# **Development Economics Workshop**

日本国内、海外から優れた研究を行っている研究者を招き、開発経済学研究会を 2020 年 5 月から 2021 年 1 月まで計 7 回開催した。昨年からのコロナウイルス拡大の影響によりすべてオンラインでの開催となった。セミナーでは、討論者を割り当てることにより、より活発な議論を促すことができた。東京地域の研究者と 遠方の研究者の交流を深め、GRIPS の学生を含む若手研究者を刺激する場を適用 することができた。

(1)

**Date**: May 13 (Wed) **Time**: 16.40 - 18.10

Place: Zoom

**Speaker**: Anna Tompsett (Stockholm University)

Discussant: Takeshi Aida (IDE-JETRO)

Title: How do community contribution requirements affect local public good provision?

Experimental evidence from safe water sources in Bangladesh

Language: English

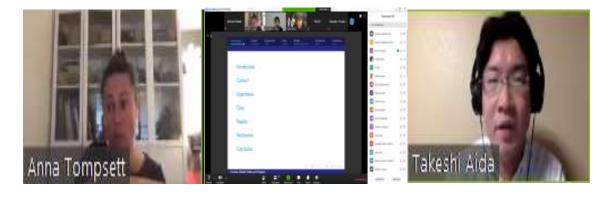
Attendants: 52 (Students: 17, GRIPS faculty: 6, Guests: 29)

GRIPS faculty: Yoko Kijima, Kazushi Takahashi, Alistair Munro, Akio

Yamazaki, Chikako Yamauchi, Stephan Litschig

Organizer: Yoko Kijima and Kazushi Takahashi

Photo:



Community-driven development projects often require communities to contribute collectively towards project costs. We provide the first experimental evaluation of a community contribution requirement for a development intervention, as well as the first experimental comparison between cash and labour contribution requirements of similar nominal value. Imposing a cash contribution requirement greatly decreases program take-up, relative to a contribution waiver, but imposing a labour contribution does not. Program impact is correspondingly lower under the cash contribution requirement than under the labour contribution requirement or the contribution waiver. Higher take-up under the labour contribution requirement appears to be the consequence of the low real value that communities place on their time. Our results suggest that there may be substantial welfare gains to be made by allowing households in poor rural communities to contribute in labour rather than cash.

(2)

**Date**: May 20 (Wed) **Time**: 16.40 - 18.10

Place: Zoom

**Speaker:** Hisaki Kono (Kyoto University) **Discussant:** Jun Goto (Kobe University)

Title: At the Right Time: Disbursement and Repayment Schedules of Microcredit Loans for

Sharecropping Farmers

Language: English

Attendants: 45 (Students: 15, GRIPS faculty: 6, Guests: 24)

GRIPS faculty: Yoko Kijima, Kazushi Takahashi, Akio Yamazaki, Chikako

Yamauchi, Stephan Litschig, Dainn Wie **Organizer**: Yoko Kijima and Kazushi Takahashi

Photo:



At Right Time: Modifying repayment and disbursement schedule in Microcredit

> Hisaki Kono (Kyoto University) Abu Shonchoy (Florida International University) Kazushi Takahashi (GRIPS)

> > May 20, 2020



While microcredit programs have expanded the access to credit, its outreach is still limited, especially among farmers in rural areas. In this paper, we evaluate modified microcredit programs by changing the timing of repayment and loan disbursement. While farmers have little income until the harvest season when they receive a sizable income, most microcredit programs require weekly installment, which causes the mismatch between the timing of the cash inflow and repayment. In addition, typical agricultural credit provides all requested loans before sowing, but farmers make investment several times until the harvest, and only a part of the credit will be used at first, which requires farmers to save the remaining money for the future investment. This mismatch of the timing of investment and loan disbursementcan may harm present-biased farmers who are tempted to overconsume. In order to investigate the impact of adjusting the timing of repayment and disbursement, we implemented a randomized controlled trial in Bangladesh, in which we randomly offered to share-cropping farmers either (1) the standard microcredit, (2) agricultural loan that requires the one time repayment right after the harvest, or (3) sequential credit that disburses the credit sequentially and requires the one time repayment right after the harvest. We found that the agricultural loans and sequential credits achieved higher uptake rates compared to the standard microcredit, and borrowers are more satisfied with the products. These new products did not worsen the repayment rate, and the sequential credits lead to a smaller loan amount on average. We argue that this is due to the option value effect: borrowers of the sequential credits could reduce the disbursement amount after observing the negative productivity shocks. Our theoretical model suggests that a partially flexible sequential credit that provides the option value and the commitment mechanisms will make a microcredit program more attractive to agricultural farmers.

(3)

**Date**: June 3 (Wed) **Time**: 12:00 – 13:.30

Place: Zoom

**Speaker**: Teresa Molina (University of Hawaii)

Discussant: -

**Title**: The Health Costs of Dirty Energy: Evidence from the Capacity Market in

Colombia

Language: English

Attendants: 41 (Students: 11, GRIPS faculty: 6, Guests: 24)

GRIPS faculty: Yoko Kijima, Kazushi Takahashi, Akio Yamazaki, Chikako

Yamauchi, Stephan Litschig, Dainn Wie

Organizer: Yoko Kijima and Kazushi Takahashi

# Photo:



### **Contents and Achievements:**

The endogeneity of fuel choice makes it difficult to measure the health effects of "dirty" (fossil fuel driven) energy production. To deal with this endogeneity, we exploit an electricity policy in Colombia that generates a price-based trigger for the use of dirty energy sources. We first document that the activation of this trigger leads to significantly higher levels of pollution, especially when accompanied by low wind speeds. We find that this switch to dirty energy increases morbidity from respiratory, cardiovascular, and mental health related diseases, by between 7 and 14%. This is accompanied by an approximately 10% increase in respiratory and cardiovascular healthcare costs. Emergency room deaths increase by 30%, driven by deaths of patients with respiratory illnesses.

(4)

**Date**: June 17 (Wed) **Time**: 11:00 – 12:.30

Place: Zoom

Speaker: Jishnu Das (Georgetown University)

Discussant: Takashi Kurosaki (Hitotsubashi University)

Title: Human Capital Accumulation and Disasters: Evidence from the Pakistan

Earthquake of 2005 **Language**: English

Attendants: 41 (Students: 18, GRIPS faculty: 5, Guests: 18)

GRIPS faculty: Yoko Kijima, Kazushi Takahashi, Akio Yamazaki, Chikako

Yamauchi, Stephan Litschig

Organizer: Yoko Kijima and Kazushi Takahashi

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We trace the effects of a devastating earthquake that occurred in Northern Pakistan in 2005. Using a new dataset from a survey conducted four years after the earthquake, we first show that the distance of the household from the fault line was not correlated with pre-existing household characteristics, while it was strongly predictive of earthquake-related damage and mortality. Through emergency relief aid, households living close to the fault line reported receiving substantial cash compensation that amounted to as much as 150 percent of their annual household consumption expenditure.

Four years after the earthquake, there were no differences in public infrastructure, household or adult outcomes between areas close to and far from the fault line. However, children in their critical first thousand days at the time of the earthquake accumulated large height deficits, with the youngest the most affected. Children aged 3 through 15 at the time of the earthquake did not suffer growth shortfalls, but scored significantly worse on academic tests if they lived close to the fault line. Finally, children whose mothers completed primary education were fully protected against the emergence of a test score

gap. We estimate that if these deficits continue to adult life, the affected children could stand to lose 15 percent of their lifetime earnings. Even when disasters are heavily compensated, human capital accumulation can be critically interrupted, with greater losses for already disadvantaged populations.

(5)

**Date**: Nov 11 (Wed) **Time**: 16:40-18:10

Place: Zoom

**Speaker**: Makiko Nakamuro (Keio University)

Discussant: Masaru Nagashima (Waseda University)

Title: The Effect of Computer Assisted Learning on Children's Cognitive and Non-

cognitive Skills: Evidence from a Randomized Experiment in Cambodia

Language: English

Attendants: 35 (Students: 10, GRIPS faculty: 5, Guests: 20)

GRIPS faculty: Kazushi Takahashi, Alistair Munro, Chikako Yamauchi, Dainn

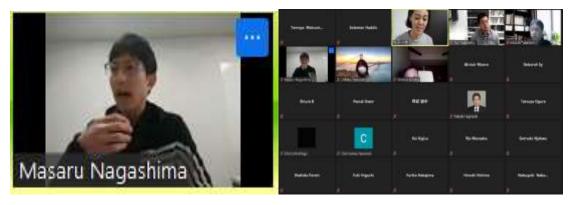
Wie, Stephan Litschig,

Organizer: Yoko Kijima and Kazushi Takahashi

Photo:



Presenter Presentation slide



Discussant Participants

# **Contents and Achievements:**

This paper examines the causal effects of computer-assisted learning on children's cognitive and non-cognitive skills. We ran school-by-grade-level clustered randomized controlled trials at five public elementary schools in Cambodia. After confirming that the IQ scores of treated students significantly improved over just three months, we randomly reassigned those students either into treatment or control groups for an additional seven month comparison. We find that students retain their cognitive skills during the additional seven-month treatment, but the initial gain diminishes for students who leave the program. Conversely, a meaningful effect on non-cognitive skills is not detected immediately after the first three-month short-run program, but the effect appears to become significant and persists in the longer run.

(6)

**Date**: Dec 2 (Wed) **Time**: 11:00-12:30

Place: Zoom

Speaker: Kelsey Jack (UC Santa Barbara)

Discussant: Yuko Nakano (University of Tsukuba)

**Title**: Harvesting the rain: The adoption of environmental technologies in the Sahel

Language: English

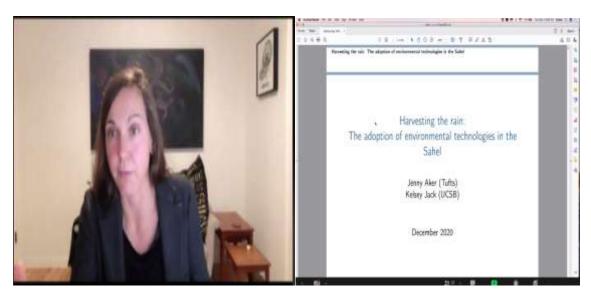
Attendants: 28 (Students: 3, GRIPS faculty: 5, Guests: 20)

GRIPS faculty: Kazushi Takahashi, Yoko Kijima, Stephan Litschig, Chikako

Yamauchi, Akio Yamazaki

Organizer: Yoko Kijima and Kazushi Takahashi

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## Presenter

## Presentation slide



Discussant Participants

#### **Contents and Achievements:**

We study the adoption of an environmental technology -demi-lunes- in Niger. Like many environmental technologies, demi-lunes require an upfront investment in exchange for medium-run benefits, which agronomists estimate to be substantial. We implement a cluster randomized control trial in 180 villages with treatments designed to relax informational, credit and labor constraints. Relative to a pure control, training increases the probability of adoption by 90 percentage points. Combining training with either unconditional or conditional cash transfers has no additional effect on the extensive margin of adoption, but increases the intensity of adoption by 35-50 percent relative to training alone. We also observe increases in agricultural output, consistent with agronomic descriptions of the costs and benefits of adoption, as well as other measures of household well-being. Over 90 percent of treatment households have operational demi-lunes two years later. Using the pattern of results and our experimental design, we investigate the mechanisms underlying our findings.

(7)

**Date**: Jan 6 (Wed) **Time**: 16:40-18:20

Place: Zoom

**Speaker**: Aashish Mahta (UC Santa Barbara) **Discussant**: Yasuyuki Todo (Waseda University)

**Title**: Education and the Evolution of Comparative Advantage

Language: English

Attendants: (attendance not taken)

Organizer: Yoko Kijima and Kazushi Takahashi

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Presentation slide



Discussant slide

Discussant

Presenter

We study education's role in helping lower-income countries to develop new industries. To do so, we measure changes in the export mixes of 49 countries between 1995 and 2015 along each of three dimensions, and ask whether differences in these measured changes can be attributed to educational differences between countries. As predicted by an economic complexity approach, countries were much less likely to develop comparative advantage in products they were not already familiar with from recent experience producing similar products – but countries with more educated working-age populations were substantially more likely to acquire comparative advantage in unfamiliar products. This is consistent with educated workers having greater ability to translate tacit knowledge across applications. This role is most strongly associated with primary education when transitioning to peripheral products, and with secondary education when transitioning to core products. In contrast, there is slight evidence that high education quality helped countries to obtain comparative advantage in more complex products. We also find no evidence that countries that increased education levels faster moved into more education-intensive products – as expected under a Heckscher-Ohlin-Viner model of trade patterns. The results are robust to correcting for many institutional, infrastructural and FDI-related variables.