)

- Biggest gains are to the individual migrant
 - They don't stop being part of the Pacific when they move to Australia/New Zealand so these benefits should be counted
- 'Brain drain' fears are overstated
- Seasonal migration provides large benefits relative to other popular development interventions
 - But small relative to the impact of settlement migration
- Hoped for impacts of skilled returnees and cashed-up seasonal workers kick starting domestic entrepreneurial activity are probably unrealistic
 - Remoteness and low economic density that make emigration attractive, also limit scope for local business development

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- For more information visit:

www.pacificmigration.ac.nz