

The need for serious evidence in development and migration policy

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This talk

1. A parable on policy evaluation from the Indonesian jungle
2. The Pacific Labour Mobility Survey

Fight fire with finance

A randomized field experiment to curtail land-clearing fire in Indonesia

Joint work with Walter Falcon, Gracia Hadiwidjaja, Matthew Higgins, Rosamond Naylor, and Sudarno Sumarto



Jambi Province, Indonesia—September 2019

Motivation

The problem ⇒ **forest fires**. In 2015-16, \$16bn **economic costs**, 100,000 premature **deaths**, some days **more emissions than US economy**

⇒ mostly all human-lit, an increasingly prominent way to clear land

Potential solution ⇒ **payments for ecosystem services (PES)** and **conditional cash transfers (CCTs)**, two popular and often quite effective approaches to spur **behavior change**.

⇒ **Key question**: whether environmental fiscal incentives can still be effective amidst limited property rights, land use flux, underdevelopment

⇒ **Empirical challenge**: credible counterfactual needed to discern **additionality** and to avoid paying for the **status quo** “anyway” activities

⇒ PES typically requires a high level additionality and a low “anyway” share to reduce the budgetary costs

This paper ⇒ **RCT deep in the Bornean jungle**, covering around 90,000 households, testing whether **community-level** conditional cash transfers can reduce the use of **harmful land-clearing** fire, as **monitored from space**

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What we do

Three-part payment-by-results pilot experiment

1. **Ex-post conditional payment** of Rp 150 million (around 15% of village budget) if successful in eliminating fire over the 2018 fire season (July–December)
2. Village **information and instruction** on fire prevention
3. **Up-front** Rp 10 million (750 USD) **capital grant** to ease liquidity constraints and help with fire prevention

Other salient features:

- With over 30,000 HH treated, plot-level monitoring infeasible, too costly; focus on **village collective action**
- Block-randomize 75/275 villages, from four districts in West Kalimantan, into the **pilot** programme
- **Satellite-based outcomes** ⇒ lower cost, higher quality, blind control
- Designed and trialled within **existing fiscal architecture** to be **scaled**, a mechanism to operationalize external climate finance

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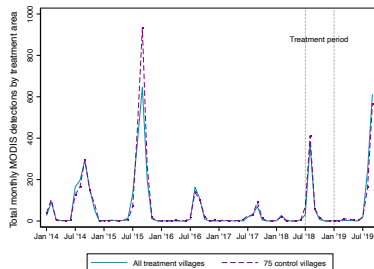
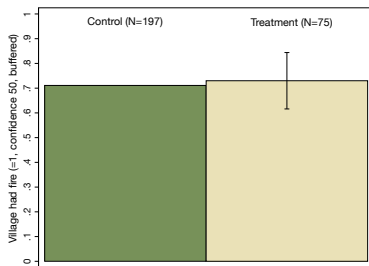
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What we find

- Program caused villages to **increase fire prevention behaviors**: more resources allocated, taskforces formed, people involved, patrols.
- 21/75 programme villages were successful (i.e., 72% had fire).
- 71% of control had fire. **No statistically significant differences.**
- Adoption of fire prevention practices was insufficient to deliver the fire free outcomes desired, and so was explicitly paying for them
- Ex-post disbursement **saved 8,100 million IDR (0.55m USD)**, no evidence 3,150 m disbursed reduced fire more than no payments



The allegory?

1. Many programs and policies in Australia, PNG, and the Pacific have **no credible evidence** to suggest (a) achieving outcomes intended, or (b) doing better than had we done (i.e., spent) nothing at all
2. In a constrained fiscal environment, we should spend on what works. If we don't know: **pilot, rigorously evaluate, and try something else**
3. Illustration of how **non-traditional or admin data** can make rigorous impact evaluations increasingly feasible and better
 - Time was not on our side. Available data allowed us to focus (both time and money) on design and implementation
 - I.e., data collection costs and logistics weren't a constraint
 - Fire and land use are hard to accurately measure with surveys
 - Usually, if there is a will, there is a way

Potential opportunities for the APS

1. **Progress on Australian administrative data** and towards a less inward culture (e.g., TSY, ATO, ABS in particular)
2. **Evaluator general election pledge**; opportunity to build back to being world leader (cf., 90s) but in light of the **credibility revolution**
3. Following stream of budget cuts and the abolition of ODE and IEC, cuts slowed, **capacity issues acknowledged and reviews underway**
 - USAID just appointed Dean Karlan as chief economist, “empowered to elevate the use of evidence” and to “incorporate **iterative testing, experimental design, and behavioural insights** into programming and decision making”

Providing some such governance functions—**independently and rigorously**—is at the heart of what we do at the Development Policy Centre, **regardless of changes in government and the public service**

E.g., transparency audits; budget tracking; education, capacity support; data creation, analysis, and public discussion, esp. Pacific labour mobility.

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The Pacific Labour Mobility Survey

Household surveys in Tonga (1st round completed, [presented here](#)), Kiribati, and Vanuatu (currently in the field), covering migrant and non-migrant households and members.

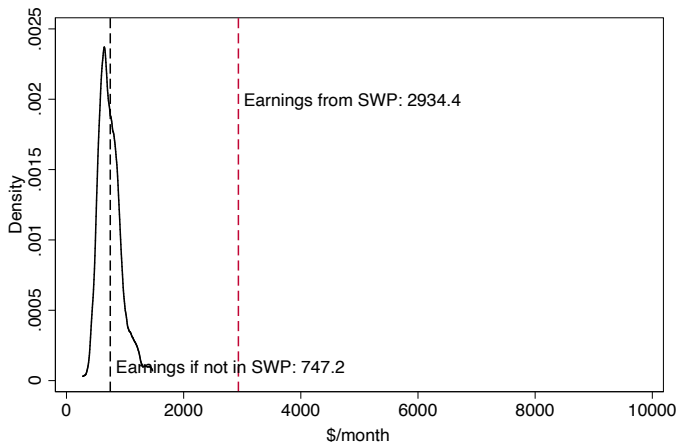
Worker surveys of PLS, SWP, and RSE workers (currently in the field).

Some key features and points of differentiation:

- **Longitudinal:** tracking migrants and their families over time (i.e., a migration HILDA). [First panel survey for the Pacific region ever.](#)
- **Control group:** non-migrant households and detailed information on selection, migration history, and networks
- **Omnibus nature:** covers a wide range of issues from consumption, to education, to labour, to migration, to gender
- **Open-access:** will be made freely available to anyone anywhere (c.f., Pacific data are often hard, sometimes impossible, to access)

How large are the earnings gains and remittances?

Predicted earnings at home c.f. SWP



Monthly earnings, before taxes/deductions, as reported by household heads (i.e., likely a lower bound)

Average monthly SWP remittances are 1055 TOP

How large are the earnings gains and remittances?

Impacts of participation in all three schemes on earnings

Log of monthly earnings			
Participate in SWP	1.244***		
	(10.73)		
Participate in PLS		0.961***	
		(6.5)	
Participate in RSE			0.890***
			(7.9)
Observations	1766	1434	1497

* t statistics are in parentheses.

Impact estimates are based on matching migrants to non-migrants in terms of age, education, sex, marital status, an other observables using a simple propensity score-based matching estimator.

Interpretation: earnings roughly double after accounting for observable determinants of scheme participation.

Additional estimates show reversing of the gender pay gap for female SWP workers, but not RSE workers

How do people in Tonga actually use remittances?

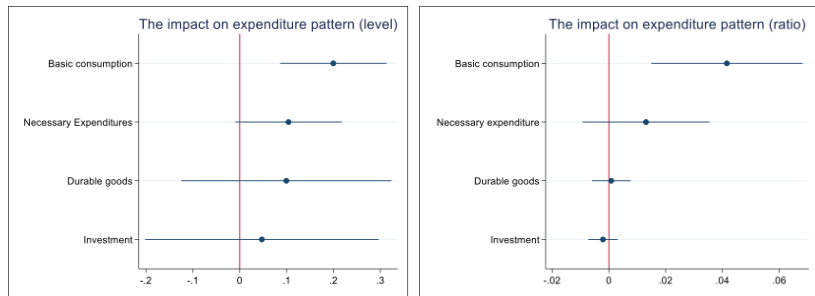
Proportion of remittance users who use them for these things

	SWP	PLS	RSE
Paying everyday expenses (e.g. food/bus	0.82	0.83	0.85
Paying school fees or other educational	0.25	0.25	0.31
Paying for health expenses	0.06	0.08	0.14
Buying durable goods (e.g. TV, car,boat)	0.02	0.05	0.03
Buying livestock, fertilizers, or equipment	0.03	0.05	0.03
Buying or starting a small business	0.03	0.03	0.04
Building or renovating dwelling	0.05	0	0.09
Repaying loans from banks, money lenders	0.08	0.08	0.04
Putting into a savings account or other	0.16	0.08	0.16
Donating to church	0.38	0.3	0.51
Donating to schools	0.13	0.08	0.18
Other	0.15	0.15	0.2
Observations	203	40	108

** Consistent with WB COVID report, Demurger and Wang (2016), and Adams and Cuecuecha (2010)

How do people in Tonga actually use remittances?

Expenditure and budget share impacts on migrant households



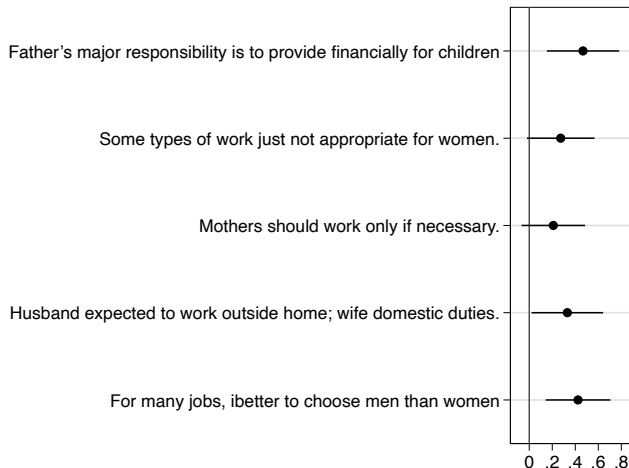
95 percent confidence intervals are the horizontal lines.

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This figure is from the interim report from Hiroshi Maeda's Crawford IDEC master's dissertation

Does migration affect Pacific gender norms?

Impacts of SWP participation on sending household views



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Highlights for 2023

- Report with the World Bank on PLMS Wave 1 findings
- Retrospective impact evaluation papers on PLS and comparing heterogeneous effects across schemes using PLMS Wave 1
- ANU-ADB Pacific Research Partnership (February public workshop, 7 papers)
- Lock in (i.e., get funded) PLMS future waves and the main medium-term IE, expanding to additional countries and adding the PEV lottery
- Remittance Diaries and Small Firm Diaries projects (in field now)

- Impacts of Pacific migration in Australia (on firms, labour markets)
- Migration attitudes and perceptions survey and experiments
- Innovations for Poverty Action Papua New Guinea (POM) office opens

- Randomized evaluations at scoping and design stages
 1. PNG Child Nutrition and Social Protection Program
 2. Expanding Labour Mobility Opportunities in PNG
 3. Pilot interventions around remittance costs and behaviours (w/ PLMS)
 4. Indonesian Government's national priority smallholder replanting program

Tonga household survey

When. Collected November 2021–January 2022 (during the pandemic and during the volcano eruption) in partnership with Sistemas Integrales, SSSMT, and Tonga Statistics Office.

Where. Covers four out of five of Tonga's island/administrative regions: Tongatapu (main island), Vava'u, Ha'apai, and 'Eua.

Who. 1,160 households: 617 non-migrant and 543 migrant

Migrant coverage: 317 SWP, 179 RSE, and 44 PLS households

Individual data for all household members, including migrants

How. Migrant household sample: selected from a **worker list** developed from multiple sources (e.g., PLF, LSUs, past WB surveys, and employers, with some support from DFAT, PLF, and MBIE)

Non-migrant household sample: selected using **probability proportional to size sampling** based on the **latest census** listing.

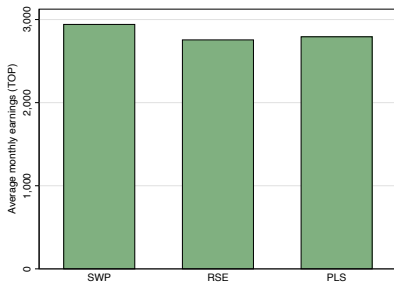
Modules: Omnibus Nature in Coverage

- Household roster
- Sociodemographics
- Education
- Children
- Labour
- Non-work income
- Expenditures
- Housing
- Assets
- Remittances, HH members
- Remittances, non-HH members
- Remittances, channels
- Temporary migrant HH details
- Non-temporary migrant household details
- Gender
- Follow-up and tracking
- Worker details

Average Earnings Abroad By Scheme

Question answered by the household head in Tonga:

“How much did [name] earn last month from wages, salaries, commissions, and non-agricultural business income, before taxes and other deductions?”



Household head reporting could be incorrect (e.g., taxes/deductions) but clearly in the right ballpark, as 3000 Tongan Pa'anga (TOP) is around 1900/mth AUD, or 500/wk.

Earnings also rise with hours worked: SWP average is 48/wk, and PLS 40.

Knowing awards, consider as lower bounds then check in worker survey/admin data.