

# Twenty Years and Counting

Celebrating 20 years of research, data, and analytics  
for evidence-based development policy and practice



THE KNOWLEDGE FOR CHANGE PROGRAM  
2022 ANNUAL REPORT

# Knowledge for Change Program

## 2022 Annual Report

## KCP Donors (2002-2022)







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# Message from the World Bank Group Chief Economist

The Knowledge for Change Program (KCP) turned 20 years old this year, and there is much to reflect on, learn, and celebrate. With support to more than 380 research and data projects over close to two decades, the KCP has made meaningful impacts on development policy and practice and expanded the knowledge frontier of a myriad of critical issues. Over the course of 20 years, the KCP grew from a pilot concept, supported by two founding donors—Finland and the United Kingdom—with an initial contribution of \$1.8 million, to a comprehensive Umbrella Multi-Donor Trust Fund, championed by 18 development partners with investments of \$80 million. KCP-financed research has brought fresh ideas and systematic thinking to a wide range of topics, on economic growth, education, public sector reform, climate change, digitalization, gender equality, and fragility, among others.

From the early days of the KCP's operation, the focus on global public goods has been front and center. Many of the KCP's outputs constitute global public goods, for which there is an inherent lack of incentive for any one institution to invest sufficiently in producing them. By pulling resources into a single program, the KCP has maximized the impacts of limited resources and produced research and analyses that have informed and influenced policy making. During Phase I, for example, a dedicated funding window was created specifically to finance research on global public goods. In later phases, support was more integrated, permeating through all the KCP's work.



Indermit Singh Gill

CHIEF ECONOMIST OF THE WORLD BANK GROUP AND SENIOR VICE PRESIDENT FOR DEVELOPMENT ECONOMICS



Another unique feature of the KCP is its emphasis on experimentation and scalable activities. The KCP aims at providing ahead-of-the-curve knowledge and analysis to anticipate future development challenges. Sometimes this means supporting projects that explore innovative and proof-of-concept ideas, including those that may have been seen as avant-garde at the time but later became mainstream topics. For example, in one of the feature stories included in the Annual Report, the team presents the KCP's impacts in piloting new analytical approaches to support basic educational service delivery in the early 2000s. This research endeavor helped shift policy discussions away from purely focusing on public spending, inputs, or supply-side measures, to zeroing in on outcomes, performance, and accountability. In addition to yielding useful insights on educational outcomes in the Lao People's Democratic Republic, Pakistan, Papua New Guinea, and Zambia, the project piloted an innovative data collection method—the Quantitative Service Delivery Surveys. The lessons learned later fed into the development of a more concerted effort to collect service delivery data in Sub-Saharan Africa—and subsequently beyond that region—through the Service Delivery Indicators project. This project has now implemented facility surveys in 19 countries.

Just as importantly, many of the KCP's research initiatives build on each other over time, creating a body of knowledge that conveys benefits far beyond the abilities of its constituent parts. This was clearly seen in a series of projects the KCP funded in Tanzania, which studied public health interventions, including for HIV/AIDS treatment and prevention. The work on financial incentives supporting better health outcomes, particularly for at-risk women, served as the basis of a knowledge reservoir and provided a good example of how research impacts can be amplified over time.



The 20th anniversary of the KCP program should not just motivate us to examine the past and distill lessons learned; it is an opportunity to imagine the future. It is also the occasion to invite more development partners to join us in the collective effort of evidence-informed policy making. The program could not have supported such an impressive list of research and data projects without the generous contributions from our donors—for that, we extend our sincere gratitude. The knowledge gaps in research and data on issues related to developing countries remain immense, and much more investment will be needed in the coming decades. The KCP program looks forward to enlarging and diversifying the partnership network, especially by forging collaboration with new donors, so that more innovative research and data projects can be funded to develop policy tools and actionable analyses that tangibly help inform policy actions.

Here's to another 20 years of impactful research!

**Indermit Gill**

Chief Economist of the World Bank Group and  
Senior Vice President for Development Economics  
The World Bank

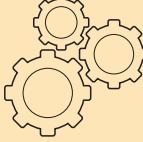


# About the KCP

## Vision and Mission

The Knowledge for Change Program (KCP) provides crucial support to the World Bank's mission to produce rigorous research addressing urgent knowledge gaps in developing countries; helps catalyze evidence-based policy changes in support of inclusive growth and poverty reduction; and facilitates global knowledge exchange, partnerships, and capacity building in research and data activities.

## Main Goals

	<b>ORIGINAL RESEARCH</b> Produce rigorous and relevant fundamental research in support of evidence-based policy making in international development, anticipating future needs and knowledge gaps as well as responding to current policy challenges.
	<b>OPERATIONAL RELEVANCE</b> Support World Bank Group country operations in the design, implementation, evaluation, and modification of development interventions in an effective and efficient manner.
	<b>OPEN KNOWLEDGE</b> Open access to knowledge through sharing, partnerships, and capacity building.

## Main Activities

Housed in the Development Economics Vice Presidency of the World Bank, the KCP is a collaborative endeavor between the World Bank and development partners. It is an Umbrella Multi-Donor Trust Fund with a successful track record in delivering high-impact, policy-relevant research and knowledge products. The

KCP commenced operations in 2002 and has supported more than 395 projects on research, data, and analytics. To date, 18 development partners have provided generous contributions to the KCP, with total funding of US\$79 million.

## **Current Program Phase**

KCP Phase IV was launched in the fall of 2020 and was established as an Umbrella 2.0 trust fund in 2021. The priority areas of Phase IV are aligned with the World Bank's International Development Association special themes and topics, namely, jobs and economic transformation; fragility, conflict, and violence; climate change; gender and development; governance and institutions; as well as cross-cutting issues in debt and financial fragility, human capital, and technology.



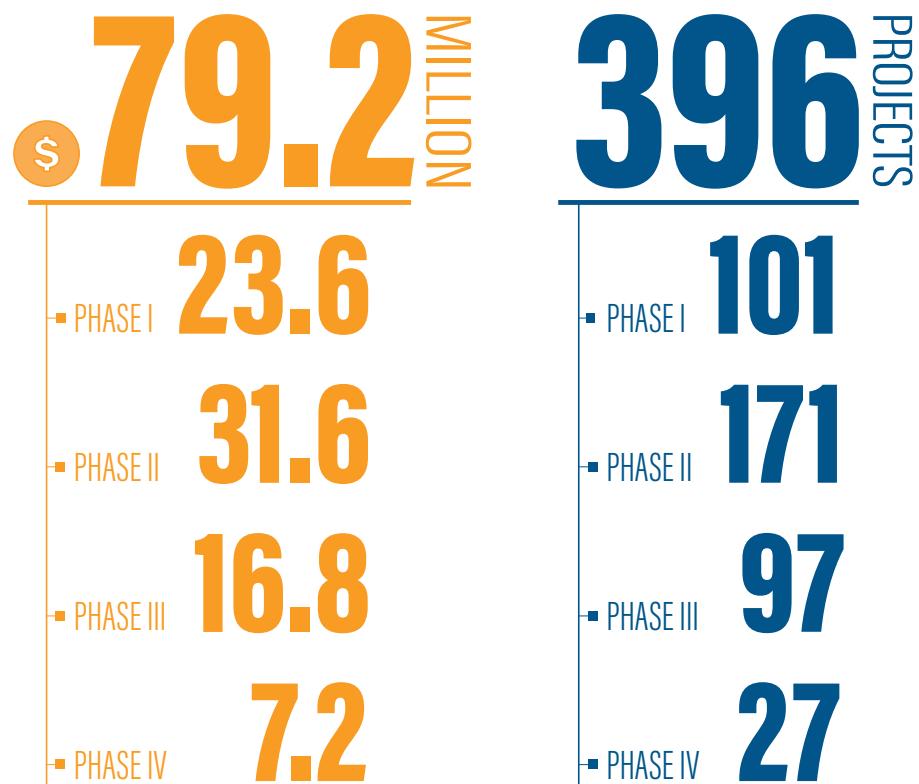
## About This Report: KCP 20+

The 2022 Annual Report consists of three main sections that examine the KCP's past, present, and future. The first section highlights the meaningful impacts that KCP-financed projects have made over the past 20 years, distills lessons learned, and inspires discussions of new research directions. The second section zeroes in on the ongoing, currently funded KCP projects from KCP III and KCP IV, presenting summaries of progress and achievements. The last section reports on the results of the 2022 round of funding allocation and the KCP's financial position.

## Time Capsules of the KCP over 20 Years

### Total Resources

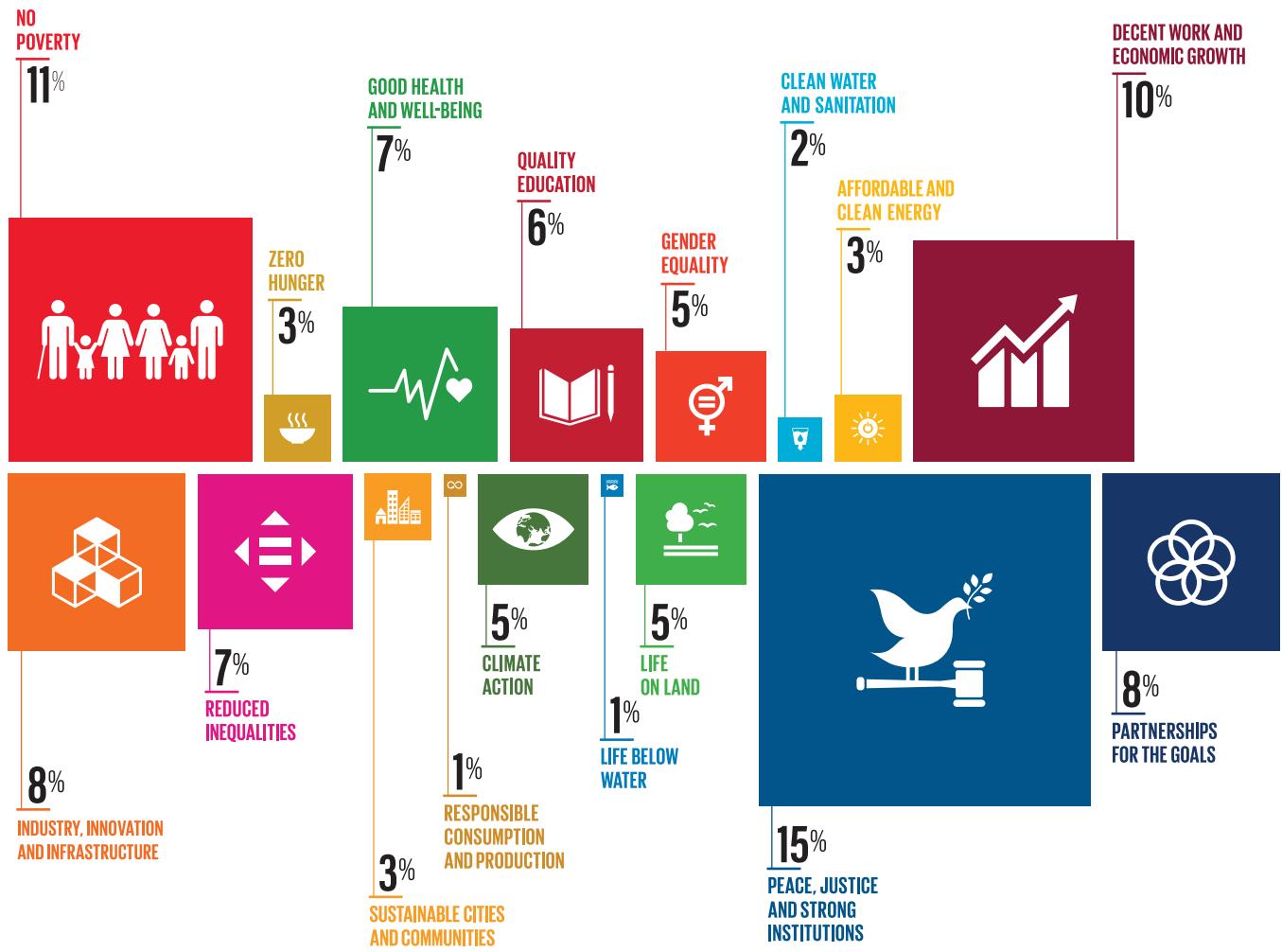
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## A Global Program Supporting Multi-Country and Cross-Cutting Research



## KCP's Contribution to the Achievement of the Sustainable Development Goals<sup>1</sup>



<sup>1</sup> Percentages of KCP projects supporting respective Sustainable Development Goals; estimated by the KCP Program Management Unit; projects may support multiple Sustainable Development Goals

## KCP 20+ Objectives

In 2002, the KCP started off as a pilot idea to carry out seminal research in important areas for poverty reduction and sustainable development by pooling limited intellectual and financial resources. Over the years, KCP projects helped inject fresh thinking, challenged conventional wisdom, charted new courses in the policy and practice of international development, and focused on systemic challenges and complex situations. Although the development puzzles that KCP projects help unravel might have evolved, the KCP value propositions—our vision of the principal ways through which the KCP would contribute to international development—has remained consistent.

A comparison of the value propositions of the KCP envisioned in 2002 and 2022 shows a stunning similarity. These points have also been used as core criteria to allocate KCP funding. The KCP continues to place a premium on the balance of addressing urgent issues and long-term objectives. A thorny challenge for research management is to anticipate topics sufficiently early to produce research findings that address them when required, while also reacting quickly and making nimble adjustments as real-time, urgent challenges emerge. Such a balance of long-term and short-term objectives has enabled KCP projects to instill a holistic perspective into research endeavors, and some have been able not only to suggest new directions on analytical and policy issues, but also jump start shifts and reorientations in development.

KCP VALUE PROPOSITIONS IN 2002	KCP VALUE PROPOSITIONS IN 2022
<ul style="list-style-type: none"> <li>◆ Are innovative, provide new knowledge and/or pilot/demonstration impact</li> <li>◆ Demonstrate country participation and ownership</li> <li>◆ Incorporate developing country capacity building</li> <li>◆ Can apply to different countries or regions</li> <li>◆ Achieve results while remaining cost effective</li> <li>◆ Demonstrate cooperation between different parts of the World Bank or between the World Bank and other donors and agencies</li> </ul>	<ul style="list-style-type: none"> <li>◆ Fill the large knowledge gap for global public goods</li> <li>◆ Establish a direct link between knowledge and policy responses</li> <li>◆ Maintain a long-term vision toward development</li> <li>◆ Experiment to develop scalable ideas</li> <li>◆ Leverage capacity building and partnerships to maximize impact</li> </ul>

In addition, it is imperative that there be space for researchers to explore “blue sky” issues. As Indermit Gill highlights in his message, the KCP supports experimentation and proof-of-concept ideas, which may not be conventional topics at the time of project initiation but later may become mainstreamed. Several projects featured in this section of the annual report speak to the long-term impacts that these projects have generated in shifting policy dialogues, dispelling myths, and triggering redeployment of development resources.

Lastly, capacity building and partnerships remain central to the KCP’s activities. To help bridge the science and policy divide, it is important to embed research and analytical capacity-building components into research work with local institutions through genuine long-term partnerships. The traditional “retail” model of research engagements—where researchers follow a linear process to design, produce, and disseminate analytical outputs—is gradually being replaced by a “wholesale” model,

where human and institutional capacity-building activities are part and parcel of research endeavors.

## KCP 20+ Impacts

Through the presentation of result stories, the next few pages are devoted to highlighting the KCP's knowledge, policy, and community impacts over the years.

It is well known that the impacts of research projects often take years to materialize. A typical duration for trust-funded projects is two years, but most of the research-related outputs and results are only realized after the conclusion of the projects. To identify the full range of contributions that the KCP may have made on development policy and practice, the team launched an exercise to trace the outcomes of selected projects that had previously been closed. Remarkably, many of the project leads reported not only new outputs, such as papers and reports being published, but also tangible development impacts, such as the use of the research findings by policy makers, scale-up of the research model, influences on policy design and decision making at the country level, or positive changes made for beneficiaries at the local level. In particular, the project snapshots showcase the following impacts:

### *Knowledge Impacts*

- ◆ Fill critical knowledge gaps and anticipate future challenges
- ◆ Implement proof-of-concept ideas
- ◆ Inspire the scale-up of models or replication of methodologies and data methods
- ◆ Cultivate a body of knowledge over time in a given field
- ◆ Create new indicators, measurements, databases, or policy tools to enable further analyses.

### *Policy Impacts*

- ◆ Tangibly influence the design and implementation of government policy actions
- ◆ Suggest new pathways and trigger reorientations for more effective development policies and practices
- ◆ Supply evidence-based advice and insights to World Bank operations.

### *Community Impacts*

- ◆ Forge partnerships with local stakeholders and institutions
- ◆ Build analytical and data capacities of local agencies.

## Human Capital

### **What Are the Linkages between Government Spending and a Variety of Service Delivery Outcomes?**

#### **KCP I –Incentives, Choice, and Accountability in Basic Education Services: Piloting a Micro Survey Approach**

Task team leaders: Ritva Reinikka, Deon Filmer

Project duration: December 2002–December 2005

Although significant amounts of public resources are spent on basic service delivery, it often falls short, especially for low-income countries and people living in poverty. A perennial question remains as to whether public investments improve economic and social outcomes for the people they serve or enhance the performance of the public sector. From water supply and sanitation to education and health, it is important to understand the linkages between government spending and a variety of service delivery outcomes, performance, and accountability. Does public spending on schooling help strengthen students' educational outcomes? Is health financing translated into reduced child mortality? What are the relationships of accountability between frontline workers who deliver services, policy makers who allocate resources, and the poor people who are the clients of services?

In the early 2000s, the KCP financed a series of research projects to develop analyses and tools for better understanding of the quantity and quality of public services on the ground, as well as their determinants, with a focus on the education sector. This body of research helped shift policy discussions away from purely focusing on public spending, inputs, or supply-side measures, to zeroing in on outcomes, performance, and accountability.

Between 2003 and 2005, the KCP supported a project that studied the quality of service delivery of one of the most essential public service agencies: schools. The project designed, tested, and implemented a Quantitative Service Delivery Survey

(QSDS) instrument in the Lao People's Democratic Republic, Pakistan, Papua New Guinea, and Zambia, to collect new types of micro-level data from basic and frontline education providers (schools). The pilot project also used these data to generate systematic empirical evidence on basic education delivery, with the aim of contributing to education and public sector reforms. The following is a list of illuminating and somewhat surprising research results for each country, and some of the lessons gleaned from the analyses are still highly relevant for policy making today:

- ◆ *Lao PDR.* This study explores the strength of the relationship between educational attainment and school attendance and living standards in Lao PDR, and how this relationship varies by gender, geographical location, and ethnic affiliation. The analysis finds that these divisions are important in determining whether a child has access to schools (especially to good schools) and what level of educational attainment is possible for that child. In explaining enrollments, the study finds that compared with boys' schooling, girls' schooling is more responsive to household and school characteristics. This is particularly so for poor, rural, non-Lao-Tai girls. Indeed, the underlying factors that together explain why some children are enrolled and others are not differ significantly across subgroups by gender, urban-rural residence, and ethno-linguistic affiliation. The results imply that policy interventions to increase schooling will not succeed unless they are carefully tailored to the specific constraints and needs facing each group.
- ◆ *Pakistan.* This study focuses on student learning achievement as measured through test scores in Pakistan. Absolute learning is low compared to curricular standards and international norms. Tested at the end of the third grade, a bare majority have mastered the first grade mathematics curriculum and only 31 percent can correctly form a sentence with the word "school" in the vernacular (Urdu). As in high-income countries, bivariate comparisons show that higher learning is associated with household wealth and parental literacy. In sharp contrast to high-income countries, these gaps decrease dramatically in a multivariate regression and looking at differences between

children in the same school. The largest gaps are between schools. The gap between government and private schools, for instance, is 15 times the gap between children from rich and poor families.

- ◆ *Papua New Guinea.* There was an experiment with free education in 2002 that resulted in some positive impacts. For one, there was a substantial increase in enrollments. The amount of subsidies received by primary/community schools increased nearly fourfold, and leakage virtually ceased to be a problem on account of a direct payment system and a highly publicized (and politicized) distribution of subsidies. Delays in the schools' receipt and use of the subsidies were also drastically reduced (to one month relative to three months in the preceding year). However, the experiment demonstrated systemic problems, for example related to the financial sustainability of the policy in a tight fiscal environment. In response to the free education policy, the average fee set by schools declined from K 84 per student in 2001 to K 46 in 2002—about half the level in 2001. First, there was uncertainty—validated by hindsight (the experiment was reversed after the subsequent election)—about how long the policy would last. Second, although the delay was reduced, it was nevertheless excessive for some schools given their virtual lack of working capital in relation to their immediate operational needs. Third, the increase in enrollments (including due to the return of earlier dropouts) enhanced schools' needs, while the subsidy payments were based on previous enrollment levels. Fourth, there was a lot of confusion about what the national policy really was, and politicians and bureaucrats played a role in this by leaving behind a trail of conflicting messages.
- ◆ *Zambia.* This research studied the impact of shocks to teachers on student learning in mathematics and English. The analytical results demonstrated that a 5 percent increase in the teacher's absence rate reduces learning by 4-8 percent of average gains over the year. This reduction in learning achievement likely reflects both the direct effect of increased absenteeism and the indirect effects of less lesson preparation and lower teaching quality when in class. The analysis also shows that health problems—primarily

teachers' own illnesses and the illnesses of their family members—account for more than 60 percent of teacher absences, which is not surprising in a country struggling with an HIV/AIDS epidemic. The relationship between shocks to teachers and student learning suggests that households are unable to substitute adequately for teaching inputs. Excess teaching capacity that allows for greater use of substitute teachers could lead to larger gains in student learning.

The project greatly influenced many policy interventions in the education sector. In Pakistan, the QSDS has been integrated into a long-running research program on the impact of information dissemination on schooling outcomes. In Zambia, the project informed the development of a United Nations Educational, Scientific and Cultural Organization International Institute for Education Planning book on public expenditure tracking—surveys, which was also disseminated within the Ministry of Education. In Lao PDR, the results were featured in the country's 2005 Laos Poverty Assessment, *From Valleys to Hilltops: 15 Years of Poverty Reduction*, as well as the 2006 Laos Public Expenditure Review. In Papua New Guinea, project findings played a key role in the World Bank's 2004 poverty assessment and influenced the development of the multi-donor *Human Development Strategy* document.

In addition to yielding illuminating insights on educational outcomes in Lao PDR, Pakistan, Papa New Guinea, and Zambia, the innovative QSDS data collection method also had a meaningful impact on measuring service delivery. Although nowadays it is common practice to combine data sources for research, it was still relatively a novelty to source quantitative data at the school level with other sources of data at the time—for example, from household surveys, administrative records, censuses, poverty mapping, and modeling exercises. While each of these other sources can reveal some important aspects, the pilot has shown that it is feasible to collect high-quality, facility-level data that shed light on the determinants of improved service delivery, outcomes, and, by implication, the policy priorities to improve outcomes.

Some of the experiences were summarized in the book "[Are You Being Served?](#)

[New Tools for Measuring Service Delivery](#). The lessons learned from the testing and implementation of the QSDS later fed into the development of a more systematic effort to collect service delivery data in Sub-Saharan Africa—and subsequently beyond that region—through [the Service Delivery Indicators](#) project, which has implemented facility surveys in 19 countries.

### **Learn More**

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## What Are the Impacts of HIV/AIDS Treatment and Prevention Efforts?

### KCP III – Extension of the RESPECT Study in Tanzania to the Population of Commercial Sex Workers and Women at High Risk in Dar-es-Salaam

Task team leader: Damien de Walque

Project duration: July 2015–October 2018

Traditional sexual behavior change interventions are based on information and education campaigns aimed at promoting safer practices. These interventions have not been as effective as hoped in terms of curbing the HIV/AIDS epidemic. Innovative solutions for HIV prevention—such as offering financial incentives for safer sexual behaviors—are promising in terms of health outcomes. It is also important to look at other aspects of HIV/AIDS treatment and prevention, such as the impact on the schooling of children and gender relations. What are the impacts of treatment on the welfare of patients and family members? Are conditional cash transfer (CCT) payments, which provide monetary incentives for remaining sexually transmitted infection (STI)/HIV negative, impactful?

The KCP has supported the cultivation of a body of knowledge related to HIV/AIDS treatment and prevention over a long period. From 2004 to 2006, researchers looked at the impact of antiretroviral treatment (ARV) on children's schooling and nutrition outcomes. The results demonstrated that children's weekly hours of school attendance increased by over 20 percent within six months after treatment was initiated for the adult household member. For boys in treatment households, the increase closely follows their reduced labor market supply. Similarly, young children's short-term nutritional status—as measured by their weight-for-height Z-score—also improved dramatically. The study provided evidence related to altering intrahousehold resource allocation in response to significant health improvements. The research demonstrated that the widespread provision of ARV treatment is likely to generate significant long-run macroeconomic benefits, as the improvements in children's schooling and nutrition at early ages affects their socioeconomic outcomes in adulthood.

From 2009 to 2012, using data from the Rewarding STI Prevention and Control in Tanzania (RESPECT) study, the KCP supported efforts to test innovative HIV prevention strategies. This experiment in Tanzania asked whether CCTs can be used to prevent people from engaging in activities that are harmful to themselves and others, such as unsafe sex. The findings from the study suggest that financial incentives—participants received a cash payment if they remained negative for a set of curable STIs—could be an effective prevention tool for STIs and possibly HIV. In rural Tanzania, among study participants who were randomly selected to be eligible for a \$20 payment every four months if they tested negative for a set of curable STIs, researchers saw a 27 percent reduction in the incidence of those STIs (adjusted results) after one year.

Further, the research evaluated men's and women's attitudes about intimate partner violence (IPV), relationship power, and sexual decision making. Unlike most previous research in Tanzania at the time, this study prospectively examined the relationship between attitudes about gender relations and IPV among young couples. The research demonstrated that women who reported that they shared sexual decision making and relationship power with their partner were consistently less likely to report IPV. In contrast, IPV was reported more frequently when men and women espoused inequitable attitudes or reported that women had more decision making control in the relationship—although few of these associations were statistically significant. The study findings emphasize the need for better understanding the delicate balance of power in intimate relationships and the role that perceived or actual imbalances in power (especially in favor of women) have in heightening women's risk of IPV.

From 2015 to 2018, research looked into whether CCTs can be used to prevent people from engaging in activities that are harmful to themselves and others, such as unsafe sex. The results indicate that CCTs based on negative results of periodic screenings for incident STIs are a potentially useful tool for the prevention of STIs and possibly HIV. Given the high social and economic cost of the HIV and AIDS crisis to this day, the research suggests that prevention can be far cheaper than treatment, thus motivating the continued search for innovative and effective new

prevention approaches. The absence of significant impacts in rounds 2 (month 4) and 3 (month 8) also suggest that the impact of the CCTs may take time to materialize, potentially due to issues such as individuals extricating themselves from complicated sexual relationships, or perhaps because the participants needed time to become accustomed to (and trust) the incentive mechanisms.

### Learn More

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## Fragility, Conflict, and Violence

### What Can We Learn from the Social Determinants of and Behaviors Related to Crime and Violence?

#### KCP III –Social Network Mapping and Analysis for Youth Living in High-Violence Urban Neighborhoods in Honduras

Task team leader: Marcus Holmlund

Project duration: March 2017–June 2021

Violence and crime continue to have negative impacts on vulnerable populations around the world, despite years of efforts to address these through many different means. However, efforts to prevent the creation and perpetuation of violence often lack a granular understanding of the determinants of violence in a specific context, and of potentially protective factors. What are the characteristics that underlie an array of behaviors and outcomes among at-risk populations? How can we inform and enrich policy design and shift youth away from crime and toward individually and socially productive opportunities?

From 2017 to 2019, the KCP supported research in practice that experimented with a new and strategic approach to help youth ages 18-29 in Honduras who are at risk of participating in and being victims of violence (the study is still ongoing). This first-of-its-kind research combines social mapping and analysis with a randomized controlled trial of an integrated soft and hard skills development intervention. The study examines the protective role of a labor market intervention in moving youth away from the market for crime and toward legal and individually and socially productive opportunities. It also considers youths' psychological wellbeing, crime victimization and participation, and norms surrounding the use of violence and crime.

The research was undertaken in collaboration with the Government of Honduras, in particular the Safer Municipalities Project Implementation Unit within the Honduran Social Investment Fund. It improved the capacity of the partnering organizations through a learning-by-doing approach that included partners in all aspects of the research design, planning, and implementation. It also contributed to the design of an experimental impact evaluation of a training and jobs program called the Temporary Jobs Program for At-Risk Youth. The program combined vocational training, soft skills training, and temporary job placements. The impact evaluation uses a randomized controlled trial study design to study whether the program prevents delinquency, promotes positive behaviors, improves mental wellbeing, and improves post-intervention labor market outcomes.

From individual aspirations and psychological wellbeing to community dynamics and cultural norms, the ongoing research has already yielded several data-driven

insights related to the social dynamics and behavior of youth living in selected high-violence neighborhoods. First, the research demonstrated that there is not only a lack of employment opportunities, but also that youth tend to work in low-quality jobs. Next, nearly half of the youth in the study sample show worrisome and severe symptoms of post-traumatic stress disorder and depression. The incidence of trauma is high, and its psychological costs are elevated. Finally, although the youth are optimistic about the future, there is a risk that without effective opportunities to realize better life outcomes, this optimism will be frustrated with potentially devastating effects for the youth and their communities, who will continue to struggle in the face of poverty and violence.

These research findings, along with many others, are directly informing and enriching policy and intervention design and implementation. Interventions targeting mental health and behavioral constraints should be a priority for improving labor market and economic outcomes and for preventing, and recovering from, violence.

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## Trade and International Integration

### **How Is Automation Impacting Current and Future North-South Trade and Job Prospects?**

#### **KCP III—Automation, Trade, and Labor Markets**

Task team leader: Bob Rijkers

Project duration: January 2019–June 2020

Production is being automated more than ever before, with the operational stock of industrial robots growing by the day. There is growing concern that production automation may negatively impact large swaths of the workforce, especially the wages and jobs of low-skilled workers in high-income countries. Developing countries are also concerned about their role in global value chains, as robotization could facilitate reshoring of labor-intensive tasks that are currently outsourced abroad. How will automation impact developing countries and their workers? How will it impact North-South trade? How will these trade impacts continue to evolve?

The KCP supported research from 2019 to 2020 that assessed how Mexican workers have been impacted by automation both domestically and in the United States. Using a local labor market approach, the research yielded analytical results that inform heated political debates and serve as a basis for evidence-based policy making. This Mexican case study used detailed trade and labor market data containing information on imports and exports for each Mexican municipality, combined with industry-level measures of robot adoption and rich labor market data.

The research demonstrates that the jobs of some low-skilled workers in developing countries are indeed being replaced by foreign robots. This phenomenon is occurring even though developing countries have not yet automated on a large scale. However, the study also shows that robotization is creating new opportunities for developing countries—increased automation has and will continue to catalyze, rather than reduce, North-South trade and enhance global welfare by lowering the cost of consumption. At the same time, trade and technological change will necessitate labor market adjustment and create distributional tensions. The study analyzed bilateral industry-level North-South trade over the past two decades. The findings revealed that a 10 percent increase in robot density in an automating industry in the North boosts its exports to the South by 11.8 percent. It also induces a 6.1 percent increase in the industry's imports from the South. An explanation for these findings is that automation increased productivity in rich countries, which, in turn, increased their demand for material inputs sourced from developing countries.

Although automation is presenting new opportunities for developing countries, it seems to be increasing demand for skills. Developing countries that fail to integrate

into global value chains face a risk of falling behind. The case study also shows that automation is likely to exacerbate wage inequality by putting downward pressure on the wages of those who are already earning low incomes.

The research evidence provides a balanced, nuanced understanding of automation policies. It helps in the design of policies that harness the growth potential of globalization and technological progress while ensuring that the attendant gains are equitably spread. For example, the World Bank's policy advice has shifted toward greater emphasis on human capital formation and remedial measures to offset the adjustment costs associated with automation. This study has stimulated and facilitated policy dialogues, particularly with governments interested in promoting job creation and reducing unemployment. The analysis featured prominently in *World Development Report 2020: Trading for Development in the Age of Global Value Chains*, and constituted the backbone for chapter 6 of the report, on the link between technological progress, trade, and development. It also featured in the 2019 East Asia and Pacific Economic Update. The research is helping to build a body of knowledge over time, as it led to two new World Bank studies: "How Technology Adoption and Trade Are Shaping Indonesian Labor Markets" and "Adapting Jobs Policies and Programs in the Face of Accelerated Technological Change."

The research results have been widely disseminated for further policy, operational, and social impacts, from talks at global research seminars at Columbia University and Tinbergen Institute, to presentations at other global World Bank Group conferences.

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### How Best to Assess Preferential Commitments to Multinational Investment in Services?

#### KCP II –Services, FDI, and Endogenous Productivity Effects in the European Neighborhood Policy—The Case of Armenia

Task team leader: Ana Margarida Fernandes

Project duration: May 2009–June 2011

In 2007, 380 preferential trade agreements had been notified to the General Agreement on Tariffs and Trade/World Trade Organization, and the numbers continued

to grow. Many countries were wondering how best to structure their existing or potential preferential trade agreements for growth and poverty reduction. Around 2009, some free trade agreements—such as those negotiated with the European Union and the United States—covered the area of services. Although it was important to understand the impact of preferential services commitments, no framework for assessing the ex-ante welfare impact of liberalization of barriers against foreign direct investment in business services in preferential trade agreements was available at the time.

The KCP supported research from 2009 to 2011 to fill this knowledge gap in an innovative way. The research improved knowledge around service policies by developing a model to assess preferential commitments to multinational investment in services. The findings—including an assessment and estimation of the regulatory barriers in services—were presented to the Government of Armenia for integration into policy and practice. At the request of the Ministry of Economy of Armenia, the modeling framework was extended to include the impact of trade facilitation and standards harmonization, and the relative importance of these aspects of a Deep and Comprehensive Free Trade Agreement with the European Union.

The results demonstrated that an Armenian Deep and Comprehensive Free Trade Agreement with the European Union should produce substantial gains from the deep aspects of the agreement, including trade facilitation, services liberalization, and standards harmonization. Trade facilitation was shown to provide the greatest benefits, followed by services liberalization. However, tariff preferences in the European Union markets were not likely to produce benefits due to trade diversion. The government agreed that there was more to gain from a preferential arrangement with the European Union than with the Commonwealth of Independent States, but that multilateral services liberalization was the best option. Importantly, not all aspects of a deep agreement with the European Union were shown to be beneficial. For example, adopting all the EU sanitary and phytosanitary standards for domestic production would produce substantial costs that would likely exceed the benefits in many cases. As such, the researchers recommended that the Government of Armenia use a case-by-case approach to adopting the EU sanitary and phytosanitary standards.

This research project had meaningful impacts on Armenia's trade-related policies. Within the constraints of the Eurasian Economic Union, as advised by the researchers, the Government of Armenia succeeded in its efforts to open its services markets multilaterally to all foreign investors. A Comprehensive and Enhanced Partnership Agreement between Armenia and the European Union was applied since June 2018 and formally entered into force on March 1, 2021. The Comprehensive and Enhanced Partnership Agreement includes provisions to remove barriers against trade in services between Armenia and the European Union. In May 2015, Armenia signed a Trade and Investment Framework Agreement with the United States. The agreement established a United States–Armenia Council on Trade and Investment to discuss bilateral issues. A publication by the U.S. State Department titled *2020 Investment Climate Statement: Armenia* noted that Armenia's legal framework and government policy aims to attract investors and that investors from the United States have invested in the Armenian banking, energy, pharmaceutical, information technology, and mining sectors.

In addition, the methodology developed by this research has been applied in numerous policy and scientific journal applications, both internal to the World Bank Group and by external stakeholders. The methodology was also used to shape World Bank policies in Kenya, Tanzania, Belarus, the Philippines, Malaysia, and South Africa and regional agreements. The methodology has also been applied to projects outside the World Bank that address regional commitments in foreign direct investment in services in the Eurasian Economic Union, the Transatlantic Trade and Investment Partnership, the Ukraine-Türkiye Free Trade Agreement, and an analysis of Brexit.

Moreover, the researchers developed an input-output table for the Government of Armenia based on preliminary survey data from the Armenian National Statistical Office and trained Armenian National Statistical Office officials on how to develop and interpret the model. The capacity building and model transfer in the training resulted in several applications of the modeling software by transition country experts. Many organizations are now able to implement models of this type, including the Institute of Economic Research and Policy Consulting in Kyiv,

Ukraine; the International School of Economics, Tbilisi, Georgia; and the University Complutense in Madrid, Spain.

Lastly, the research contributed social accounting matrixes for Armenia, Georgia, and Azerbaijan to the Global Trade Analysis Project database so that additional research may be conducted. For example, the recently constructed environmental computable general equilibrium model of Georgia developed at the International School of Economics was based on the model developed in this project.

### **Learn More**

Documentation for Armenia, Azerbaijan and Georgia is now on the list of Global Trade Analysis Project sectors (as [regions 89, 90 and 91](#)).

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## Environment and Climate Change

### **What Are the Social, Environmental, and Economic Impacts of Biofuel Production and Expansion?**

#### **KCP I –Biofuels and Sustainable Development**

Task team leader: Govinda Timilsina

Project duration: June 2008–March 2010

#### **KCP II –Economics of Biofuels and Potential Impacts on Biodiversity**

Task team leader: Govinda Timilsina

Project Duration: May 2009–May 2012

In 2007 and 2008, both public and private sector stakeholders were questioning the rapid expansion of biofuels amid a food crisis and concerns about socio-environmental sustainability. Although biofuel mandates and targets had already been introduced, and substantial investments made, the social, environmental, and

economic impacts of biofuel expansion were not well understood. Could expanded biofuel production contribute to poverty reduction and reduce inequality? What were the environmental impacts of biofuel production, particularly related to land use and climate change?

From 2008 to 2012, the KCP financed first-of-its-kind analytical work designed to tackle important questions related to the short- and long-term impacts of biofuel production. Widely applicable across multiple countries and sectors, the multifaceted and interdisciplinary research spanned social, economic, and environmental topics. The study also examined the impacts of various policy instruments on biofuels, such as the introduction of a carbon tax on biofuel markets.

From international trade to food security, the research yielded substantial evidence-based insights on various themes. On food security, the research demonstrated that the global expansion of biofuels could impact food supply in the long run, but not to the level as claimed by the media in 2008. Many countries developed policies to discourage or limit the use of food commodities to produce biofuels (for example, banning the use of corn for biofuel production in China) and encourage the use of non-food products to produce biofuels (second-generation biofuels).

On environmental issues, the study found that biofuels would not help to reduce greenhouse gas (GHG) emissions globally. The emissions from land use change due to biofuel expansion were found to be higher than the emissions reduced through the substitution of gasoline and diesel by biofuels. The expansion of biofuels to meet targets and mandates would not cause net reductions of GHG emissions for many years unless conversion of forests to cropland to meet the incremental demand for cropland due to biofuels is avoided. The results implied that proper regulations and enforcement mechanisms were needed to control deforestation so that the incremental cropland to meet biofuels demand is supplied through pastureland instead of forest, thereby resulting in net GHG mitigation. Finally, the study showed that the marginal rate of deforestation would be independent of the level of biofuel targets. GHG emissions originating from land use change due to the expansion of biofuels to meet the announced targets by 2020 would be higher than

GHG avoidance from the substitution of petroleum products, thereby resulting in the net release of GHG emissions to the atmosphere. Most countries would have to wait more than two decades to realize GHG mitigation benefits after they meet their announced biofuel targets.

On economic impacts, the research endeavor found that the expansion of biofuels to meet their announced targets would slightly reduce global gross domestic product. However, the impacts were mixed and varied substantially across countries and regions. For example, countries like the United States, India, and the Russian Federation were found to have net negative impacts due to biofuel expansion, whereas countries like Argentina, Brazil, Indonesia, and Thailand were found to have net positive impacts.

The research also illuminated the social impacts associated with the expansion of biofuel production, particularly related to poverty. It demonstrated that the impacts varied significantly across countries and regions, for example raising poverty rates in Sub-Saharan Africa, where the incidence of poverty is already relatively high. Biofuel expansion was predicted to reduce the poverty headcount in East Asia and Latin America. Overall, the expansion of biofuels to meet announced targets would increase global poverty, although the magnitude of the increase would be small.

These findings—and more—informed policy making, operations, investment activities, and continued knowledge generation for the World Bank and its client countries. For example, the research findings helped countries develop policies for the sustainable production of biofuels to a level that does not cause land clearing. The European Union banned imports of biofuels produced from palm oil, the primary driver of deforestation in Southeast Asia. Country-specific case studies were also developed for Zimbabwe, Zambia, and Mali to guide biofuel promotion policies.

Overall, the research endeavor resulted in an impressive body of knowledge for the public good that still has relevant lessons today. More than 20 journal articles, one book, several book chapters, and 17 World Bank Policy Research Working Papers were produced. The studies produced from the KCP-funded research have more than 2,400 citations.

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## **Climate Change and Respiratory Health—Can Cookstoves Help?**

### **KCP II —Ethiopia's Push for 9 Million Improved Cooking Stoves to Improve Health and Combat Climate Change**

Task team leader: Michael Toman

Project duration: July 2013–June 2015

### **KCP III —The Effect of Improved Biomass Cookstoves on Indoor Air Quality and Respiratory Health in Rural Ethiopia**

Task team leader: Michael Toman

Project duration: July 2015–June 2017

How much and why are improved cookstoves being used? How do households interact with improved cookstoves? Do improved biomass cookstoves reduce carbon emissions? Can improved biomass cookstoves contribute to REDD+ (Reducing Emissions from Deforestation and forest Degradation) in low-income countries? These questions (and more) are important because the use of improved stoves is a critical determinant of reduction in indoor air pollution and greenhouse gas emissions.

Cleaner and more fuel-efficient cookstoves may improve human health and combat climate change. Thus, the KCP funded a series of research endeavors from 2013 to 2017 that examined the effects of improved biomass cookstoves on indoor air quality and respiratory health in rural Ethiopia. Prior to this research, much of the attention on clean cooking in Ethiopia was limited to the technology design and performance of different designs as measured in a laboratory.

In collaboration with the Environment and Climate Research Center (now called the Institute for Policy Studies) in Addis Ababa, the series of research endeavors looked at everything from incentives for adoption of a new stove design in a more real-world experimental setting, to indoor air pollution reductions from use of the improved stove. The research design and findings were shared with Ethiopian

government officials and other practitioners in workshops before and after the two parts of the project.

From 2013 to 2015, the KCP supported first-of-its-kind research that used a randomized experimental design and real-time electronic stove monitoring to evaluate the frequency with which villagers use improved biomass-burning *Mirt* (which means “best” in Amharic) injera cookstoves in rural Ethiopia. Biomass is overwhelmingly the primary source of household energy use, and injera baking represents almost half of household energy use for cooking, so improving the energy efficiency of this activity can have major consequences.

First, the research discovered behavioral patterns related to the adoption of cook-stove usage. The study found that Ethiopian households in the study area used the Mirt stoves on a regular basis well after they obtained them, and that use increased with experience. Giving the Mirt stoves away for free and supporting community-level user networks were estimated to lead to greater use. The study found no evidence that stove recipients used the stoves more if they had to pay for them—a hypothesis that frequently arose in policy debates around improved stove promotion.

Second, the research revealed the motivations behind cookstove usage. The most important determinant of stove user satisfaction was reduced smokiness in the home, with users expressing much lower priority for forest protection to limit global warming. The project also found that with experience, users were able to cook standardized batches of injera faster on the Mirt stove than the traditional three-stone tripod, which saves valuable time, mainly for women.

Third, the research calculated related environmental effects and estimated the fuel-wood and carbon dioxide savings from an improved cookstove program that was in the process of being implemented in rural Ethiopia. Overall, the Mirt improved cookstove was found to use 30 percent less fuelwood to cook injera. On average, one improved stove saves approximately 634 kilograms of fuelwood per year, or about 0.94 ton of carbon dioxide equivalent per year, which is about half of previous estimates.

From 2015 to 2017, additional research built on the above findings and sought to evaluate the extent to which the technology reduced household air pollution and improved the health of household members—especially female cooks and children. A key conclusion of the analysis of the health impacts was that very young children's exposure to household air pollution led to stunting of their growth. This effect was lessened by regular use of the Mirt stove over the longer term (as confirmed by stove monitoring devices used in the experiment).

The research helped gain knowledge and insights to benefit policy makers in developing countries, World Bank Group operational units implementing improved cooking and indoor pollution reduction projects, and international partners working with Ethiopia and other developing countries on clean energy. Overall, the research demonstrated that improved cooking technologies were technically and economically viable and capable of providing multiple environmental and development benefits.

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## Poverty and Inequality

### Micro Database for Positive Social Impact

#### KCP I –The International Income Distribution Database (I2D2)

Task team leader: Dominique van der Mensbrugge

Project duration: May 2009–July 2010

#### KCP II –Harmonized Microdata for Enhanced Global Poverty Monitoring: The International Income Distribution Database (I2D2)

Task team leader: Kathleen Beegle

Project duration: July 2014–December 2015

Data are foundational for designing sound policy and evidence-based decision making. Household survey data in particular are necessary to answer questions related to global poverty and wellbeing, such as: How has the global poverty incidence for children ages 0–5 changed over the past decade? What fraction of households are living on less than \$1.25/day? Is the gender wage differential larger or smaller for poor households or in low- or middle-income countries?

However, microdata often remain unarchived, difficult to locate and access, and even unusable, especially in low- and middle-income countries. It is important not only to support more high-quality surveys, but also to store, verify, and integrate them in a centralized location. Moreover, there is added value in combining consistent data sources across countries to understand global patterns and trends in wellbeing.

The KCP supported the expansion of a worldwide micro database from 2014 to 2015. The International Income Distribution Database (I2D2) was originally started for the [World Development Report on Equity \(2006\)](#); subsequently, the I2D2 was a critical input for the [World Development Report on Jobs \(2013\)](#). It was a unique effort to harmonize hundreds of household surveys to provide consistent statistics on aspects of employment and wellbeing that were not otherwise captured

in global data efforts. Derived from nationally representative household surveys, the I2D2 contains core socioeconomic indicators covering 160 economies (127 developing and 33 developed) and more than 1,000 surveys. At the time of the KCP investment, however, the I2D2 was underfunded and falling behind in its coverage. The investment from the KCP expanded the survey coverage and quality of inputs and helped support dozens of additional studies in drawing on the latest data.

From academic articles and regional studies to Human Development Reports (as well as World Development Reports), more than 70 publications have used this global public good. In addition, databases such as Educational Attainment and Enrollment Around the World, the Gender Disaggregated Labor Database, JOIN (the global jobs indicator database), and Worldwide Bureaucracy Indicators were built using the I2D2. The I2D2 legacy lives on in recent efforts to subsume the I2D2 into two new efforts at the World Bank: (i) the World Bank Global Monitoring Database, which tracks global poverty and correlates it with key covariates like employment and education, and (ii) the Global Labor Database, which covers harmonized microdata for surveys that do not include a poverty measure.

Many studies have used the I2D2. For example, one study analyzes the potential impact of climate change and climate policies on poverty reduction. The study quantifies the challenges of climate change as an obstacle to the sustained eradication of poverty. It also demonstrates that climate-informed development can prevent most short-term impacts, whereas immediate, pro-poor emissions reduction policies can drastically limit long-term impacts. Another study using the I2D2 provides new cross-country evidence on the impact of cognitive skills, as measured by international achievement tests, on subsequent youth employment outcomes. The research demonstrates that while increasing the quality of education can play a central role in improving youth employment outcomes, increasing attainment remains an important and complementary objective to foster the creation of better jobs for youth. However, preliminary extensions to the existing analysis using data from additional countries and years suggest much more important effects of test scores on measures of job quality, such as wage and non-agricultural employment, than on employment, enrollment, unemployment, or labor force participation.

## **Learn More**

The list of publications and databases using the I2D2 can be shared upon request to the [KCP Program Management Unit](#)

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### **Data for Shared Prosperity and Poverty in Developing Countries— Pushing the Frontiers of Research on Poverty Imputation in a Data- Scarce Environment**

#### **KCP III –Poverty Imputation Handbook and Research**

Task team leader: Hai-Anh Dang

Project duration: September 2015–March 2019

Household survey data underlie poverty estimates and support evidence-based policy making in the developing world. However, household consumption data—as well as a wide range of other outcomes, such as agricultural production, labor, and land measurement—are often unavailable. How do we monitor progress in reducing poverty when low-income countries are missing data for poverty comparisons over time? What are the best methods to produce poverty estimates when household consumption data are not available?

From 2015 to 2019, the KCP supported research that addressed this knowledge gap and pushed the frontiers of research on poverty imputation in data-scarce environments. Cost-effective techniques were developed that help to produce frequent and reliable estimates of poverty where income data are unavailable. An accessible treatment of various methodologies was also prepared in a handbook

format, which has been updated continuously with other funding support. The research also resulted in a practical guide with detailed instructions on computer programs that can be used to implement the reviewed techniques. Bridging the gaps between academic literature and practical needs to track poverty trends, these global public goods have been especially impactful.

In 2018, an oral briefing was delivered to the Deputy Chair of the Russian Senate, Ms. Galina Koroleva. An accompanying policy brief discussed findings from an assessment of inequality and welfare dynamics in the Russian Federation from 1994 to 2015. The research showed rising income levels and decreasing inequality, with the latter being mostly caused by pro-poor growth rather than redistribution. The poorest percentile experienced a growth rate that was more than 10 times that of the richest percentile, leading to less long-term inequality than short-term inequality.

In 2018, the team presented research on welfare dynamics (including poverty, vulnerability, and mobility) in India at a United Nations expert workshop. Using Indian National Sample Survey data from 1987 to 2012, the research uncovered patterns of transition into and out of different classes of the consumption distribution. The research demonstrates that income growth accelerated at the aggregate level, accompanied by an accelerating decline in poverty. However, those who escaped poverty remained vulnerable. Most of those who are poor were also poor in the preceding period, and are thus likely to be chronically poor. The characteristics of households that are upwardly mobile contrast with those of the poor; upwardly mobile households are also far less likely to experience downward mobility.

Lectures on global inequality trends were also delivered to high-level Vietnamese government officials as part of a program with Indiana University's O'Neill School of Public and Environmental Affairs.

The analytical results contributed to the improvement of various World Bank Group projects, including the Europe and Central Asia regional flagship on inequality and distributional issues. The quality of the World Bank's work on poverty and

vulnerability has also improved, leading to enhanced policy and technical advice for government clients.

Capacity building and training has further magnified the impact of this study. The researchers delivered a training course on survey imputation methods in refugee contexts for the United Nations High Commissioner for Refugees and the World Bank's Young Professionals program.

## Learn More

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- Dang, H.-A., and U. Serajuddin. 2020. "[Tracking the Sustainable Development Goals: Emerging Measurement Challenges and Further Reflections](#)." *World Development* 127: 104570.

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## Private Sector Development

### Does Management Matter?

**“**One of the positive things I would like to acknowledge from KCP is that it has helped fund this accumulating body of knowledge, funding studies that help build on each other. This is most clearly seen in the work on management practices, where it funded measurement tools, a proof-of-concept pilot in India, and then a project in Colombia which directly came from the policymakers in Colombia seeing the Indian results and wanting to try to scale them in Colombia.**”**

—David McKenzie, Lead Economist,  
Development Research Group, World Bank

## **KCP II — How Much Do Management Practices Matter? A Randomized Experiment in India**

Task team leader: David McKenzie

Project duration: May 2009–December 2010

## **KCP II — Improving the Management and Profits of Small Businesses and Their Measurement**

Task team leader: David McKenzie

Project duration: July 2013–December 2015

## **KCP II — Upgrading Management Technology in Colombia: A Randomized Experiment**

Task team leaders: William Maloney, David McKenzie

Project duration: July 2014–December 2015

## **KCP III — Business Practices and Firm Performance**

Task team leaders: Caio Piza, Miriam Bruhn

Project duration: November 2018–April 2021

Does management matter in firms' performance in developing countries? With the KCP's support over the years, a series of research projects uncovered causal evidence that demonstrated the impacts of management improvements on private sector productivity.

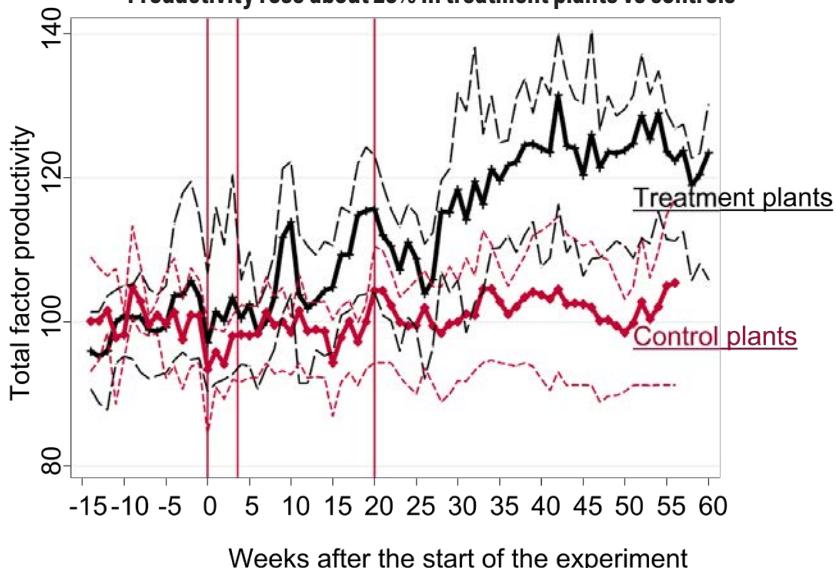
The first project, a proof-of-concept pilot started in 2010 in India, revealed the first causal evidence that management practices affect productivity in developing country firms, and that intensive consulting can improve management practices. In addition to achieving high acclaim in academic circles, this pioneering study successfully put management improvements for firm productivity growth on the agenda for policy engagements in a wide range of developing countries. It also provided rigorous evidence that consulting engagements can be included as an effective instrument in governments' policy toolbox. This recommendation was incorporated into a Growth and Employment project in Nigeria, which provided

government subsidized consulting services to small and medium-sized enterprises. What made the project in India even more impactful was that the authors conducted a long-term follow-up study and observed that even after a decade, many of the management practices adopted by the original participating plants persisted. This revelation suggests that effective management interventions have long-lasting impacts.

### The Organization of Inventory



**Productivity rose about 20% in treatment plants vs controls**



The KCP subsequently financed two additional related projects in 2015, which built on the success of the Indian project and cultivated a crucial body of work on evidence related to the causal link between management practices and firm outcomes. One project supported the development of new measurements for firm outcomes and business practices. A notable output of this project was that it tested and fine-tuned a tool to measure business practices in small firms, which is now being widely used by many other researchers and has filled a knowledge gap on the importance of business practices in small firms. The research also illustrated that better business practices

are associated with better firm performance across a wide range of developing countries, suggesting that there is a policy rationale for trying to improve business practices in small firms, not just in larger firms. The work also spurred the use of training programs, which have then improved outcomes for microenterprises in communities. All of these lessons remain critically relevant for policy making today.

The third project in Colombia built on the success of the management experiment in India and innovatively tested and demonstrated that a new group-based approach to consulting could deliver equivalent gains to individual consulting at a lower cost. The project directly influenced the design of a technical extension of the World Bank project in Colombia. The results proved that this approach could deliver equivalent or perhaps greater gains for firms that use local consultants for individualized consulting, at one-third of the cost. The new evidence formed the basis for more realistic, cost-effective ways to manage improvement of practices in developing countries today.

The KCP supported an additional project between 2018 and 2021 that also searched for and tested cost-effective interventions for business growth. The study evaluated why micro and small and medium-sized enterprises were not adopting better management practices, despite these having been shown to improve firms' productivity. In collaboration with Brazilian Service of Support for Micro and Small Enterprises (SEBRAE) regional branches in the states of Paraná and Rio de Janeiro, the research set out to test whether lack of information on the importance of business practices to firms' growth is one of the factors behind firms' suboptimal investment in business practices.

The research assessed whether shocking firms with straightforward and tailored information would lead them to adopt better practices or to seek out business service advice that could lead to management upgrading and, consequently, improve performance. The treatment groups were assigned different versions of an information sheet that benchmarked business practices to other firms and listed five practices to improve. The results show that in Paraná state, receiving any information sheet

led to increased demand for business advice by 7 percentage points in the first six months, or 30 percent over the control mean, suggesting that information matters for seeking advice. However, the control group caught up over the next 12 months. The intervention did not affect business practices and performance outcomes, but it decreased the fraction of firms that report being happy with their performance. Even so, the intervention was found to be cost-effective for the service provider, and the results of this research led the SEBRAE team to adjust its program by integrating the one-pager into the project design.

In a spinoff research project with SEBRAE offices, the team investigated whether the low demand for free-of-charge business advice could be related to the quality of the service provided. The research found that management advice varies greatly across consultants, which might shape how consulting services are delivered and, in turn, how small and medium-sized enterprises perceive the potential returns of following noisy advice. However, the study found that noisy advice is not exclusive to SEBRAE as it performs similarly to a top local consulting firm and an internationally known consulting firm.

These results, among others, may influence private sector development policies. For example, machine learning algorithms may be introduced in the prognostics stage to reduce noise and biases when advising small and medium-sized enterprises to adopt new business practices. SEBRAE in Rio de Janeiro is incorporating these findings into the management consulting services it provides.

### **Learn More**

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## How Can Micro and Small Firms Thrive?

### KCP I –New Research on Firm Informality

Task team leader: David McKenzie

Project duration: July 2006–June 2009

### KCP I –Innovation and Informality across the Firm Size Spectrum in Sri Lanka

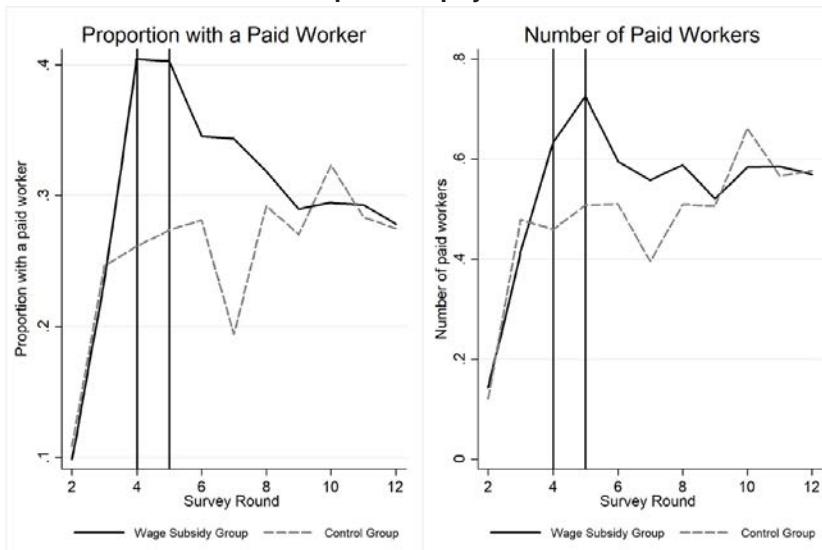
Task team leader: David McKenzie

Project duration: July 2008–June 2009

The informal sector is a key source of employment for people living in poverty, and it is responsible for much of the non-agricultural labor force in developing countries. However, data and research was scarce around informal firm productivity, the barriers informal firms face for growth, and how to measure their performance.

From 2006 to 2009, the KCP supported innovative research that administered surveys on firms and firm informality to measure the dynamics of the informal sector and identify the constraints to the growth of small firms. The study conducted new major surveys of informal firms, developed new measurement tools, and conducted a large-scale randomized experiment designed to investigate the constraints to firm growth. In collaboration with local researchers, a representative firm survey was completed in Sri Lanka, covering both formal and informal firms across the entire firm size spectrum.

### Impact of Employment



The analytical results demonstrate that innovation is key for micro and small firms. Marketing and product innovations were demonstrated as the most common innovations. Innovation was positively correlated with exporting and access to finance, but not found to have any relationship to whether or not a firm is formally registered.

In addition, the study found that microenterprises were not as labor constrained as previously thought, and that wage subsi-

dies did not have lasting impacts on firm employment. These findings enabled better measurement of profit outcomes for selected micro enterprises, and also provided new evidence that labor market constraints are not the main barrier to micro enterprise growth. The tool related to firm profits has helped inform a variety of decisions on the effectiveness of microenterprise programs.

## **Learn More**

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## Macro and Finance

### **What Policies Work and What Outcomes Are Associated with the Design of Bank Regulation and Supervision?**

#### **KCP III –2016 World Bank Survey of Bank Regulation and Supervision**

Task team leader: Robert Cull

Project duration: August 2015–December 2018

#### **KCP III –After the Global Financial Crisis: Bank Regulation and Supervision**

Task team leader: Robert Cull

Project duration: July 2017–December 2019

### KCP III – Bank Regulation and Supervision Reforms: Impact on Developing Countries

Task team leader: Robert Cull

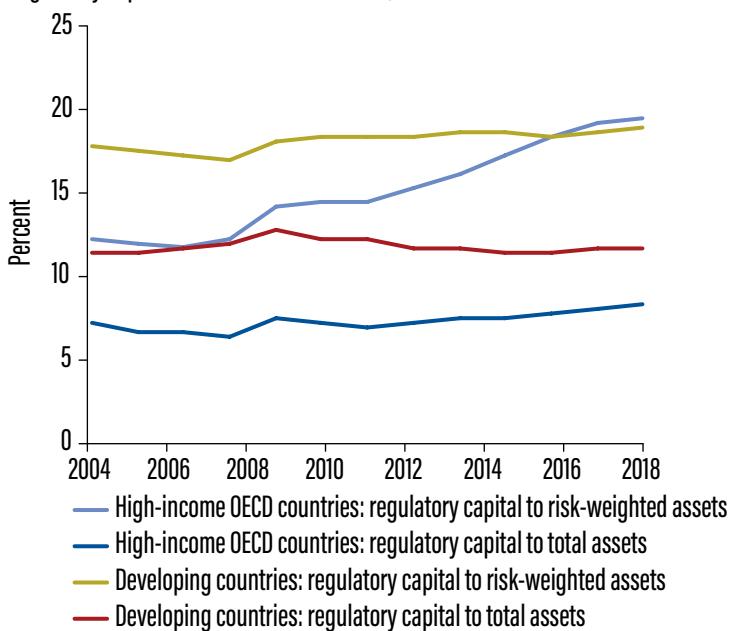
Project duration: November 2018–October 2022

Bank regulation and supervision has profound consequences for the financial sector. The development of the financial sector, in turn, is known to influence economic growth, poverty, and inequality. Banking crises, which can result from inadequate regulation and supervision of banks, can be very costly and can negatively impact people living in poverty. It is important to understand what policies work in developing countries and what outcomes are associated with the design and implementation of such policies.

The KCP financed research from 2017 to 2020 that made fundamental contributions to understanding the factors that drive bank regulation and supervision, and the subsequent effects on banking sector outcomes and general economic performance.

Researchers first updated the World Bank's Bank Regulation and Supervision Survey (BRSS) database, in addition to improving the data quality and making it easier to access past rounds of the survey data in a systematic way. The fifth round of the BRSS encompassed information on 160 jurisdictions, including two monetary areas, 66 high-income countries, and 93 emerging markets and developing economies. Prior to this update, the survey was completed in 2011 (just after the global financial crisis) with information from 2008–10. Many countries were only beginning to pass and implement regulatory reforms following the crisis at the time. Therefore, the objective of the 2019

Regulatory Capital-to-Asset Ratios over Time, 2004–18

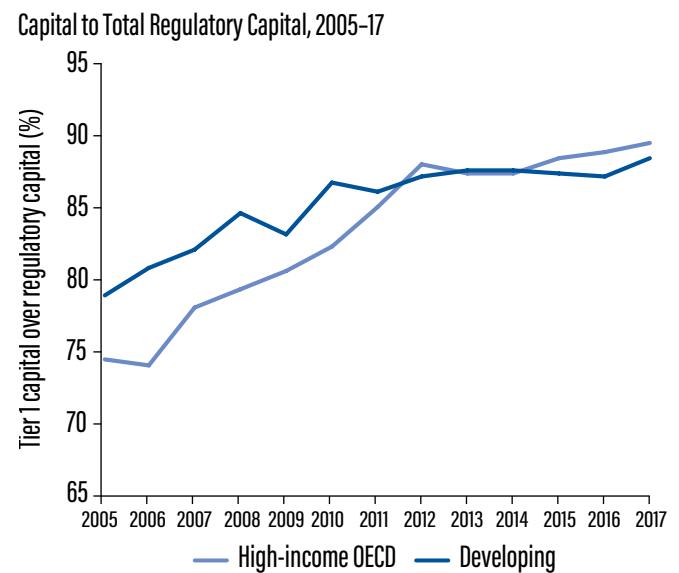


Source: World Bank staff calculations, based on data from Financial Soundness Indicators (FSI)

World Bank BRSS was to obtain the most comprehensive data set on regulatory and supervisory practices across the world from 2011 to 2016. The global database and public good allows for cross-country comparisons of regulatory and supervisory features, enabling benchmarking and identification of what are the most effective policies associated with economic and financial development.

Prior to this research, the website that housed the BRSS data was difficult for researchers, policy makers, and development practitioners to use. A new website was created to host the data, the Global Financial Development Report (GFDR), and related outputs. The updated and open data set became available in November 2019 on the revamped website.

The BRSS is a unique public good that provides comparable economy-level data on how banks are regulated and supervised around the world. To date, the database has been downloaded approximately 14,000 times. These data facilitate empirical and analytical work aimed at understanding the suitability and implications of banking regulation and oversight in the context of prudential regulations. For example, the research results show how developing countries may benefit from addressing issues related to the management of nonperforming loans, which is an important current challenge for developing countries following the spread of COVID-19. A reverse stress testing exercise was developed using information from the BRSS to understand what banks are the weakest in terms of capitalization and their exposure to credit risk. Using this tool, bank supervisors can establish a basic understanding of a banking sector's resilience, which is a key condition for the well-functioning of the banking system. The survey data were also used for analysis of



Source: World Bank staff calculations, based on data from Financial Soundness Indicators (FSI)

competition policies in banking services in Latin America and the Caribbean, and for a study of the risks represented by state-owned banks in South Asia ("Financial Risks and Contingent Liabilities in South Asia").

Focused on the progress and impact of reforms on market discipline and bank capital regulation, the analytical results showed that required regulatory capital and bank capital holdings tended to increase across countries, but some elements of capital regulations became laxer. Market discipline may also have deteriorated as the financial safety nets became more generous after the crisis.

These analyses, and more, fed directly into the Global Financial Development Report (GFDR) 2019/2020: *Bank Regulation and Supervision a Decade after the Global Financial Crisis* (November 2019), which has important bearing on policy design. The data are also featured in the *World Development Report 2022 and Hidden Debt: Solutions to Avert the Next Financial Crisis in South Asia*.

The GFDR has more than 230 citations and has been downloaded approximately 44,000 times. It has informed policy making in developing countries, such as on the design of proportional regulation in banking. The GFDR—and the BRSS data set that underlies the publication—helped shape technical assistance for the Bank of Negara (the Central Bank of Malaysia) on adapting bank regulation and supervision to the local context. The GFDR also inspired a survey on proportionality in regulation and supervision of banks run by the Equitable Growth, Finance, and Institutions—Finance, Competitiveness, and Innovation Financial Stability and Integrity unit. A World Bank Finance, Competitiveness, and Innovation study uses BRSS data to understand country-level responses to COVID-19 as they relate to the health of their respective banking sectors.

### **Learn More**

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## Summary of Progress and Achievements in FY2022 (July 2021–June 2022)

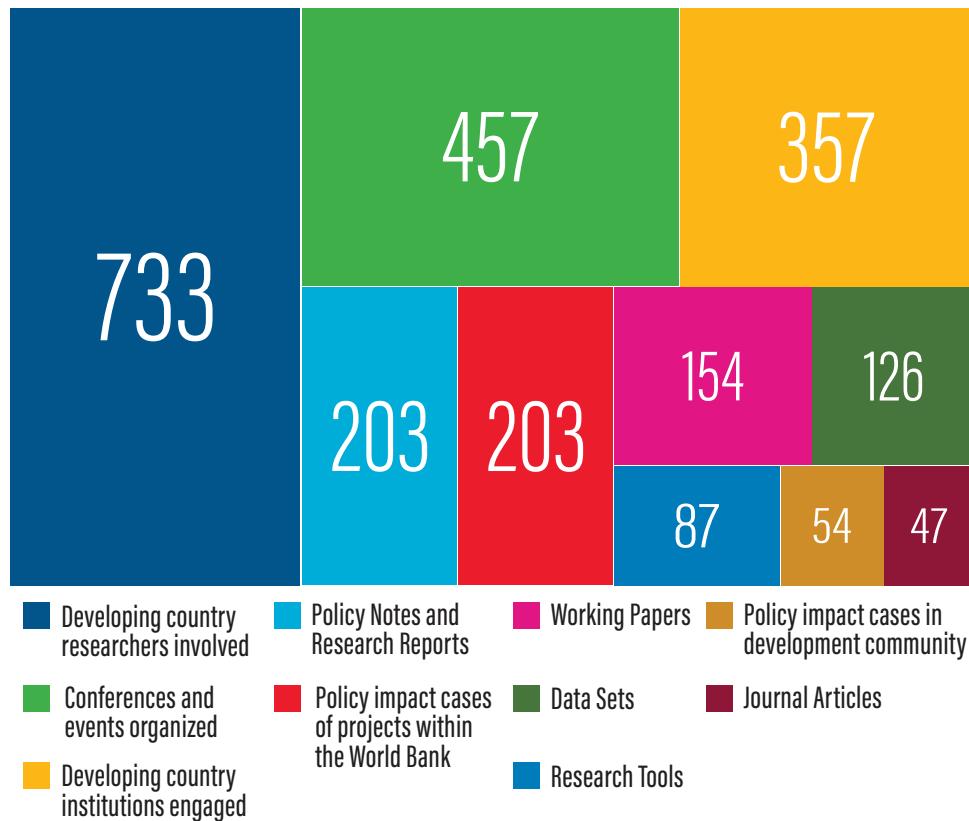
KCP Phase III, which started in 2014, will end in October 2022. By June 30, 2022, KCP III had allocated funding for 97 projects, with a total volume of US\$16.2 million. In FY2022 (June 2021–June 2022), 10 projects were completed, and 28 projects were ongoing—all ongoing projects will conclude by the end of October 2022.

KCP Phase III supported policy-relevant research and data collection and analysis activities within the following themes: fragility and risk management, innovation in data production, international cooperation and global public goods, service delivery and aid effectiveness, growth and job creation, and poverty and shared prosperity. KCP III also funded major policy research reports and World Bank flagship reports, such as World Development Reports and Global Financial Development Reports.

The KCP's current phase (Phase IV) was launched in 2021. Between July 2021 and June 2022, 12 projects were awarded funding in the first round of the call for proposals, and they became fully operational in FY2022. The projects cover priority areas such as jobs and economic transformation, governance and institutions, climate change, and gender and development. Another round of the call for proposals took place in 2022, and more information on the newly approved projects will be provided in the next section.

Despite the challenges posed by the pandemic, the KCP teams produced a wide range of outputs. Outputs from the KCP include research and policy papers published in top academic journals; new data sets, indicators, and survey instruments; non-technical papers, reports, and briefs targeted at government and operational counterparts; presentations and blogposts to highlight key results in a more accessible format for a wider audience; as well as capacity-building workshops and dissemination events to engage stakeholders in local research institutions, think tanks, and civil society organizations.

### Cumulative Output Indicators for KCP III



The following pages present the progress achieved by selected projects in FY2022. Tables A.1, A.2, A.3, A.4, and A.5, in annex A, provide the full list of KCP projects, as well as the completed and ongoing projects.

## Economic Inclusion, Micro-Entrepreneurship and Social Cohesion in Post-Conflict Côte d'Ivoire

KCP Window: Growth & Job Creation (KCP III)

Geography: Côte d'Ivoire

Period: February 2020–January 2022

Task Team Leader: Patrick Premand



Policy makers are giving increased attention to multidimensional economic inclusion or graduation programs to improve the livelihoods of disadvantaged populations. How can policies enhance economic and social inclusion of vulnerable people in low/low-middle-income and fragile settings? What are their impacts on social outcomes, as well as on the local spillovers they generate? What are the most cost-effective instruments to facilitate access to capital as part of these interventions?

The KCP is financing a multi-arm randomized experiment to analyze an intervention to foster micro-entrepreneurship, support livelihoods, and improve social cohesion in post-conflict Côte d'Ivoire. In collaboration with the Government of Côte d'Ivoire through its Bureau de Coordination des Programmes d'Emploi, the study has informed ongoing operational efforts to design, implement, and scale up economic inclusion programs through government systems.



The results have (so far) yielded three key insights. First, group-based village savings and loan associations savings instruments show promise in generating positive savings and investment dynamics among beneficiaries, performing at least as well as much more expensive capital injection modalities. Second, economic inclusion programs may need to be paired with small, regular cash transfers to meet

beneficiaries' basic and precautionary saving needs before they can sufficiently invest in income-generating activities. And third, economic inclusion programs can have positive economic and social spillovers on nonbeneficiaries, suggesting broader benefits to the local economy from such policies.

The results were disseminated through workshops with policy makers in Côte d'Ivoire as well as among international audiences. The findings were featured in a global report on the state of economic inclusion programs published by the Partnership for Economic Inclusion in the World Bank's Social Protection & Jobs Global Practice. The results have also directly informed World Bank supported operations such as the youth employment and skills development project and the productive safety net projects in Côte d'Ivoire. Both of these operations have used the village savings and loan associations model tested in the study given the positive dynamics it seems to generate compared to pure capital injection modalities.

### **Labor Market Policies on Unemployment Protection & Employment Services**

KCP Window: Growth & Job Creation (KCP III)

Geographies: Global

Period: December 2020–October 2021

Task Team Leaders: Hulya Ulku, Dorina Georgieva

Although unemployment benefits and active labor market policies (ALMP) have been increasing in popularity, more data and research are needed to understand how and if they improve labor market outcomes and address social issues. The data gap around unemployment benefits and ALMP, particularly in developing countries, prevents the development of clear-cut evidence on their effectiveness in promoting employment and productivity.

The KCP supported research that collected data in 2019 and 2020 on unemployment benefits and ALMP from the Ministries of Labor and Social Protection in 191 economies. The findable, accessible, interoperable, and reusable and open data are available to the public, and the [webpage](#) has been visited more than 1,700 times.

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<table border="1"> <thead> <tr> <th>Economy<sup>12</sup></th> <th>Final-term contracts prohibited for permanent basis<sup>12</sup></th> <th>Maximum length of fixed term contracts<sup>12</sup></th> <th>Maximum length of fixed term contracts, including renewals<sup>12</sup></th> <th>Minimum wage applicable to workers assigned to the same sector<sup>12</sup></th> <th>Ratio of minimum wage to value added per worker<sup>12</sup></th> <th>Minimum length of probationary period immediate<sup>12</sup></th> <th>Standard working week<sup>12</sup></th> </tr> </thead> <tbody> <tr> <td>Afghanistan</td> <td>No</td> <td>12</td> <td>No limit</td> <td>0</td> <td>0</td> <td>3</td> <td>0</td> </tr> <tr> <td>Alliana</td> <td>Yes</td> <td>No limit</td> <td>No limit</td> <td>223</td> <td>0</td> <td>3</td> <td>0</td> </tr> </tbody> </table>								Economy <sup>12</sup>	Final-term contracts prohibited for permanent basis <sup>12</sup>	Maximum length of fixed term contracts <sup>12</sup>	Maximum length of fixed term contracts, including renewals <sup>12</sup>	Minimum wage applicable to workers assigned to the same sector <sup>12</sup>	Ratio of minimum wage to value added per worker <sup>12</sup>	Minimum length of probationary period immediate <sup>12</sup>	Standard working week <sup>12</sup>	Afghanistan	No	12	No limit	0	0	3	0	Alliana	Yes	No limit	No limit	223	0	3	0
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A first-of-its-kind analysis of the novel data was also undertaken that shed light on patterns of unemployment benefits and ALMP and their relationship with labor market outcome policies at different levels. The analytical results are beneficial to both policy makers and researchers in developed and developing countries.

Among the 191 economies cov-

ered by the data, approximately 48 percent had unemployment benefit schemes, 82 percent had public employment services, 53 percent had national skills funds, and 54 percent offered incentives for training. As income level decreases, the use of ALMP vis-à-vis unemployment benefits increases substantially.

The econometric analyses demonstrated that productivity growth has a positive relationship with both unemployment benefits and ALMP in upper-middle-income countries and with ALMP in low- and lower-middle-income countries. However, productivity growth has a negative relationship with both unemployment benefits and ALMP in high-income countries. The findings also indicate a consistent negative association of ALMP with the rate of self-employment in all income groups. Moreover, although ALMP and unemployment benefits have largely insignificant associations with the employment rate, in upper-middle-income countries, having a longer period of unemployment benefits and training incentives are negatively associated with the employment rate.

## Childcare Indicators and Research: Measuring Legal Frameworks for Childcare Provision

KCP Window: Gender and Development (KCP IV)

Geographies: Global

Period: August 2021–June 2023

Task Team Leader: Alena Sakhonchik

Expanding access to childcare increases women's participation in the labor market, improves family welfare, and enhances child development. However, there is a global childcare gap and public interventions may help to make childcare accessible for all. How can countries use their legal systems to foster availability of affordable and quality childcare services?

As part of [the Women, Business and the Law program](#), an ongoing KCP-supported research project (2021–23) is developing a first-of-its kind open data set with 50 actionable indicators measuring legal and regulatory frameworks for childcare provision in 95 selected economies representing 82 percent of the world's population. The new data are a steppingstone toward facilitating and informing policy dialogue around key demand- and supply-side avenues that limit or promote the formal provision of childcare services, their affordability, quality, and uptake by parents. The pilot data present a framework showing a range of options that governments may support to meet the needs of working mothers and families, although international best practice frameworks have yet to be established.

This research is filling knowledge gaps not only related to childcare, but also around ways to increase women's economic opportunities. For example, the data demonstrate that around 80 percent of economies with existing public childcare frameworks do not mandate its free provision. Only one-third of covered economies provide support options targeting low-income families. A set of structural, process, and system quality aspects for both public and private childcare centers were also investigated. The analytical results demonstrate that different quality aspects do not clearly show discernible patterns among regions, and that requirements are not always equal for public and private providers.

This pilot research has already made strides in open access to knowledge through sharing, partnerships, dissemination, and capacity building:

- ◆ Technical discussions were organized at the conceptual stage with a series of stakeholders, including the Center on Global Development, International Finance Corporation, Asian Development Bank, International Labour

Organization, and Oxfam, to build awareness related to the empirical relevance of the proposed data set for women's access to more and better jobs and solicit feedback to inform future data collection cycles.

- ◆ This project informs and complements the new World Bank Childcare Incentive Fund, which is managed by the World Bank's Education Global Practice.
- ◆ Seminars and capacity-building workshops disseminated lessons learned, knowledge, and advisory on how to integrate childcare policy reforms into World Bank country operation and development interventions. The team has engaged with national nongovernmental organizations, global coalition initiatives, and women's advocacy groups, including the Early Childhood Development Action Network, Center on Global Development, International Center for Research on Women, Global Coalition for Women's Economic Empowerment, Women's Economic Empowerment Community of Practice in Kenya, and Asia-Pacific Regional Network for Early Childhood.
- ◆ Strategic learning events with internal and external partner organizations disseminated information related to approaches to boosting women's economic participation.
- ◆ The project team met with relevant officials and developing country stakeholders in Thailand and Vietnam to demonstrate outstanding legal gaps revealed by the data, for integration into policy and practice. Partnership has been established with the Association of Southeast Asian Nations Training Center for Social Work and Social Welfare, to facilitate future data collection efforts.
- ◆ Two blogs and three regional briefs were developed that focused on childcare policies in East Asia and the Pacific, Latin America and the Caribbean, and Sub-Saharan Africa.

The global public goods produced through this project will continue to strengthen sustainable development outcomes, as well as inform lawmakers, policy makers, and internal operational units and partners.

### **Giving Community-Based Organizations (CBOs) a Financial Stake in Local Government Performance: A Field Experiment in Burkina Faso**

KCP Window: Service Delivery & Aid Effectiveness (KCP III)

Geography: Burkina Faso

Period: October 2018–September 2022

Task Team Leader: Marcus Holmlund

Local governments play a central role in expanding access to public services and fighting extreme poverty, but they cannot always keep up with their growing responsibilities. New approaches and solutions are needed to increase the accountability of municipal governments for the quality of local public services. This is where community-based organizations (CBOs) step in. Although CBOs are often high-functioning entities at the local level in countries with limited state capacity, they conventionally exist to serve their own membership, rather than the community as a whole.

But what if high-functioning and local CBOs were provided incentives to hold their municipal government accountable? Can cash grants incentivize CBOs to lobby actively for better municipal service delivery? Do increased accountability pressures from local CBOs cause improvements in the quality of municipal services?

The KCP is financing research on intervention that encourages CBOs to use their local knowledge, influence, and mobilization capacity to influence their municipal government to enhance performance. In partnership with the Government of Burkina Faso, the researchers are testing an intervention at scale through a nationwide randomized controlled trial. Well-functioning local CBOs were provided a direct, financial stake in the performance of their municipal government in the form of an annual cash grant that is a function of improvements in their respective municipal

government's performance. The study targets 170 treatment and 169 control municipalities, covering almost all of Burkina Faso (outside the two main urban centers of Ouagadougou and Bobo-Dioulasso).

This research is building capacity for evidence-based and innovative policy making through a learning-by-doing approach, as part of a broader initiative on Experimental Research on Local Governance in Burkina Faso (REGLAB) (French: Recherche expérimentale sur la gouvernance locale au Burkina Faso). REGLAB is a long-term collaboration for research and policy innovation on municipal governance in Burkina Faso, comprised of the Government of Burkina Faso (in particular, its Programme d'appui aux collectivités territoriales), researchers at the German Institute of Global and Area Studies, and the World Bank's Governance Global Practice and Development Impact Evaluation Unit. The research team is also collaborating with the Ministry of Territorial Administration and Decentralization in Burkina Faso.

### **The Collection and Analysis of Gender Differentials in Wellbeing Narratives**

KCP Window: Gender and Development (KCP IV)

Geographies: Peru, Bangladesh

Period: September 2021–June 2023

Task Team Leader: Vijayendra Rao

Standard approaches to measuring and understanding wellbeing—such as money-metric, biometric, and subjective or self-reported wellbeing—present challenges related to inference across gender. Traditional qualitative approaches often sacrifice breadth for depth, are difficult to analyze at scale, and require painstaking coding work with small samples. How can we enhance understanding, at scale, around conceptions of wellbeing, including any gender differences?

The KCP is supporting first-of-its-kind research that will use machine learning or natural language processing methods to analyze open-ended narrative data at scale. This research represents the first attempt to scale up qualitative work on survey responses to a large sample with machine learning. This could allow

researchers to perform high-quality, qualitative analysis on much larger samples than was previously possible. This research is developing new tools for poverty assessment and risk management, including methods of data collection and analytical tools with broad applicability. The data will enhance understanding, at scale, around conceptions of wellbeing as expressed by study respondents, including any gender differences.

Researchers are collecting narratives in two countries and, within each country, for two different populations, to examine the generalizability of findings across disparate contexts. In Bangladesh, data were collected in Cox's Bazaar, which is the site of camps housing the vast majority of Rohingya refugees from Burma, as well their Bangladeshi hosts. This work is part of a larger project partnering with the World Bank's Poverty Global Practice, in collaboration with the United Nations High Commissioner for Refugees. Working closely with Bangladeshi researchers, this research will inform the design of policy interventions in Cox's Bazaar by the World Bank and other partners. Preliminary findings from pilot research show pronounced differences in ambition for children between the host community and the displaced Rohingya, and important differences by the gender of the child. First, the host population generally has higher ambitions than the recently displaced Rohingya, as measured by structured quantitative questions on educational ambitions. On average, the respondents have slightly higher educational ambitions for their male children than their female children. Controlling for the child's current school attendance, Rohingya respondents still have significantly lower ambitions than hosts, and lower ambitions for their female children. However, there are no significant gender differences for the host respondents.

The research is developing the capacity of local survey firms in Bangladesh to conduct open-ended, qualitative interviews at scale, and in coding these interviews using coding software such as Nvivo and Atlas TI. The research findings were presented during the Conference on Innovations in Development Data and a Development Research Group Half-Baked Seminar.

In Peru, the research focuses on two purposefully sampled regions: one central and

urban, Lima, and the other a highly rural department in the central highlands, Sierra Central. In collaboration with the Peruvian National Statistics Agency (Spanish: Instituto Nacional de Estadística e Informática), the University of Cayetano Heredia, and Oxford University, investigators are collecting an expansive household welfare survey that leverages the Peruvian Living Standards Survey, the Encuesta Nacional Hogares.

### Trade, Poverty and Inequality

KCP Window: International Cooperation & Global Public Goods (KCP III)

Geographies: Global

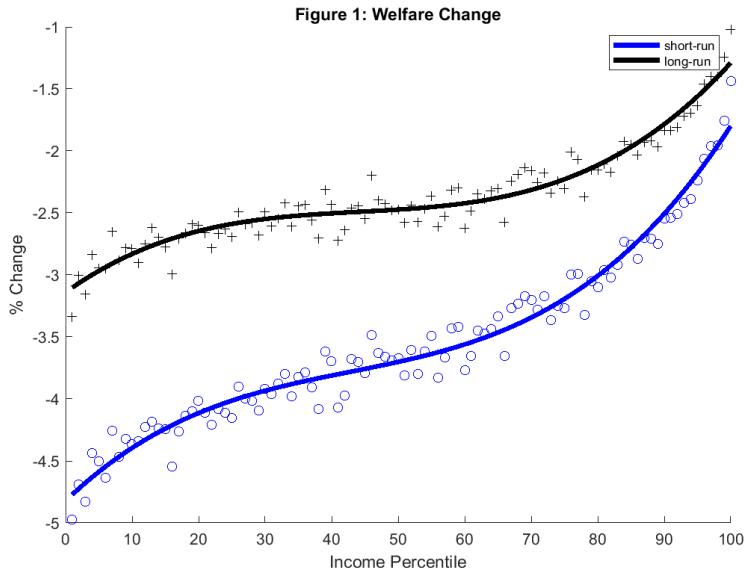
Period: August 2020–October 2022

Task Team Leader: Erhan Artuc

Although international trade liberalization increases aggregate welfare due to efficiency gains, it has large distributional effects as well. Those that lose are often found concentrated among specific people in specific areas. Conversely, those that

win are often widely spread and therefore less noticeable. It is critical to quantify the effects of globalization on developing countries by quantifying both aggregate and distributional effects. This type of analysis requires very detailed data that cover households across the whole income distribution.

The KCP is supporting research that measures how the gains from trade are distributed, with a special focus on households in low- and middle-income countries. The research is developing a more accurate quantification of both the short- and long-run distributional effects of trade, with a specific focus on poverty



short- and long-run distributional effects of trade, with a specific focus on poverty

and inequality. The tool and harmonized data will be publicly available and will help to inform international trade and social protection policies.

The study has already yielded interesting results through an assessment of the impact of increasing food prices due to the war in Ukraine starting in February 2022. By using micro-level household survey data from 54 low-income and developing countries and data on food prices, the research demonstrated that average household welfare decreases in 43 of 53 countries in the sample, with an average real income loss of -1.5 percent. The researchers also made an online platform available to the public, with data and tools to perform simulations. The impact is especially important for countries in the Middle East and North Africa region where wheat constitutes a high percentage of households' consumption basket. Figure 1, which was directly generated using the online platform, shows the impact of increasing food prices on household welfare in the Arab Republic of Egypt. Lower income households face large welfare losses, greater than 4 percent after the increase in food prices, and the impacts are projected to persist in the long run.

### **Promoting Youth Economic Inclusion: Evidence from a Job Trainings and Search Program in the Dominican Republic**

KCP Window: Growth & Job Creation (KCP III)

Geography: Dominican Republic

Period: March 2020–October 2022

Task Team Leader: Xavier Gine

Unemployment is a persistent problem in many developing countries, especially among the youth. Young females also face what are often higher barriers in the labor market. There is much debate around the effectiveness of active labor market policies as policy makers aim to address these challenges.

KCP-supported research is strengthening social protection instruments designed to provide better job opportunities to the youth—especially females—in the Dominican Republic. Partnering with the Cabinet of Coordination of Safety Net Policies

of the Vice Presidency of the Dominican Republic (Spanish: *Gabinete de Coordinación de Políticas Sociales, Vicepresidencia de la República Dominicana*) and other government agencies in the Dominican Republic, researchers are improving the design and implementation of the government-led economic inclusion component of the Progresando con Solidaridad conditional cash transfer program. Participants in the program come from socially vulnerable families who live in the 14 extremely poor provinces in the country.

The researchers implemented an impact evaluation of the Progresando con Solidaridad program with a modified design that included a job search skills module to help students find employment after the program ended. Additionally, the evaluation produced a set of assessments (one for each technical skill and one on socioemotional skills) that could be used in future rounds of training.

The program increased technical (but not socioemotional) skills among participants compared to the control group. Although the employment rate among participants is comparable to that in the control group, at around 41 percent, program participants were more likely to be formally employed and to report higher salaries. In addition, among those not yet employed, those who completed the program were searching for jobs more intensively, increasing the chances of finding a desired job. Last but not least, the participants who did both the course and the job search skills module had more positive outcomes, adding evidence that the combination of technical abilities plus learning job search skills might yield positive results for youth starting their careers.

### **Boosting Self-Employment in Kenya: Experimentally Testing Strategies to Alleviate Financial, Knowledge, and Behavioral Constraints to Entrepreneurship**

KCP Window: Growth & Job Creation (KCP III)

Geography: Kenya

Period: October 2020–October 2022

Task Team Leader: Abla Safir

Various constraints can stand in the way of self-employment and entrepreneurship, including capital, knowledge, and behavioral constraints. They hamper individual aspirations and the ability to grow businesses and create new jobs. Can active labor market programs and nudges alleviate these constraints?

KCP-supported research is delving into how to leverage and complement cash grants with optimized business support and behavioral nudges to boost self-employment among the youth. Based in Kenya, this study is also learning how to maximize efficiency through technology business development services (BDS) and determine who will gain the most from both grants and other support (in particular, for women). The study includes introducing a screening tool for entrepreneurs, supporting the digital delivery of BDS, and providing nudges. The study includes an impact evaluation of the support for self-employment subcomponent of the Kenya Youth Employment and Opportunities Project and testing of gender-integrated interventions.

Using the baseline data and multiple rounds of phone surveys, the research has already yielded insights about the impact of the COVID-19 crisis on microbusinesses in Kenya. The results show that youth who are assigned business grants—or a combination of grants and BDS—are much more likely to maintain a business, earn more revenue and profits, retain employees, and report higher confidence and satisfaction with life. During times of crisis, cash infusions for youth entrepreneurs may therefore be instrumental in moderating the immediate harmful impacts.

### **Recording Small Receipts: Digital Technology Adoption at the Margin of Formalization**

KCP Window: Governance and Institutions (KCP IV)

Geography: Rwanda

Period: October 2021–June 2023

Task Team Leaders: Astrid Maria Theresia Zwager, Florence Kondylis

Although corporate income taxes are an important source of tax revenue in low-and middle-income countries, they are also vulnerable to evasion. New digital technologies that record transactions may reduce accounting costs and enable firm growth, while also reducing evasion. However, more research is needed to understand the roles of tax policy, tax compliance, and the adoption of digital technology in firm growth.

The KCP is supporting novel, rigorous research that explores the potential of a new technology to elevate government capacity and accelerate the formalization of the economy in Rwanda. The research builds on a policy rolled out in September 2021 by the Rwanda Revenue Authority called the Electronic Billing Machine (EBM) for All. The policy introduced new requirements for large firms and a tax disadvantage to firms that do not adopt an EBM. The study looked at the firm and revenue impacts of the EBM-related policy changes to inform policy making in Rwanda and other countries at similar levels of economic development that are considering similar policies.

The research is a first of its kind for Sub-Saharan Africa and has already used receipt-level tax data from Rwanda to show that increasing the domestic mask supply was a cost-effective way to slow the spread of COVID-19. Rwanda licensed and incentivized high-quality mask manufacturing at the start of the pandemic. The study demonstrated conservative estimates that licensing domestic mask manufacturers reduced mask prices by 8.8 percent and reduced monthly growth in COVID-19 infections (proxied by demand for anti-fever medicine) by 12 percent. The analytical results suggest that high-quality masks reduced infections in the context of strict mask mandates and informal markets for masks.

The study has a learning-by-doing approach to capacity building as part of a comprehensive research partnership with the Rwanda Revenue Authority. It also benefits the Tax Policy Unit of the Ministry of Finance and the Rwanda Development Board. The research team has held training sessions on topics such as handling data ethically, technical software programming, and impact evaluation on tax.

## The Effects of Interest Rate Ceilings on Credit Markets

KCP Window: Growth & Job Creation (KCP III)

Geography: Chile

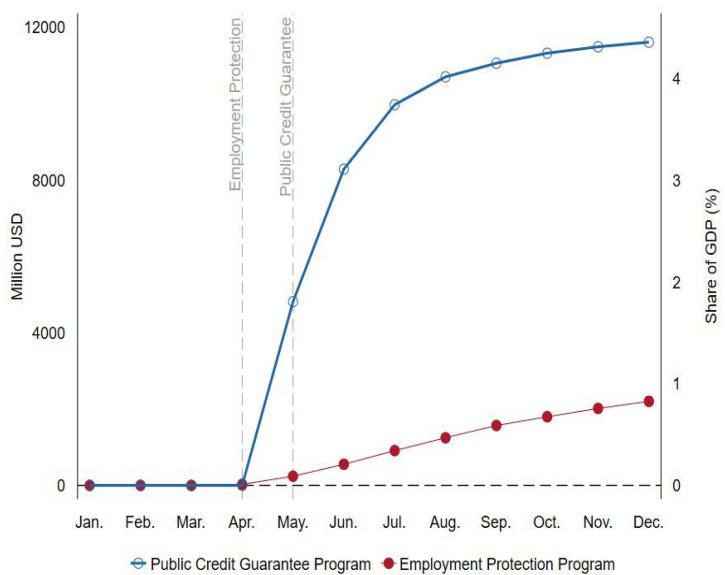
Period: July 2017–October 2022

Task Team Leader: Sergio Schmukler

Many governments and policy makers have introduced limits on interest rates, particularly when dealing with markets that target lower income and high-risk individuals and smaller and riskier firms. These limits are intended to prevent banks and other financial institutions from taking advantage of relatively poor, unprotected, and uninformed customers with few choices to obtain financing. However, the effects of these limits are not well understood.

The KCP financed research that analyzed the distributional impacts of imposing limits on interest rates, using unique data from Chile's entire financial system, working in close collaboration with the Central Bank of Chile, the Financial Market Commission, and local Chilean universities. One research paper exploits a natural experiment from Chile, using the introduction in December 2013 of a new anti-usury law for financial operations. This law significantly reduced the maximum rate allowed for credit operations for individuals, called the conventional ceiling rate (Spanish: *tasa maxima convencional*) and introduced a tiered regulation. The research investigated how new limits to (high) interest rates affect various individuals and firms. Using information from all credit products to individuals, this research finds that limits to interest rates

Growth of the Credit and Employment Program



Source: Huneeus, Kaboski, Larraín, Schmukler, and Vera (2022).

reduced the borrowing rates of individuals with large credit lines, generating a redistribution from banks to individuals who tend to be relatively better off (richer), and thus subject to different credit products.

Another research paper studies the impact of limits on interest rates in a new, large-scale program of public credit guarantees implemented in Chile to help firms during the COVID-19 pandemic. The program imposed a limit on the maximum interest rates. In this work, the project studies the distribution of credit during the crisis and its impact on firm indebtedness and macroeconomic risk. Whereas policies can help firms in need of financing, they can lead to adverse selection from riskier firms that access credit at a maximum rate that does not compensate for their higher default risk. The team uses unique transaction-level data on credit applications, approvals, and loans for the universe of banks and firms, matched with administrative tax data. The program distributes credit amounting to 4.6 percent of gross domestic product and increases firm leverage. Although demand channels credit toward riskier firms at the micro level, the macroeconomic risks remain small. Several factors mitigate aggregate risk: the small weight of riskier firms, exclusion of the riskiest firms, bank screening due to the interest rate cap, and government absorption of tail risk.

### **Data Systems for Safer Cities and Inclusive Growth**

KCP Window: Innovation in Data Production Methods, Analysis and Dissemination (KCP III)

Geography: Kenya

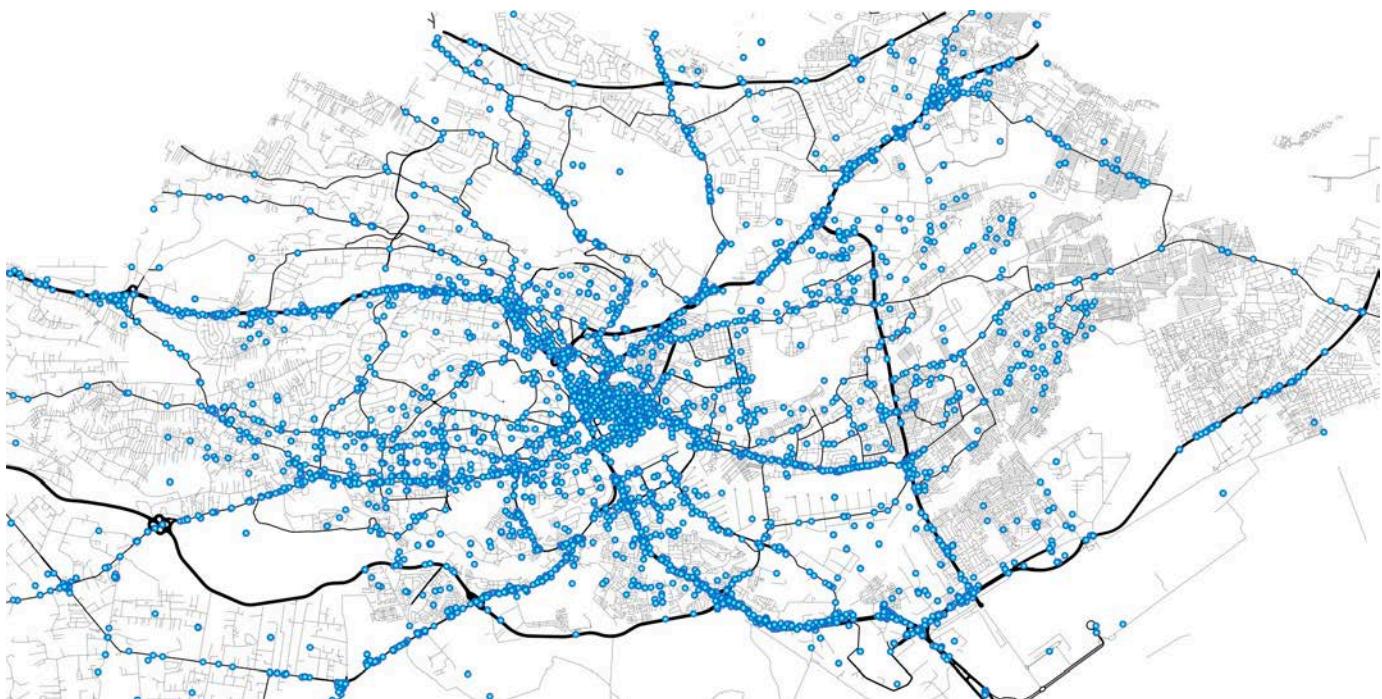
Period: April 2020–October 2022

Task Team Leaders: Guadalupe Bedoya, Sveta Milusheva

Data related to road traffic crashes are especially scarce, and it is important to expand the coverage of data on road crashes for better analysis of road safety and prioritization of appropriate policy action. How can we build pilot data systems to fill the gaps in data-scarce settings?

The KCP is supporting pilot research in Kenya that combines traditional and non-traditional sources of data—from paper-based police reports to traffic speeds from Uber—to expand the coverage of data that can be used to analyze road safety and prioritize policy action around the locations where crashes occur more often. Building on the existing literature, the researchers have developed an improved geoparsing algorithm to extract data on crash time and location. These data are grounded by dispatching a motorcycle delivery company to the site of the presumed crash minutes after each new crash report is received, to verify the validity of the crowdsourced data. These data are merged with official data that have been digitized and geolocated by the research team. A machine learning model has so far produced approximately 36,428 geolocated crash reports from Twitter for Nairobi, Kenya (see map 1). The researchers have also manually built a 13-month, double-coded crash location truth data set for training an algorithm to identify and geolocate crashes.

**Map 1.** Road Traffic Crashes, Geolocated from Twitter



The analytical results will inform urban planning and development and help to guide road safety investments in Kenya and other data-scarce contexts. For example, by using a clustering algorithm to identify and rank blackspots (high-risk locations defined by the number of road traffic crashes in this case), the researchers found that a small portion (< 1 percent) of the road network hosts 50 percent of the road traffic crashes. This knowledge reduces an intractable problem to a more manageable one. The information on blackspots is now being used by the Kenya Urban Roads Authority to identify locations where additional road safety investments are needed and cameras can be installed to collect additional data that can help monitor and address road safety.

The research was presented at the Measuring Development 2022: The Role of Mobile Data in Global Development Research Conference in the session "COVID-19 Policies and Road Safety: The Case of Nairobi." In January 2022, a Road Crash Database Stake-

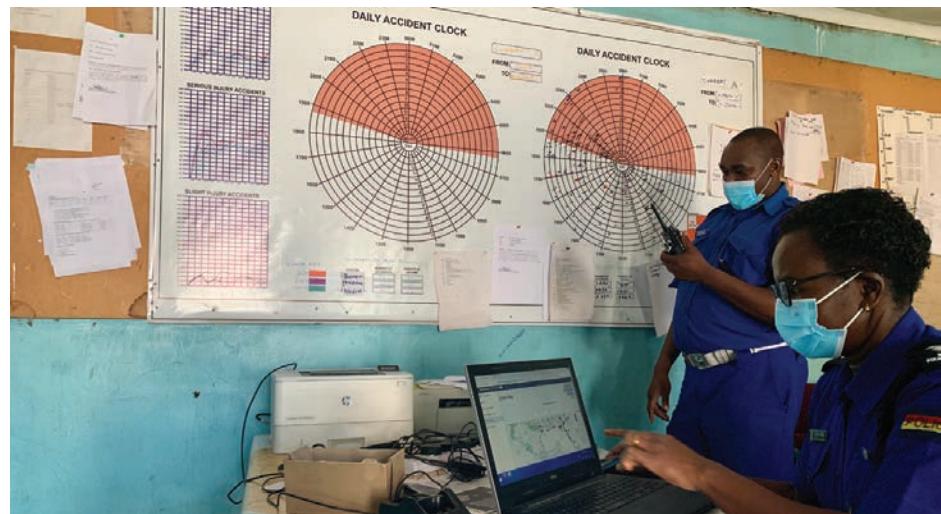


Photo 1. Police Officers Using the Prototype Crash Data Collection System

holder Workshop was held in Mombasa, Kenya, bringing together Kenya's National Transport and Safety Authority, National Police Service, and relevant ministries, departments, and agencies in the transport sector to discuss and advance a national road crash data system. The team shared the learning from a prototype road traffic crash data collection system that was developed based on the lessons from the analysis above, introducing electronic records in place of the existing paper-based system to improve the efficiency and quality of crash data. The prototype was developed hand-in-hand with the National Police Service over several rounds of

extensive field testing in Nairobi (see photo 1). [Preliminary lessons](#), materials, and resources, including the prototype algorithms and code, are currently being integrated into the broader system design to inform the development of the scaled-up national digital platform in Kenya.



## Looking Forward: Summaries of Newly Approved Projects

KCP IV recently completed its second round of the call for proposals, and 15 new projects were approved. This round of the call for proposals was conducted under two windows: window 1: advancing KCP's goals—open call, and window 2: subnational development. Window 1 funds small proposals that advance the KCP's goals in general, with priorities given to proposals addressing the following four thematic areas: (i) debt and financial fragility, (ii) human capital, (iii) governance and institutions, and (iv) technology. Window 2 funds both programmatic and small proposals, with an aim to advance the KCP's goals through a spatial lens focused on the economic geography of growth and development at the subnational level.

Eleven projects were approved for funding under window 1, for a total amount of \$1,831,491. These selected projects cover seven broad themes: (i) jobs and economic transformation; (ii) fragility, conflict, and violence; (iii) gender and development; (iv) governance and institutions; (v) debt and financial fragility; (vi) human capital; and (vii) technology. Four projects (including three programmatic grants and one small grant) have been approved for funding under window 2, for a total amount of \$2,396,000.

The expected outputs from these 15 projects are wide ranging, including but not limited to policy papers that can be published in top academic journals; new data sets, indicators, and survey instruments; non-technical papers, reports, and briefs targeted at government and operational counterparts; presentations and blogposts to highlight key results in a more accessible format for a wider audience; as well as capacity-building workshops and dissemination events to engage stakeholders in local research institutions, think tanks, and civil society organizations. This section provides a brief introduction to these 15 newly awarded projects.

## Approved Projects under Window 1

### The Demand for Debt from Emerging Markets and Developing Economies



- DECENT WORK AND ECONOMIC GROWTH
- PEACE, JUSTICE AND STRONG INSTITUTIONS
- CLIMATE ACTION

**LED BY:** Matias Moretti, Sergio Schmukler, DEC Research Group

**PARTNERED WITH:** Finance, Competitiveness and Innovation Global Practice; International Finance Corporation; International Monetary Fund; George Washington University

**AWARDED AMOUNT:** \$200,000

**GEOGRAPHIES:** Global

**DURATION:** October 2022–June 2024

Sovereign and corporate debt has been increasing steadily over the past decade. The large increase in debt-to-gross domestic product ratios had led to a large increase in debt service, bond yields, borrowing costs, and sovereign risk in emerging markets and developing economies (EMDEs). This study aims to shed light on questions like how much debt EMDEs can issue and how exposed those economies are to global shocks that can affect the demand for their debt. The project will study two separate but related issues: (i) how the inclusion in global benchmark indexes and, more generally, how shocks to the global demand for debt can affect the cost of raising new bonds, including refinancing existing debt, and (ii) to provide novel evidence on green bonds and analyze how the establishment of an international benchmark that determines what constitutes a green investment can allow both governments and corporates to increase their issuances of these bonds.

## Improving Skills Development and Employability through Traditional Apprenticeships: Evidence from Senegal



■ DECENT WORK AND ECONOMIC GROWTH

■ NO POVERTY

■ QUALITY EDUCATION

■ PEACE, JUSTICE AND STRONG INSTITUTIONS

**LED BY:** John Giles, DEC Research Group

**PARTNERED WITH:** Social Protection & Jobs Global Practice

**AWARDED AMOUNT:** \$200,000

**GEOGRAPHIES:** West Africa, Senegal

**DURATION:** October 2022–June 2024

In Senegal, and West Africa, apprenticeships remain one of the most important pathways through which young people transition to work, but skills development through workshop training can vary tremendously. This project will study the impacts of a large-scale skills development pilot targeting traditional apprentices in Senegal, titled “Improving Youth Employability through Informal Apprenticeships (PEJA).” To inform future efforts to improve skills delivery through informal apprenticeships, the project will evaluate the relative benefits of improving the socioemotional skills of apprentices. The project also aims to understand how digital media can be used to reinforce the training of adolescents and young adults with relatively low literacy.

## Protecting Human Capital during Episodes of Forced Displacement: Learning from Ukrainian Refugees in Italy



■ PEACE, JUSTICE AND STRONG INSTITUTIONS

■ GOOD HEALTH AND WELL-BEING

■ NO POVERTY ■ QUALITY EDUCATION

■ DECENT WORK AND ECONOMIC GROWTH

■ PARTNERSHIPS FOR THE GOALS

**LED BY:** Gero Carletto, DEC Data Group; Quy-Toan Do, DEC Research Group

**PARTNERED WITH:** Social Protection & Jobs Global Practice, Italian Ministry of Internal Affairs, Italian Ministry of Education, Italian National Institute of Health–Italian Istituto Superiore di Sanita, National Association of Italian Municipalities–Associazione Nazionale Comuni Italiani

**AWARDED AMOUNT:** \$200,000

**GEOGRAPHIES:** Europe and Central Asia, Ukraine, Italy

**DURATION:** October 2022–June 2024

This project aims to generate knowledge on the factors preventing or ameliorating human capital losses during episodes of massive, forced displacement among extremely vulnerable populations. It will collect data on forcibly displaced children and youth and their primary caregivers to: (i) gain better understanding of the conditions in the field across several human capital and labor market dimensions, toward informing the design of interventions by the host country, and (ii) establish a high-quality baseline to track populations of interest over time, whether in host countries or back home, toward measuring the long-term impacts of displacement and interventions. The research will inform the World Bank's technical and financial assistance in countries experiencing large inflows of refugees, to support them as they shift from a humanitarian to a development approach to refugee integration.

## The Persistent Effects of Stunting: A Ten-Year Follow-up of Beneficiaries and Non-Beneficiaries of the Philippine CCT



GOOD HEALTH AND WELL-BEING

QUALITY EDUCATION

**LED BY:** Eeshani Kandpal, Jed Friedman, DEC Research Group

**PARTNERED WITH:** Northwestern University, Yale University, George Washington University

**AWARDED AMOUNT:** \$200,000

**GEOGRAPHIES:** Philippines

**DURATION:** October 2022–June 2024

This study investigates the medium-run effects on key development outcomes of the Philippine conditional cash transfer program, Pantawid, to answer two main questions: what are the medium-run effects of cash transfers that might principally operate through the health and nutrition channel? And what are the medium-run effects of early life stunting? The project will assess impacts along a wide range of cutting-edge outcomes, for a rigorous assessment of the impacts of early life stunting across a wide range of important dimensions. The results should inform the policy dialogue on the use of stunting to track long-run outcomes tied to health, education, and overall mental and physical wellbeing. The findings will be highly relevant for the World Bank's large and growing portfolio of operations involving cash transfers or targeting stunting reduction.

## Measuring the Cost of Digital Transactions



⌚ GENDER EQUITY

🕊 PEACE, JUSTICE AND STRONG INSTITUTIONS

🛠 INDUSTRY, INNOVATION AND INFRASTRUCTURE

**LED BY:** Xavier Gine, DEC Research Group

**PARTNERED WITH:** Innovations for Poverty Action, Bill and Melinda Gates Foundation

**AWARDED AMOUNT:** \$123,740

**GEOGRAPHIES:** Global

**DURATION:** October 2022–June 2024

Digital financial services (DFS) such as mobile money can be used to transfer funds quickly and relatively inexpensively across long distances. Despite the many determinants of DFS usage, the cost of using these services is a critical factor, but little has been done toward systematically measuring and monitoring the true cost of conducting common DFS transactions such as person-to-person transfers or cashing out funds from an e-wallet at an agent location. This project aims to capture and report the cost of DFS transactions by constructing a transaction pricing index, which could be a valuable resource to support the development of thriving and competitive digital financial services markets, in addition to reducing bottlenecks to financial inclusion. Building on the existing body of evidence on mystery shopping of financial service providers, this project will develop a mystery shopping methodology that can be deployed across a diverse set of markets, to capture mobile money and banking transaction costs.

## The Transformational Impact of Novel Weather Forecasts for Smallholder Farmers



- 🕒 CLIMATE ACTION
- 蚪 REDUCED INEQUALITY
- 👫 NO POVERTY

**LED BY:** Erin Kelley, DEC Impact Evaluation Group

**PARTNERED WITH:** University of Chicago; International Crops Research Institute for the Semi-Arid Tropics  
Awarded amount: \$90,000

**GEOGRAPHIES:** India

**DURATION:** October 2022–June 2024

Agricultural production is highly sensitive to weather shocks. This project will test a new method of adaptation for farmers: long-range, or seasonal, weather forecasts. It will leverage recent advances in atmospheric science to bring high-quality monsoon forecasts to farmers and estimate the welfare impacts of these forecasts using a randomized controlled trial. The research will broaden understanding of the risk farmers face and highlight the most effective way of dealing with it. It will also inform governments and international institutions on the cost-effectiveness of different interventions for farmers. This is especially relevant in light of the large-scale investments that governments have made to support small-scale farmers in low-income countries.

## The Potential for E-Justice Innovations to Build More Resilient Justice Systems in the Wake of COVID-19



- PEACE, JUSTICE AND STRONG INSTITUTIONS
- REDUCED INEQUALITY

**LED BY:** Daniel Chen, Antoine Deeb, DEC Impact Evaluation Group

**PARTNERED WITH:** DEC Research Group, Governance Global Practice, Judiciary of Pakistan, Ministry of Justice and Free Mediation Centers in Peru, National Judiciary Council of Brazil, Administrative Corporation of the Judiciary in Chile

**AWARDED AMOUNT:** \$200,000

**GEOGRAPHIES:** Pakistan, Peru, Brazil, Chile

**DURATION:** October 2022–March 2024

The project will evaluate e-justice technology-enabled innovations in various parts of the world with the goal of strengthening judiciaries to deal with the growing backlog of cases and low citizen access to courts. The results of these research projects will help us to understand which technology-enabled innovations work to strengthen and build resilience in justice systems around the world in the wake of the COVID-19 crisis. The innovations to be studied include the Legal Case Management App to Reduce Court Backlog in Pakistan, Technological Innovations to Improve Dispute Resolution in Peru's Free Mediation Centers, Reducing Legal Uncertainty through Precedents in Brazil, and Digital Instant Messaging Platform to Facilitate Citizens' Access to Court Services in Chile.

## Understanding the Determinants of Public Procurement Efficiency: Evidence from Administrative and Survey Data from Brazil



- PEACE, JUSTICE AND STRONG INSTITUTIONS
- DECENT WORK AND ECONOMIC GROWTH
- REDUCED INEQUALITY

**LED BY:** Thiago de Gouveia Scot de Arruda, DEC Impact Evaluation Group

**PARTNERED WITH:** Tribunal de Contas da Uniao, Brazil; LabPub, University of São Paulo

**AWARDED AMOUNT:** \$141,000

**GEOGRAPHIES:** Brazil

**DURATION:** October 2022–June 2024

Efficient public procurement can generate sizable fiscal savings. Despite a growing academic literature and impact evaluations on public procurement, the existing body of evidence is still scarce and limited to a few countries, making it difficult to draw generalizable lessons on the most effective policies to improve the efficiency of public procurement. This project aims to advance the existing knowledge and evidence on effective strategies to increase efficiency in public procurement. First, it will leverage rich administrative data combined with original surveys of public officials to understand the determinants of procurement efficiency. Second, it will use text analysis and other machine learning methods to build early-warning alarms identifying systematic mistakes in procurement documents and propose an experiment to evaluate whether sharing this information with procurement officials improves outcomes.

## Livelihoods Support for Displaced Persons and Host Populations in a Fragile Context



- NO POVERTY QUALITY EDUCATION
- GOOD HEALTH AND WELL-BEING
- DECENT WORK AND ECONOMIC GROWTH
- PEACE, JUSTICE AND STRONG INSTITUTIONS
- REDUCED INEQUALITY

**LED BY:** Marcus Holmlund, Chloë Fernandez, DEC Impact Evaluation Group

**PARTNERED WITH:** Urban, Disaster Risk Management, Resilience, and Land Global Practice; Trinity College Dublin; University of Milan-Bicocca

**AWARDED AMOUNT:** \$196,750

**GEOGRAPHIES:** Niger

**DURATION:** October 2022–March 2024

This grant will support a research activity that aims to generate rigorous evidence on the welfare impacts of a livelihoods support program (consisting of a one-time cash transfer, six-day training, and follow-up coaching) for forcibly displaced persons and host populations in a fragile context in Niger. Using a large-scale field experiment, the project will assess the socioeconomic and psychological impacts of the livelihoods support package for both forcibly displaced individuals and the communities hosting them. Through partnering with the Nigerien government, the project will investigate pressing policy questions on whether and how already vulnerable societies can absorb large numbers of displaced persons and the types of interventions that can work to increase the resilience and welfare of both displaced and host populations.

## **Women, Business and the Law in Practice: Completing a Framework to Measure de Facto Gender Equality**



⌚ GENDER EQUITY

⤓ REDUCED INEQUALITY

🕊 PEACE, JUSTICE AND STRONG INSTITUTIONS

**LED BY:** Nisha Arekapudi, DEC Indicators Group

**PARTNERED WITH:** Governance Global Practice, Poverty Global Practice, Social Protection & Jobs Global Practice, Gender Group, Human Rights Measurement Initiative

**AWARDED AMOUNT:** \$200,000

**GEOGRAPHIES:** Global

**DURATION:** October 2022–June 2024

Women, Business and the Law—the World Bank Group's flagship publication in the field of gender—provides policy makers a starting point for reform by identifying the laws and regulations that limit women's economic inclusion. However, for women to thrive in the world of work, equal laws must be meaningfully implemented. Cross-country evidence of this implementation gap remains scarce. Women, Business and the Law (2022) introduced a new conceptual framework for measuring the gap between laws on the books and their implementation, and presented pilot data from 25 economies. This project intends to build on this concept and complete the framework by scaling up the pilot database, reviewing relevant literature and developing an expert opinion questionnaire to address bias and small sample size, and incorporating the completed process and outcome methodologies into Women, Business and the Law analysis for 190 economies. The data and analysis will promote informed policy making and encourage governments to implement laws more efficiently and comprehensively. They will also contribute to World Bank Group operations and research by identifying key priorities for legal and institutional reform, as well as elements and practices of implementation and enforcement that should be strengthened.

## Subnational Fiscal Multipliers in Developing Countries



- DECENT WORK AND ECONOMIC GROWTH
- REDUCED INEQUALITY  NO POVERTY
- SUSTAINABLE CITIES AND COMMUNITIES
- PEACE, JUSTICE AND STRONG INSTITUTIONS

**LED BY:** Steven Pennings, DEC Research Group

**PARTNERED WITH:** Macroeconomics, Trade and Investment Global Practice

**AWARDED AMOUNT:** \$80,000

**GEOGRAPHIES:** Global

**DURATION:** October 2022–June 2024

The size of the fiscal multiplier determines the benefits of Keynesian fiscal stimulus in terms of extra short-term economic growth, and also the extent to which fiscal austerity can weigh on growth. This project aims to estimate the size of fiscal multipliers at the subnational level in developing and emerging countries, which will help governments design new stabilization policies and understand the short-term growth effects of existing development-related expenditure. It will first focus on the effects of cash transfers, which have become increasingly popular antipoverty programs in developing countries, reaching around 500 million beneficiaries before the pandemic, and expanding to 1.36 billion beneficiaries in response to COVID-19. It will also estimate the effect of EU investment and structural fund spending, which is a major source of funding for development projects in Central and Eastern Europe.

## Window 2: Advancing the KCP's Goals through a Spatial Lens Focused on the Economic Geography of Growth and Development at the Subnational Level

### Programmatic Grant: Economic Development through a Spatial Lens: Urbanization in Times of Climate Change and Social Justice



- SUSTAINABLE CITIES AND COMMUNITIES
- CLIMATE ACTION QUALITY EDUCATION
- DECENT WORK AND ECONOMIC GROWTH
- REDUCED INEQUALITY NO POVERTY
- PEACE, JUSTICE AND STRONG INSTITUTIONS
- INDUSTRY, INNOVATION AND INFRASTRUCTURE

**LED BY:** Forhad Shilpi, Harris Selod, DEC Research Group

**PARTNERED WITH:** DEC Data Group; Impact Evaluation Group; Urban, Disaster Risk Management, Resilience and Land Global Practice; various local institutions

**AWARDED AMOUNT:** \$900,000

**GEOGRAPHIES:** Global

**DURATION:** October 2022–June 2025

The objective of this research program is to improve our understanding of how to design policies for productive, inclusive, and sustainable urbanization in a developing world that is facing rising regional inequality and frequent and potent shocks from climate change. This research program will focus on the system of cities, from smaller towns to metropolitan areas. The research program is organized into three parts respectively focusing on growth and transformation, fairness and inclusion, and climate change and urbanization. In much of urban analysis, cities form data points similar to isolated islands. By introducing the urban hierarchy as a centerpiece of nearly all of the studies, this project will shed light on (i) inequality in terms of broader measures of welfare not just within large cities but across cities of different sizes, (ii) the effect of climate change on interconnectivity across cities and climate-induced migration on urban hierarchy, and (iii) impacts of connectivity on the growth of cities of different sizes. The program will also generate new evidence on connectivity, urban mobility, and place-based interventions: (i) how connectivity may have affected intergenerational mobility across different areas; (ii) how place-based policies such as government procurement, enterprise zones, or investment in school quality interact with connectivity and affect growth and intergenerational mobility; and (iii) whether reforms in the structure of informal transit markets would be useful in relieving congestion and reducing pollution in a developing country city.

## Programmatic Grant: Understanding Trends in Sub-National Differences in Economic Well-Being in Low- and Middle-Income Countries



-  NO POVERTY
-  SUSTAINABLE CITIES AND COMMUNITIES
-  REDUCED INEQUALITY  GENDER EQUITY

**LED BY:** Talip Kilic, David Newhouse, DEC Data Group; Jed Friedman, DEC Research Group

**PARTNERED WITH:** Poverty and Equity Global Practice, Stanford University (Department of Earth System Science and the Center on Food Security and the Environment), Economic Commission for Latin America and the Caribbean (ECLAC) (Statistics Division)

**AWARDED AMOUNT:** \$900,000

**GEOGRAPHIES:** Global

**DURATION:** October 2022–August 2025

This grant will support a three-year programmatic research program to document the extent of variation in subnational levels and changes in a range of development outcomes, namely, monetary poverty and household consumption/income, multidimensional poverty, and household wealth, across a diverse set of at least 10 countries at different income levels and stages of structural transformation. The analysis will leverage the latest advances in small area estimation, machine learning, and computer vision, together with multiple rounds of georeferenced census and longitudinal household survey data that will be integrated with time series satellite imagery and processed geospatial data.

The subsequent cross-country research will document the subnational levels and changes in these outcomes and explore interrelationships and policy-relevant potential drivers at subnational levels. In parallel, the program will generate new insights on best practices in the integration of survey and satellite data and the use of machine learning techniques for generating reliable and operationally relevant cross-sectional and longitudinal development outcomes of interest. These insights will be highly relevant for operations seeking to target poor areas within client countries, evaluations of spatial policy interventions, as well as downstream empirical research efforts and the implementation of census and household surveys.

## Programmatic Grant: Data and Evidence on Subnational Production, Trade, and Infrastructure



- DECENT WORK AND ECONOMIC GROWTH
- SUSTAINABLE CITIES AND COMMUNITIES
- INDUSTRY, INNOVATION AND INFRASTRUCTURE
- PEACE, JUSTICE AND STRONG INSTITUTIONS
- REDUCED INEQUALITY

**LED BY:** Florence Kondylis, John Loeser, Thiago de Gouveia Scot de Arruda,  
DEC Impact Evaluation Group

**PARTNERED WITH:** Transport Global Practice, Honduras and Rwanda  
Country Management Units, Rwanda Transport Development Agency, Rwanda  
Revenue Authority, Rwanda Ministry of Agriculture, Institute of Fiscal Studies

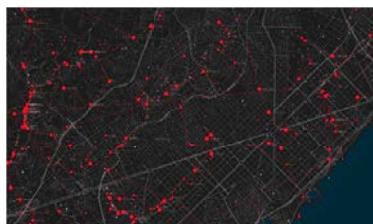
**AWARDED AMOUNT:** \$450,000

**GEOGRAPHIES:** Honduras, Rwanda

**DURATION:** October 2022–June 2025

This project seeks to advance the measurement of spatial inequalities in low- and middle-income countries and provide new evidence on the impact of subnational trade on fostering local development. The project will first use novel administrative data to characterize production networks, employment, and growth across space. Using rich administrative data in several countries, it will provide new evidence on the geography of firms and production. Economic disparities across space are partly driven by government policies, directly or indirectly. The second component of the project will explore the effects of trade and local transport infrastructure rehabilitation on subnational development. The goal is to understand both the impacts of regional policy (place-based policies) and the impacts of central policies that might indirectly affect agents across space, although not designed as such (the heterogeneous effect of policies). To this end, the project will study interventions on both the tax/revenue side (for example, place-based tax exemptions in Honduras and Rwanda) and on the expenditure side (for example, road construction in Rwanda). The findings will be highly policy relevant in dialogues with client countries on fiscal policy, trade policy, and infrastructure development.

## **Indexing the World: Enabling the Effective and Efficient Discovery of Geospatial Data for Holistic and Localized Research**



- NO POVERTY
- SUSTAINABLE CITIES AND COMMUNITIES
- REDUCED INEQUALITY

**LED BY:** Aivin V. Solatorio, DEC Data Group

**AWARDED AMOUNT:** \$146,000

**GEOGRAPHIES:** Global

**DURATION:** October 2022–December 2023

This project aims to improve the discoverability of subnational and granular geospatial data. The project will implement a system to make geospatial data discoverable by developing algorithms and leveraging open-source solutions, including Nominatim (from OpenStreetMap) as an interface for an H3-based indexing system (an innovative and open-source system created by Uber). This system will enable users to search and discover geospatial data using natural language. The development of this system will benefit individual researchers and data repositories—individual researchers can find geospatial data at the subnational or local level, and geospatial data in data repositories will be made more discoverable. Finally, the output of this project will open opportunities for research and operations to leverage geospatial data that are available in subnational and local regimes as inputs to research and policy discussions, focusing on subnational and local geographic issues.



# KCP Finances

## Donor Contributions

KCP Phase III, from its inception in December 2014 to June 30, 2022, received US\$16.8 million in cash contributions from seven donors, namely, Norway, Estonia, Canada, the United Kingdom, Finland, France, and Sweden.

KCP Phase IV was launched in FY2021. As of the end of FY2022 (June 2022), KCP Phase IV has an accumulated signed contributions totaling US\$6.3 million from three donors: Sweden, France, and Japan. In the early part of FY2023, one additional donor, the European Union, joined the KCP family. Discussions are ongoing with prospective partners to expand and diversify KCP's donor base.

Sweden (through the Swedish International Development Cooperation Agency, Sida) was the first donor to contribute to KCP IV, with a commitment of SEK 28 million payable over four tranches. The first tranche of SEK 14 million, and second tranche of SEK 4 million have been received.

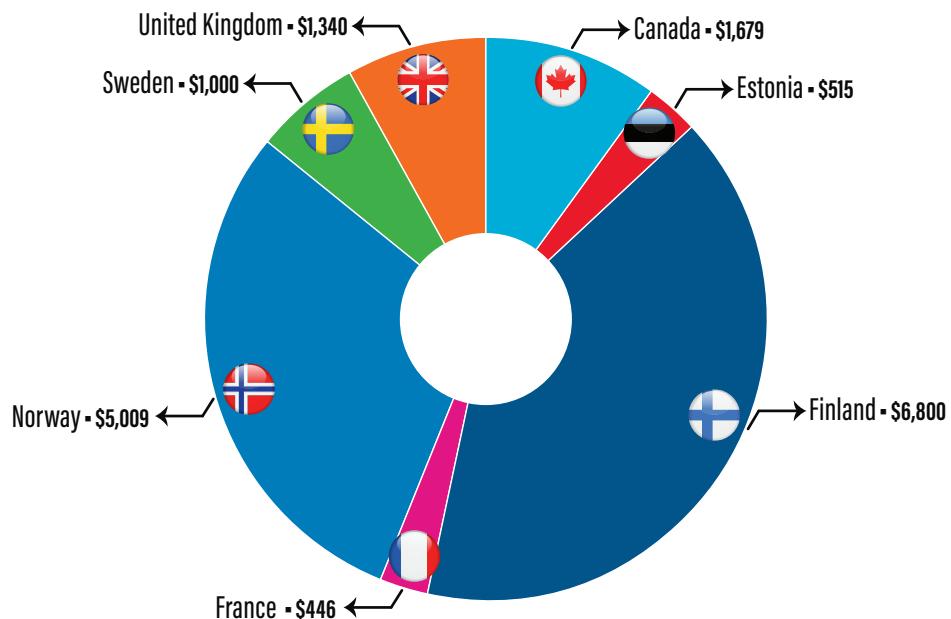
France, represented by the Agence Francaise de Developpement contributed €100,000 to KCP IV.

Japan, a former donor to KCP I and KCP II, re-joined the KCP family in FY2022 and became an official contributor to KCP IV, with a signed amount of US\$3 million, disbursed in one tranche.

In early FY2023, the European Union (through the European Commission –Directorate-General for Regional and Urban Policy), signed a contribution agreement pledging €3 million to KCP IV, payable over two tranches.

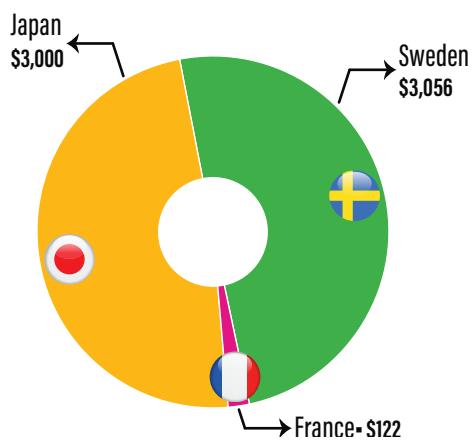
### KCP III Donor Contributions Received, by Donor

From KCP III Inception to June 30, 2022 (US\$, thousands)



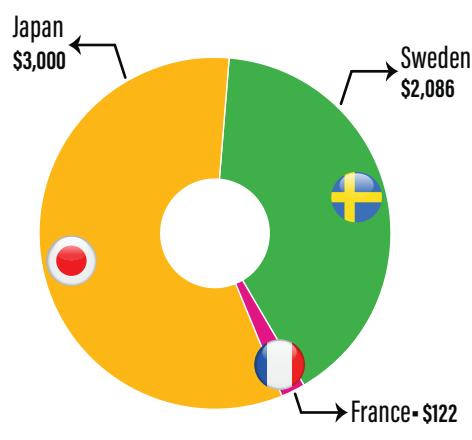
### KCP IV Donor Contributions Signed, by Donor

From KCP IV Inception to June 30, 2022 (US\$, thousands)



### KCP IV Donor Contributions Received, by Donor

From KCP IV Inception to June 30, 2022 (US\$, thousands)



### KCP III Accounts Statement

As of June 30, 2022, Unaudited (US\$)

	TF072304	TF072635	Total
<i>Contributions received</i>			
Norway	4,535,529	473,440	5,008,969
Estonia	480,839	34,188	515,027
United Kingdom	1,340,016		1,340,016
Canada	303,558	1,375,432	1,678,989
Finland	2,480,685	4,319,655	6,800,340
France	107,235	338,468	445,703
Sweden		999,970	999,970
<b>Total contributions received</b>	<b>9,247,862</b>	<b>7,541,153</b>	<b>16,789,015</b>
<i>Investment income</i>			
	198,630	208,322	406,953
<i>Allocations and expenses</i>			
Set-up fee	(35,000)		(35,000)
Administrative fee (5%)	(462,393)		(462,393)
Project allocations	(8,525,413)	(7,634,822)	(16,160,295)
Program management and administration	(414,136)	(81,312)	(459,449)
<b>Total allocations and expenses</b>	<b>(9,436,943)</b>	<b>(7,716,193)</b>	<b>(17,153,136)</b>
<b>ESTIMATED FUNDS AVAILABLE</b>	<b>9,549</b>	<b>33,282</b>	<b>42,832</b>

## KCP IV Accounts Statement

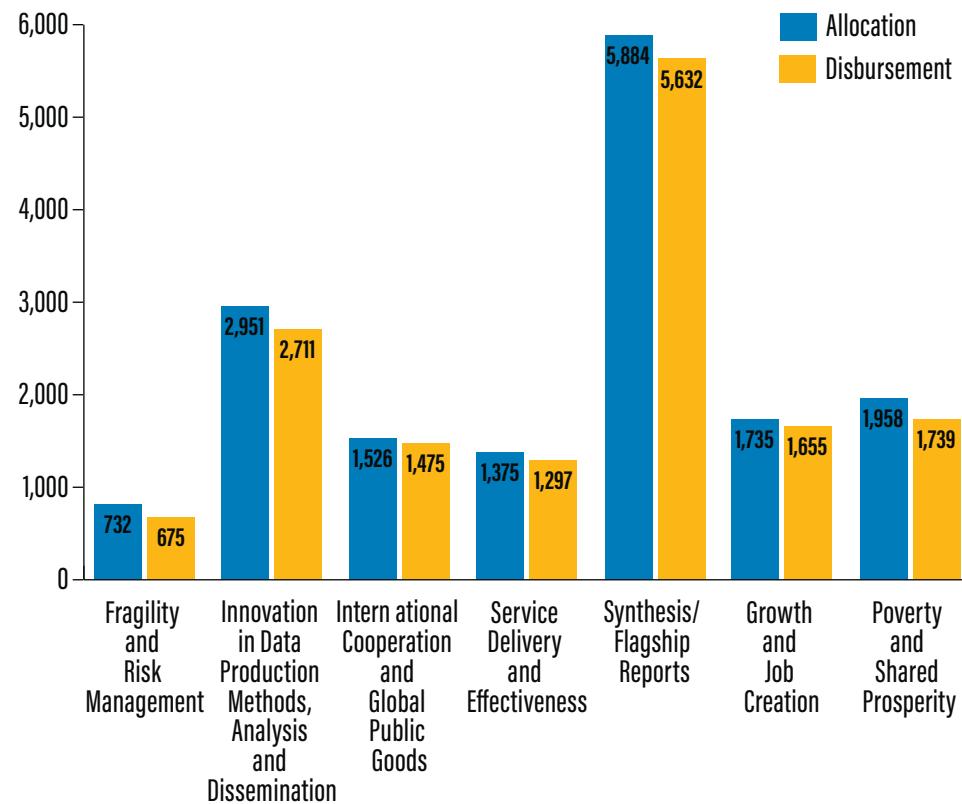
As of June 30, 2022, Unaudited

	Currency	Amount	Amount (\$)
<i>Contributions signed</i>			
Sweden	SEK	28,000,000	3,056,167
France	EUR	100,000	122,000
Japan	US\$	3,000,000	3,000,000
<b>Total</b>			<b>6,178,167</b>
<i>Contributions received</i>			
Sweden	SEK	18,000,000	2,086,278
France	EUR	100,000	122,000
Japan	US\$	3,000,000	3,000,000
Total			5,208,278
<i>Investment income</i>			
			5,280
<i>Allocations and expenses</i>			
Project allocations			(1,864,961)
Program management and administration			-
World Bank executed TF administrative fees (12% of disbursement)			(51,444)
<b>Total</b>			<b>(1,916,405)</b>
<b>ESTIMATED FUNDS AVAILABLE</b>			<b>4,267,042</b>

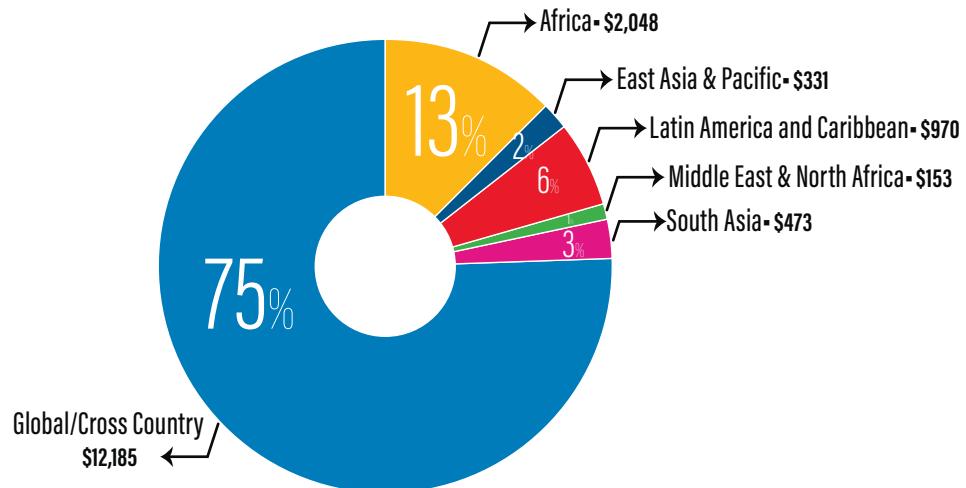
# Annex KCP Projects Portfolio

**FIGURE A.1 KCP III Allocations and Disbursements by Window**

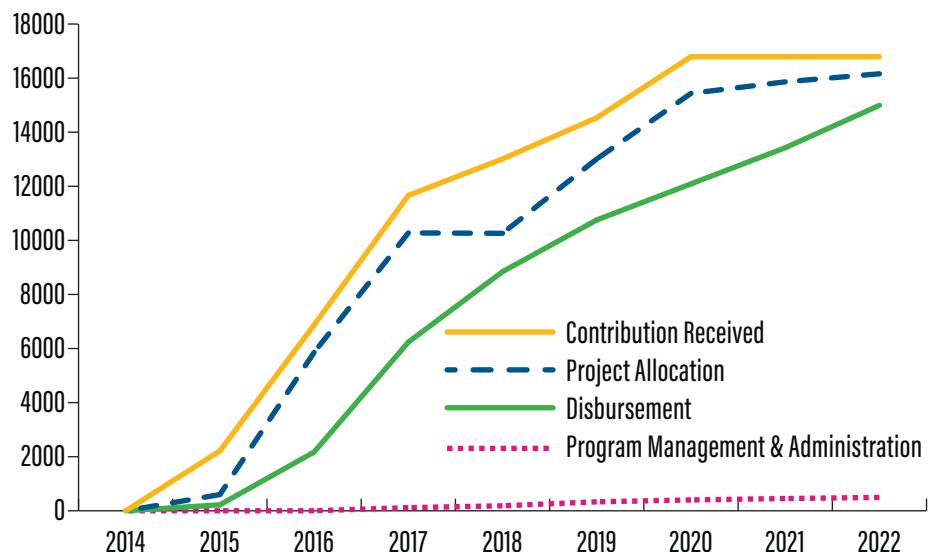
From KCP III Inception to June 30, 2022 (US\$, thousands)



**FIGURE A.2 KCP III Allocations, by Region**  
From KCP III Inception to June 30, 2021 (US\$, thousands)

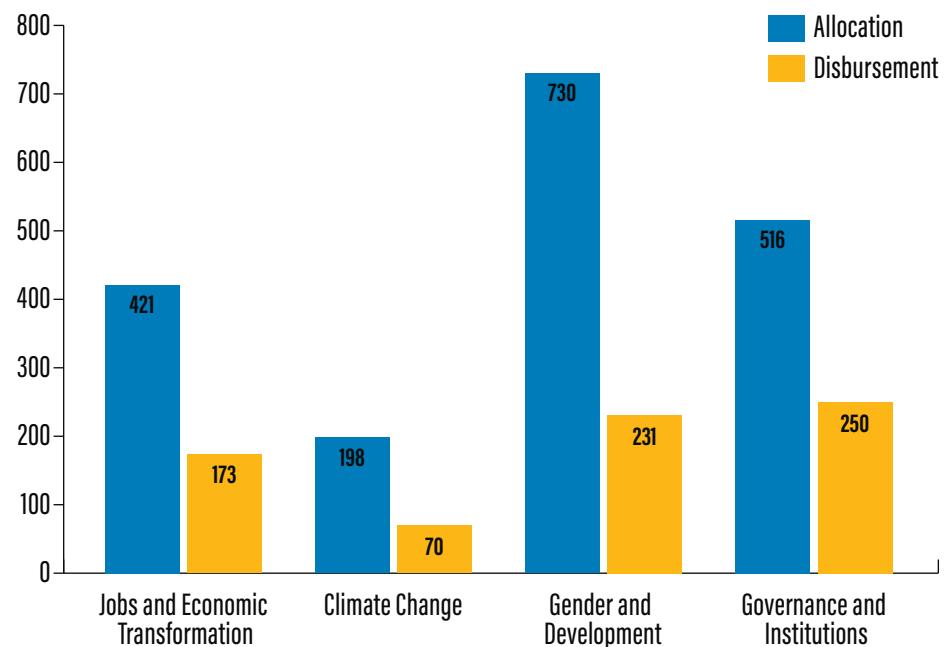


**FIGURE A.3 KCP III Cumulative Contributions, Allocations, and Disbursements, by Year**  
From KCP III Inception to June 30, 2022 (US\$, thousands)



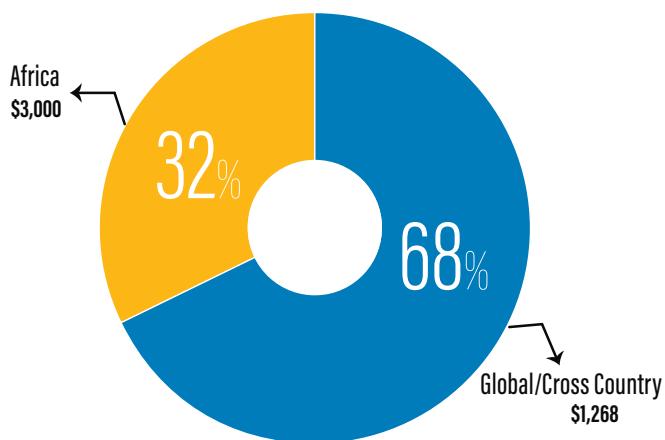
**FIGURE A.4 KCP IV Allocations and Disbursements, by Window**

From KCP IV Inception to June 30, 2022 (US\$, thousands)



**FIGURE A.5 KCP IV Allocations, by Region**

From KCP IV Inception to June 30, 2022 (US\$, thousands)



**TABLE A.1 KCP III Allocations and Disbursements**

From KCP III Inception to June 30, 2020 (US\$)

Project Name	Task Team Leader	Amount	Disbursements	Available
FRAGILITY AND RISK MANAGEMENT				
1 Global Financial Development Report 2016 - Global Banking	Robert J. Cull	200,000	200,000	-
2 Social network mapping and analysis for youth living in high-violence urban neighborhoods in Honduras	Marcus Erik Holmlund	129,957	129,957	-
3 Strengthening Financial Consumer Protection in Mexico and Colombia: Disclosure and Transparency of Information	Xavier Gine	49,750	49,750	-
4 Big Data in Migration Research	Caglar Ozden	100,000	99,928	72
5 Afghanistan cell phone records to estimate poverty	Guadalupe Bedoya Arguelles	74,892	74,892	-
6 A home away from home: improving the lives of adolescent refugees	Erin Munro Kelley	97,700	52,417	45,283
7 Strengthening Financial Consumer Protectin in Mexico: Disclosure and Transparency of Information	Xavier Gine	80,000	67,986	12,014
<b>TOTAL—FRAGILITY AND RISK MANAGEMENT</b>		<b>732,299</b>	<b>674,930</b>	<b>57,369</b>
INNOVATION IN DATA PRODUCTION METHODS, ANALYSIS AND DISSEMINATION				
8 Calibration in sample survey estimation: improving the quality of socio-economic indicators by using auxiliary information	Olivier Dupriez	74,931	74,931	-
9 Worldwide Governance Indicators 2016-2018	Aart C. Kraay	92,808	92,808	-
10 Generation of synthetic data for ex-ante impact assessments	Olivier Dupriez	89,655	89,655	-
11 Measuring and Analyzing Teacher Knowledge and Behavior	Deon P. Filmer	99,989	99,989	-
12 Producing, Analyzing and Visualizing Global Income Distributions	Tariq Afzal Khokhar	55,874	55,874	-
13 2016 World Bank Survey of Bank Regulation and Supervision	Robert J. Cull	199,782	199,782	-
14 Benchmarking the Private Sector in Sub-Saharan Africa	Silvia Muzi	299,627	299,627	-
15 Poverty imputation handbook & research	Hai-Anh H. Dang	99,988	99,988	-
16 Machine Learning Algorithms for Poverty Prediction: An Empirical Comparative Assessment	Olivier Dupriez	180,000	180,000	-
17 Measuring Process Productivity in Bureaucracies	Daniel Oliver Rogger	79,983	79,983	-
18 Measuring Countries' Statistical Capacity	Hai-Anh H. Dang	120,000	100,353	19,647
19 Using big data to measure urban congestion	Harris Selod	65,844	65,844	-

	<b>Project Name</b>	<b>Task Team Leader</b>	<b>Amount</b>	<b>Disbursements</b>	<b>Available</b>
20	Intra-Household Allocation of and Gender Differences in Consumption Poverty	Talip Kilic	129,966	129,966	–
21	Structuring 50 years of knowledge on development	Olivier Dupriez	60,000	60,000	–
22	Measuring and Enhancing Mobility in Dakar	Svetoslava Petkova Milusheva	49,931	49,931	–
23	Predicting Credit Worthiness through Digital Engagement	Abla Safir	65,000	64,755	245
24	Using Bayesian Methods to Measure Whether Improving Management Improves Exporting in Colombia	David J. McKenzie	75,000	74,243	757
25	Cross-Country Firm Dataset Built from Administrative Tax Return Data	Pierre Jean Bachas	99,979	99,979	–
26	Matters of Place: Maximizing the Potential of Georeferenced Microdata Within the Limits of Confidentiality	Siobhan Murray	99,571	99,571	–
27	Methods of Imputation-Based Estimates for Welfare Outcomes with Household Surveys: Research and Guidelines	Hai-Anh H. Dang	250,000	153,586	96,414
28	Research Platforms: A Pilot Project for Education in Pakistan	Deon P. Filmer	148,212	148,212	–
29	Measuring Time Use Well	Talip Kilic	175,000	173,782	1,218
30	Testing Novel Social Network Methodologies and Targeting Strategies for an intervention aimed at increasing aspirations and reducing teenage pregnancies in Brazil	Victor Hugo Orozco Olvera	90,000	89,522	478
31	Data Systems for Safer Cities and Inclusive Growth	Guadalupe Bedoya Arguelles	100,000	81,298	18,702
32	Using household listing and satellite data to improve survey sampling frames	Michael Wild	150,000	47,561	102,439
<b>TOTAL—INNOVATION IN DATA PRODUCTION METHODS, ANALYSIS AND DISSEMINATION</b>			<b>2,951,140</b>	<b>2,711,240</b>	<b>239,899</b>

INTERNATIONAL COOPERATION AND GLOBAL PUBLIC GOODS					
33	Migration and Labor Market Implications in the South	Caglar Ozden	100,000	100,000	–
34	Trade Policy, Poverty and Shared Prosperity	Aaditya Mattoo	99,706	99,706	–
35	The role of confidence in the cross-border transmission and propagation of shocks	Jongrim Ha	209,907	209,907	–
36	China Climate Policy Modeling	Govinda R. Timilsina	48,317	48,317	–
37	Mega-regional trade agreements: implications for developing countries	Ekaterine T. Vashakmadze	100,000	100,000	–

	<b>Project Name</b>	<b>Task Team Leader</b>	<b>Amount</b>	<b>Disbursements</b>	<b>Available</b>
38	Non-Tariff Measures (NTM) Indicators	Siddhesh Vishwanath Kaushik	99,995	99,995	-
39	After the Global Financial Crisis: Bank Regulation and Supervision	Robert J. Cull	164,931	164,931	-
40	Bank Regulation and Supervision Reforms - Impact on Developing Countries	Robert J. Cull	200,000	199,706	294
41	Does Mass Transit Investment Reduce Greenhouse Gas Emissions? An Empirical Test with New Satellite Data	Susmita Dasgupta	150,000	123,559	26,441
42	Developing country cities and climate change adaptation	Harris Selod	175,000	154,951	20,049
43	Trade, Poverty and Inequality	Erhan Artuc	177,939	173,712	4,227
<b>TOTAL—INTERNATIONAL COOPERATION AND GLOBAL PUBLIC GOODS</b>			<b>1,525,793</b>	<b>1,474,782</b>	<b>51,011</b>
SERVICE DELIVERY AND EFFECTIVENESS					
44	Kenya Patient Safety Impact Evaluation	Jishnu Das	149,887	149,887	-
45	Extension of the RESPECT study in Tanzania to the population of commercial sex workers and women at high risk in Dar-es-Salaam.	Damien B. C. M. de Walque	75,000	75,000	-
46	From Access to Quality: Ramping up Measurement and Improvement of Health Care Quality	Damien B. C. M. de Walque	249,951	249,951	-
47	A New Model for Primary Schooling in Developing Countries	Owen Ozier	249,999	249,999	-
48	Increasing uptake of LARCs Among Adolescent Females in Cameroon	Berk Ozler	199,957	199,957	-
49	Performance Pay in Customs Evidence from Madagascar	Bob Rijkers	74,982	74,982	-
50	CBOs & local governance in Burkina Faso	Marcus Erik Holmlund	50,000	44,843	5,157
51	The Impact of Justice Innovations on Poverty, Growth and Development	Vincenzo Di Maro	180,000	179,889	111
52	Operationalizing and measuring effective coverage in health care	Damien B. C. M. de Walque	145,000	72,586	72,414
<b>TOTAL—SERVICE DELIVERY AND EFFECTIVENESS</b>			<b>1,374,776</b>	<b>1,297,093</b>	<b>77,683</b>
SYNTHESIS / FLAGSHIP REPORTS					
53	Global Monitoring Report	Philip Schellekens	120,000	120,000	-
54	WDR 2018 Realizing the Promise of Education for Development	Deon P. Filmer	398,114	398,114	-
55	World Development Report 2017: Governance and the Law	Luis-Felipe Lopez-Calva	944,291	944,291	-
56	WDR 2016 Internet for Development	Deepak K. Mishra	607,049	607,049	-

	Project Name	Task Team Leader	Amount	Disbursements	Available
57	World Development Report 2017	Luis-Felipe Lopez-Calva	1,024,256	1,024,256	–
58	WDR 2015 Operationalization	Varun Gauri	149,611	149,611	–
59	Economic Spillovers in an Era of Globalization: Facts, Channels, and Implications	Jongrim Ha	119,820	119,820	–
60	WDR 2018 Realizing the Promise of Education for Development	Deon P. Filmer	1,440,436	1,405,929	34,507
61	World Development Report 2019: The Changing Nature of Work	Federica Saliola	116,584	116,584	–
62	New Doing Business indicator: Measuring the ease of contracting with the government	Erica Bosio	270,000	268,732	1,268
63	Dissemination of PRR - Moving for Mobility	Caglar Ozden	29,963	29,963	–
64	World Development Report 2020: Trading for Development in the Age of Global Value Chains	Daria Taglioni	314,663	236,829	77,835
65	Business Reform Committees	Dorina Peteva Georgieva	248,800	187,474	61,326
66	WDR 2021, "Data for Development", Dissemination and Research Extensions	Hai-Anh H. Dang	100,000	23,312	76,688
<b>TOTAL – WORLD BANK FLAGSHIP REPORTS</b>			<b>5,883,587</b>	<b>5,631,964</b>	<b>251,623</b>
GROWTH AND JOB CREATION					
67	Getting water and sewerage connections in 31 Mexican states and Mexico City	Julio Fuster	99,830	99,830	–
68	International Benchmarking for Country Diagnostics	Norman V. Loayza	49,698	49,698	–
69	Economy-wide effects of expanded electricity access and impacts of household electricity tariff changes in Ethiopia	Michael A. Toman	99,707	99,707	–
70	Job Quality Framework	Rita Ramalho	149,931	149,931	–
71	Micro and Small Firm Death in Developing Countries	David J. McKenzie	74,929	74,929	–
72	Interest Rate Ceilings	Sergio L. Schmukler	150,000	126,845	23,155
73	Making Enforceable Agreements: Data and Indicator Pilot	David C. Francis	150,000	150,000	–
74	Making working capital available to marginally riskier firms	Xavier Cirera/Caio Piza	150,000	121,546	28,454
75	Boosting Self-Employment in Kenya	Abla Safir	75,000	70,283	4,717
76	Business Practices and Firm Performance	Caio Piza	100,000	100,000	–
77	Can the Private Provision of Employment Services Improve Employment Outcomes? Evidence from Bosnia and Herzegovina	John T. Giles	90,000	79,563	10,437
78	Labor Market Policies on Unemployment Protection & Employment Services	Hulya Ulku	149,936	149,936	–

	<b>Project Name</b>	<b>Task Team Leader</b>	<b>Amount</b>	<b>Disbursements</b>	<b>Available</b>
79	Automation, Trade, and Labor Markets	Bob Rijkers	74,543	74,543	-
80	Economic inclusion, micro-entrepreneurship and social cohesion in post-conflict Côte d'Ivoire	Patrick Premand	72,357	72,357	-
81	Promoting Youth Economic Inclusion: Evidence from a Job Trainings and Search Program in the Dominican Republic	Xavier Gine	80,000	79,816	184
82	The cost of inputs	Tristan Reed	109,000	95,676	13,324
83	Government-driven credit and its impact on economic development and growth	Alvaro Enrique Pedraza morales	60,000	59,872	128
<b>TOTAL—GROWTH AND JOB CREATION</b>			<b>1,734,930</b>	<b>1,654,532</b>	<b>80,399</b>
POVERTY AND SHARED PROSPERITY					
84	What Drives the Demand for Islamic Finance?	Martin Kanz	-	-	-
85	The Effect of Improved Biomass Cookstoves on Indoor Air Quality and Respiratory Health in Rural Ethiopia	Michael A. Toman	99,660	99,660	-
86	Living Life	Valeria Perotti	99,991	99,991	-
87	Equality of Opportunity in Global Prosperity	Tazeen Hasan	149,895	149,895	-
88	Electricity Demand in Vietnam	Hanan G. Jacoby	179,983	179,983	-
89	Migration and the Law	Dilip K. Ratha	299,994	299,994	-
90	Effect of Improved Biomass Cookstoves on Indoor Air Quality and Respiratory Health in Rural Ethiopia Part 3	Michael A. Toman	56,988	56,988	-
91	Living Life	Valeria Perotti	144,925	144,925	-
92	Understanding the global inflation cycle and its drivers	Jongrim Ha	75,000	65,507	9,493
93	The Incidence of Trade Policies	Csilla Lakatos	75,169	75,169	-
94	Building a Global Multidimensional Poverty Profile	Jed Friedman	149,970	149,970	-
95	The Impact of Infrastructure Spending on Local Economies: Evidence from a Randomized Control Trial in Mexico	Daniel Oliver Rogger	120,565	120,460	105
96	Cash Transfers in the Medium Run: A Ten-Year Follow-up of Beneficiaries and Non-Beneficiaries	Eeshani Kandpal	250,000	244,862	5,138
97	Jordan Syrian Integration Refugee IE	Chloe Monica Fernandez	153,366	51,504	101,862
98	Institutional Strengthening for Improved Village Service Delivery	Mahvish Ifrah Shaukat	102,265	-	102,265
<b>TOTAL—POVERTY AND SHARED PROSPERITY</b>			<b>1,957,769</b>	<b>1,738,906</b>	<b>218,864</b>
<b>KCPIII TOTAL, June 30, 2022</b>			<b>16,160,295</b>	<b>15,183,447</b>	<b>976,847</b>

**TABLE A.2 KCP III Projects Completed in FY2022 (US\$)**

	Project Name	Task Team Leader	Completion Date	Disbursement
1	Using Bayesian Methods to Measure Whether Improving Management Improves Exporting in Colombia	David J. McKenzie	6/30/2022	74,243
2	The Incidence of Trade Policies	Csilla Lakatos	6/30/2022	75,169
3	New Doing Business indicator: Measuring the ease of contracting with the government	Erica Bosio	6/30/2022	268,732
4	Big Data in Migration Research	Caglar Ozden	6/30/2022	99,928
5	Testing Novel Social Network Methodologies and Targeting Strategies for an intervention aimed at increasing aspirations and reducing teenage pregnancies in Brazil	Victor Hugo Orozco Olvera	6/30/2022	89,522
6	The Impact of Infrastructure Spending on Local Economies: Evidence from a Randomized Control Trial in Mexico	Daniel Oliver Rogger	6/30/2022	120,460
7	The Impact of Justice Innovations on Poverty, Growth and Developement	Vincenzo Di Maro	6/30/2022	179,889
8	Government-driven credit and its impact on economic development and growth	Alvaro Enrique Pedraza morales	6/30/2022	59,872
9	Economic inclusion, micro-entrepreneurship and social cohesion in post-conflict Côte d'Ivoire	Patrick Premand	1/31/2022	72,357
10	Labor Market Policies on Unemployment Protection & Employment Services	Hulya Ulku	10/31/2021	149,936

**TABLE A.3 KCP III Ongoing Projects in FY2022 (US\$)**

Project Name	Task Team Leader	Allocation	Disbursements	Available
FRAGILITY AND RISK MANAGEMENT				
1 A home away from home: improving the lives of adolescent refugees	Erin Munro Kelley	97,700	52,417	45,283
2 Strengthening Financial Consumer Protection in Mexico: Disclosure and Transparency of Information	Xavier Gine	80,000	67,986	12,014
<b>TOTAL—FRAGILITY AND RISK MANAGEMENT</b>		<b>177,700</b>	<b>120,403</b>	<b>57,297</b>
INNOVATION IN DATA PRODUCTION METHODS, ANALYSIS AND DISSEMINATION				
3 Measuring Countries' Statistical Capacity	Hai-Anh H. Dang	120,000	100,353	19,647
4 Predicting Credit Worthiness through Digital Engagement	Abla Safir	65,000	64,755	245
5 Methods of Imputation-Based Estimates for Welfare Outcomes with Household Surveys: Research and Guidelines	Hai-Anh H. Dang	250,000	153,586	96,414
6 Measuring Time Use Well	Talip Kilic	175,000	173,782	1,218
7 Data Systems for Safer Cities and Inclusive Growth	Guadalupe Bedoya Arguelles	100,000	81,298	18,702
8 Using household listing and satellite data to improve survey sampling frames	Michael Wild	150,000	47,561	102,439
<b>TOTAL—INNOVATION IN DATA PRODUCTION METHODS, ANALYSIS AND DISSEMINATION</b>		<b>860,000</b>	<b>621,336</b>	<b>238,664</b>
INTERNATIONAL COOPERATION AND GLOBAL PUBLIC GOODS				
9 Bank Regulation and Supervision Reforms - Impact on Developing Countries	Robert J. Cull	200,000	199,706	294
10 Does Mass Transit Investment Reduce Greenhouse Gas Emissions? An Empirical Test with New Satellite Data	Susmita Dasgupta	150,000	123,559	26,441
11 Developing country cities and climate change adaptation	Harris Selod	175,000	154,951	20,049
12 Trade, Poverty and Inequality	Erhan Artuc	177,939	173,712	4,227
<b>TOTAL—INTERNATIONAL COOPERATION AND GLOBAL PUBLIC GOODS</b>		<b>702,939</b>	<b>651,928</b>	<b>51,011</b>
SERVICE DELIVERY AND EFFECTIVENESS				
13 CBOs & local governance in Burkina Faso	Marcus Erik Holmlund	50,000	44,843	5,157
14 Operationalizing and measuring effective coverage in health care	Damien B. C. M. de Walque	145,000	72,586	72,414
<b>TOTAL—SERVICE DELIVERY AND EFFECTIVENESS</b>		<b>195,000</b>	<b>117,429</b>	<b>77,571</b>
WORLD BANK FLAGSHIP REPORTS				
15 WDR 2018 Realizing the Promise of Education for Development	Deon P. Filmer	1,440,436	1,405,929	34,507

Project Name	Task Team Leader	Allocation	Disbursements	Available
16 World Development Report 2020: Trading for Development in the Age of Global Value Chains	Daria Taglioni	314,663	236,829	77,835
17 Business Reform Committees	Dorina Peteva Georgieva	248,800	187,474	61,326
18 WDR 2021, "Data for Development", Dissemination and Research Extensions	Hai-Anh H. Dang	100,000	23,312	76,688
<b>TOTAL - WORLD BANK FLAGSHIP REPORTS</b>		<b>2,103,899</b>	<b>1,853,544</b>	<b>250,355</b>
GROWTH AND JOB CREATION				
19 Interest Rate Ceilings	Sergio L. Schmukler	150,000	126,845	23,155
20 Making working capital available to marginally riskier firms	Xavier Cirera/Caio Piza	150,000	121,546	28,454
21 Boosting Self-Employment in Kenya	Abla Safir	75,000	70,283	4,717
22 Can the Private Provision of Employment Services Improve Employment Outcomes? Evidence from Bosnia and Herzegovina	John T. Giles	90,000	79,563	10,437
23 Promoting Youth Economic Inclusion: Evidence from a Job Trainings and Search Program in the Dominican Republic	Xavier Gine	80,000	79,816	184
24 The cost of inputs	Tristan Reed	109,000	95,676	13,324
<b>TOTAL—GROWTH AND JOB CREATION</b>		<b>654,000</b>	<b>573,729</b>	<b>80,271</b>
POVERTY AND SHARED PROSPERITY				
25 Understanding the global inflation cycle and its drivers	Jongrim Ha	75,000	65,507	9,493
26 Cash Transfers in the Medium Run: A Ten-Year Follow-up of Beneficiaries and Non-Beneficiaries	Eeshani Kandpal	250,000	244,862	5,138
27 Jordan Syrian Integration Refugee IE	Chloe Monica Fernandez	153,366	51,504	101,862
28 Institutional Strengthening for Improved Village Service Delivery	Mahvish Ifrah Shaukat	102,265	–	102,265
<b>TOTAL—POVERTY AND SHARED PROSPERITY</b>		<b>580,631</b>	<b>361,873</b>	<b>218,758</b>
<b>KCPIII TOTAL, June 30, 2022</b>		<b>5,274,169</b>	<b>4,300,241</b>	<b>973,928</b>

**TABLE A.4 KCP IV Allocations and Disbursements**

From KCP IV Inception to June 30, 2022 (US\$)

Project Name	Task Team Leader	Amount	Disbursements	Available
JOBS AND ECONOMIC TRANSFORMATION				
1 Promoting economic inclusion at scale through self and wage employment support in Tanzania	Dahyeon Jeong	125,000	75,854	49,146
2 Evaluating the Impact of a Business Plan Competition in Kenya	Abla Safir	150,000	-	150,000
3 Enhancing Traditional Apprenticeships for Youths and Firms in Sub-Saharan Africa -Experimental Evidence from Nigeria	Patrick Premand	146,000	96,880	49,120
<b>TOTAL—JOBS AND ECONOMIC TRANSFORMATION</b>			<b>421,000</b>	<b>172,734</b>
CLIMATE CHANGE				
4 Leveraging Building Energy Codes and Standards for Climate Change Mitigation	Jayashree Srinivasan	197,896	70,319	127,577
<b>TOTAL—CLIMATE CHANGE</b>			<b>197,896</b>	<b>70,319</b>
GENDER AND DEVELOPMENT				
5 Validating model-based estimates of intra-household resource allocation and gender differences in consumption poverty	Talip Kilic	200,000	13,760	186,240
6 Lack of Employability Skills and Informational Barriers to Female Labor Force Participation in India: Evidence from Two Randomized Controlled Trials	Anukriti LNU	200,000	92,686	107,314
7 The Collection and Analysis of Gender Differentials in Wellbeing Narratives	Vijayendra Rao	200,000	110,520	89,480
8 Childcare indicators and research: measuring legal frameworks for childcare provision	Alena Sakhonchik	130,000	14,425	115,575
<b>TOTAL - GENDER AND DEVELOPMENT</b>			<b>730,000</b>	<b>231,392</b>
GOVERNANCE AND INSTITUTIONS				
9 Optimal Design of Consumption Taxes: Evidence from India's GST	Pierre Jean Bachas	70,000	36,821	33,179
10 Recording Small Receipts: Digital Technology Adoption at the Margin of Formalization	Astrid Maria Theresia Zwager	176,000	-	176,000
11 Understanding How Public Officials Learn Through In-Service Training	Daniel Oliver Rogger	74,065	25,800	48,265
12 Public procurement and firm behavior	Vincenzo Di Maro	196,000	187,266	8,734
<b>TOTAL - GOVERNANCE AND INSTITUTIONS</b>			<b>516,065</b>	<b>249,887</b>
<b>KCPIV Total, June 30, 2022</b>			<b>1,864,961</b>	<b>724,331</b>
				<b>1,140,630</b>

**TABLE A.5 New KCP Projects Approved in the 2022 Round of the Call for Proposals**

Title	TTL	Amount
JOBS AND ECONOMIC TRANSFORMATION		
1 Subnational Fiscal Multipliers in Developing Countries	Steven Pennings	80,000
2 Economic Development through a Spatial Lens: Urbanization in Times of Climate Change and Social Justice	Forhad Shilpi, Harris Selod	900,000
3 Understanding Trends in Sub-National Differences in Economic Well-Being in Low- and Middle-Income Countries	Talip Kilic, Jed Friedman	900,000
4 Data and Evidence on Subnational Production, Trade, and Infrastructure	Florence Kondylis	450,000
FRAGILITY, CONFLICT, AND VIOLENCE		
5 Livelihoods Support for Displaced Persons and Host Populations in a Fragile Context Gender and Development	Marcus Holmlund	196,750
6 Women, Business and the Law in Practice: Completing a Framework to Measure de Facto Gender Equality	Nisha Arekapudi	200,000
GOVERNANCE AND INSTITUTIONS		
7 The Potential for E-Justice Innovations to Build More Resilient Justice Systems in the Wake of COVID-19	Daniel Chen, Antoine Deeb	200,000
8 Understanding the determinants of public procurement efficiency: evidence from administrative and survey data from Brazil	Thiago de Gouveia Scot de Arruda	141,000
CROSS-CUTTING ISSUES: DEBT AND FINANCIAL FRAGILITY		
9 The Demand for Debt from Emerging Markets and Developing Economies	Matias Moretti	200,000
CROSS-CUTTING ISSUES: HUMAN CAPITAL		
10 Improving Skills Development and Employability through Traditional Apprenticeships: Evidence from Senegal	John Giles	200,000
11 Protecting human capital during episodes of forced displacement: learning from Ukrainian refugees in Italy	Gero Carletto, Quy-Toan Do	200,000
12 The Persistent Effects of Stunting: A Ten-Year Follow-up of Beneficiaries and Non-Beneficiaries of the Philippine CCT Cross-Cutting Issues: Technology	Eeshani Kandpal	200,000
13 Measuring the Cost of Digital Transactions	Xavier Gine	123,741
14 The transformational impact of novel weather forecasts for smallholder farmers	Erin Kelley	90,000
15 Indexing the World: Enabling the effective and efficient discovery of geospatial data for holistic and localized research	Aivin V. Solatorio	146,000







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