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*Photo: Representative bird's-eye view of Chennai city*

*By Karl Janisse on Unsplash*

# *Delivering municipal services SMARTly*

**U**rban residents are usually skeptical when approaching the local municipal office. It is taken for granted that multiple visits will be necessary to resolve an issue. However, Urban Local Bodies (ULBs) in the state of Andhra Pradesh (AP) have a different story to tell.

Millions of urban residents are now getting the services they need with the help of technology. An application for registering a shop is now done online and processed within 15 minutes, when it would have taken many days earlier. And applications for a trade license, or permission for a water connection, or transfer of title deeds of property are processed within 15 days, which earlier took months.

With rapid urbanization and the onset of SMART cities, the ULBs have an important role to play. They sanction the allotment of land, give permits for the construction of buildings, ensure water supply for domestic and commercial use, handle street lighting, garbage and sewage disposal, among many other services. To carry out these functions, they depend on income derived from property tax, water tariffs, trade licenses and other fees.

In the early 2000s, the urban local bodies in Andhra Pradesh were using a web-based program called e-suidha to provide a suite of services. However, they were unable to keep up with the growing demand placed on them by a rapidly growing population.

There was considerable evasion of property tax, unauthorized construction and the proliferation of slums, all of which led to the failure of town planning, low water supply, and delays in municipal services. Municipal governments did not function in a transparent manner and grievances were not redressed in a time-bound and systematic manner. The ICT systems were working in silos and there was no standardized set of systems and processes for all municipalities across the state.

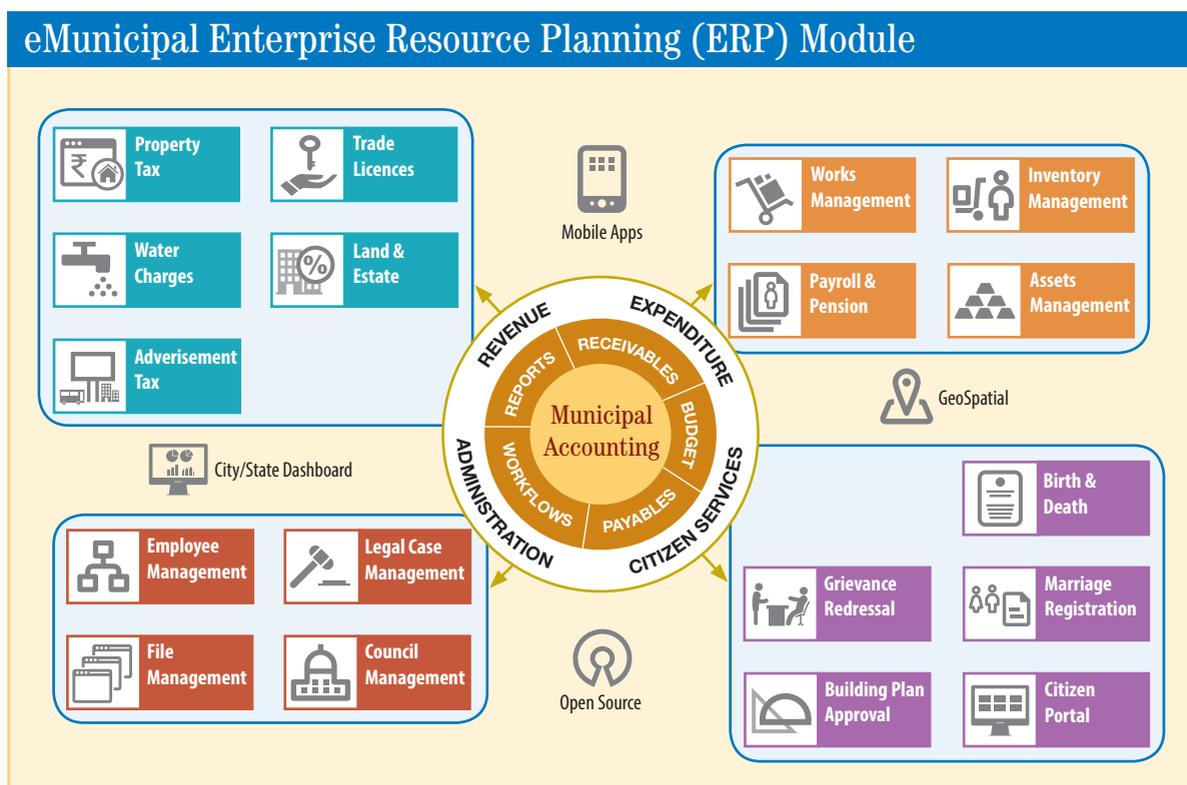
In 2010, the World Bank Board approved

the Andhra Pradesh Municipal Development Project which sought to use innovative digital technology to transform municipal governance in the state. The first challenge was to collect exact information on all urban assets in the state. Drones were used to map cities, showing details of buildings, vacant land, water networks, sewage networks, roads, slums, and vegetation, among others.

Their imaging was more detailed than satellite imagery that was used earlier, and less expensive as well. Artificial intelligence was then used to analyze the data, and maps prepared to give a pictorial view of the urban assets.

These maps were then linked to a 'geo-portal' with details such as street information, addresses, location, landmarks, drainage networks, details on public buildings such as metro stations, post offices, fire stations etc. With this, officials could now check if the buildings conformed to the planning and zoning laws and detect unauthorized construction.

The geo-portal was further connected to a new municipal e-governance system, the Enterprise Resource Planning (ERP) Module. This was made operational in all 110 ULBs in the state. This module covered core



municipal functions that directly impacted citizens such as building permissions, property tax, water charges, other municipal revenue sources and an online grievance redressal system. It integrated twenty-one different modules such as revenue sources, expenditure tracking, citizen services portals, grievance redressal websites, birth & death registration, municipal administration portal and much more.

In addition, Andhra Pradesh was the first state in India to implement a unique 'digital door numbering' system whereby a property was given a unique digital address, visible on a GIS map and linked to GPS. Using this technology, ULBs could track online if municipal services, like water supply or garbage collection, have been delivered at an address. This information was linked to the ERP dashboard making it easy for municipal officials to monitor & track even the garbage collection process and take remedial action in case of delays.

The process brought more properties into the tax base, increasing revenues from property tax. And collection of water charges increased by over 100 percent.

The new digital systems enabled citizens grievances to be logged/photographed, geo-tagged with location and time, and made

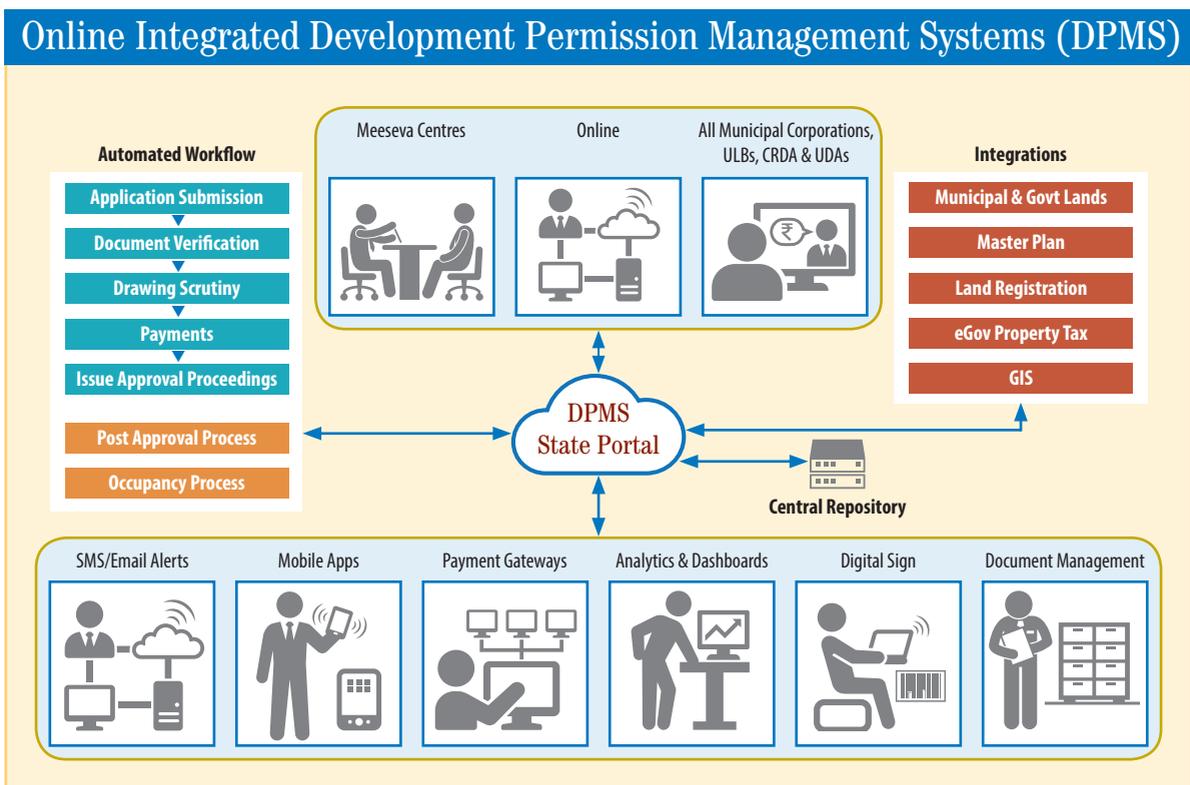
available on the AP government's public website.

The new digitized system has benefited over 14.6 million urban residents through improved accountability, transparency and a better citizen interface. It has also helped the departments in urban local bodies to better coordinate, prioritize and plan initiatives in their areas.

### Going forward

Following the success of the digitization of municipal bodies in Andhra Pradesh, the state of Tamil Nadu is implementing a digital based program for ULBs in about 136 municipalities. It now also plans to digitize about 528 town panchayats across the state.

The national flagship programs like Digital India, 100 Smart Cities Mission and others envisage the use of new disruptive technologies, information and data to improve infrastructure and services across multiple sectors in India. A study by Mckinsey suggests that the full scope of digitization could add about a trillion dollars to India's GDP by 2025. The states of Andhra Pradesh, Karnataka and Tamil Nadu offer successful models for other states to follow.



# *Helping 10-year-olds to read by 2030*

*Learning poverty not only wastes the children's potential, it hurts entire economies, negatively impacts future workforces and economic competitiveness. Eliminating it must be a priority, just like ending hunger and extreme poverty.*



India has been successful in increasing access to school, but now the focus must shift to quality.

For most children, turning 10 is an exciting moment. They are learning more about the world and expanding their horizons. But too many children — more than half of all 10-year olds in low- and middle-income countries — cannot read and understand a simple story.

We are in the middle of a global learning crisis that stifles opportunities and aspirations of hundreds of millions of children. That is unacceptable.

In October, we released data to support a new learning target: by 2030, we want to cut, by at least half, the global level of learning poverty.

### *Missing possibilities*

Learning to read is an especially critical skill: it opens a world of possibilities, and it is the foundation on which other essential learning is built — including numeracy and science. Wiping out learning poverty (defined as the percentage of children who cannot read and understand a simple story by age 10) is an urgent matter. It is key to eliminating poverty in general and boosting shared prosperity. It is key to helping children achieve their potential.

But over the last several years, progress in reducing learning poverty has been stagnant. Globally between 2000 and 2017, there has only been a 10% improvement in learning outcomes for primary school-aged children. If this pace continues, 43% of 10-year-olds will not be able to read in 2030.

The good news is, the children who will turn 10 in 2030 will be born next year. If we work urgently, there is an opportunity to reverse this trend.

The target we have set is ambitious but achievable — and should galvanize action toward achieving Sustainable Development Goal (SDG4) — ensuring quality education for all. It will require nearly tripling the rate of progress worldwide, which can be done if every country can match the performance of the countries that made the most progress between 2000 and 2015.

Several countries are showing that it is possible.

### *The India example*

In India, the Right-to-Education Act has been successful in increasing coverage and access to school education but now there is an urgent need to shift the focus to quality. The decision of India to join the Program for International Student Assessment and the merger of schemes under Samagra Shiksha are encouraging signs that India is moving in this direction.

In Kenya, the government's national reading program has more than tripled the percentage of grade two students reading at an appropriate level. This was accomplished through technology-enabled teacher

coaching, teacher guides, and delivering one book per child.

In Vietnam, a lean, effective curriculum ensures that the basics are covered, there is deep learning of fundamental skills, and all children have reading materials. Learning outcomes of Vietnamese students in the bottom 40% of the income ladder are as high, or higher, than the average student in high-income countries.

The challenges of reducing learning poverty will differ between countries and regions. In some countries, access to school remains an enormous problem — 258 million young people were out of school globally, in 2018. In other countries, children are in classrooms but are not learning. By setting a global target, the World Bank can work with countries to define their own national learning targets. Cutting learning poverty in half by 2030 is only an intermediate goal. Our ambition is to work with governments and development partners to bring that number to zero.

As the largest financier of education in low- and middle-income countries, the World Bank will work with countries to promote reading proficiency in primary schools. Policies include providing detailed guidance and practical training for teachers, ensuring access to more and better age-appropriate texts, and teaching children in the language they use at home.





and their drivers, continued research and innovation, and the smart use of new technologies on how to build foundation skills.

The learning crisis not only wastes the children's potential, it hurts entire economies. It will negatively impact future workforces and economic competitiveness — as the World Bank's Human Capital Index shows that, globally, the productivity of the average child born today is expected to be only 56% of what it would be if countries invested enough in health and education.

Eliminating learning poverty must be a priority, just like ending hunger and extreme poverty. It will not be easy, but we cannot back down from the challenge. We owe it to the children all over the world to set our sights high, so they can too.

*This article, by David Malpass, President, World Bank Group, was published as an opinion piece in The Hindu on November 26th, 2019*

### *Creating the right classroom*

The World Bank is also working with governments and development partners to improve entire education systems, so advancements in literacy can be sustained and scaled up. That means making sure children come to school prepared and motivated to learn; teachers are effective and valued and have access to technology; classrooms provide a well-equipped space for learning; schools are safe and inclusive; and education systems are well-managed.

An ambitious measurement and research agenda supports these efforts and includes measurement of both learning outcomes

# ICR Update

**T**his is a short summary of the Implementation Completion Report (ICR) of a recently-closed World Bank project. The full text of the ICR is available on the Bank's website. To access this document, go to [www.worldbank.org/research](http://www.worldbank.org/research).

## *Sustainable Urban Transport Project (SUTP)*



### **Context**

India's surging economic growth in the late 2000s led to a rise in urban centers and an increase in the use of motorized vehicles. However, there were many cities which did not have access to organized public transport. A study by the Ministry of Urban Development (MoUD) in 2008 found that only 20 out of 87 cities with a population of more than 0.5 million had any organized public transport. Midsize cities in the 0.5-4.0 million population size category typically had low public transport mode shares of 9-13 percent.

Cities were grappling with increased traffic congestion, air pollution, travel time, safety issues for pedestrians, greenhouse gas (GHG) emissions, which also disproportionately affected the poor. There were no effective mechanisms for coordinating the national, state, and municipal actors. In addition, systematic procedures and technical

<b>Sustainable Urban Transport Project (SUTP)</b>	
<b>Approval Date:</b>	10 December, 2009
<b>Closing Date:</b>	31 March, 2018
<b>Total Project Cost</b>	US\$ 318.6 million
<b>Bank Financing:</b>	US\$ 105.5 million
<b>Implementing Agency:</b>	Ministry of Urban Development and state and city transport corporations
<b>Outcome:</b>	Moderately Satisfactory
<b>Risk to Development Outcome:</b>	Moderate
<b>Overall Bank Performance:</b>	Satisfactory

guidelines for planning, preparing, appraising, monitoring, and evaluating urban transport investments, especially large-scale projects, were not well established at either the national or state level.

With support from Global Environment Facility (GEF), the World Bank and UNDP, MoUD developed an India-GEF-World Bank-UNDP Sustainable Urban Transport Program.

### **Project Development Objective**

The Project's Development Objective was to promote environmentally sustainable urban transport nationally and to improve the usage of environmentally friendly transport modes in project cities.

The aim was to strengthen national and local governments' capacity in urban transport planning and management in a more integrated and comprehensive manner. The World Bank supported component of the Sustainable Urban Transport Project (SUTP) Program included

- a series of capacity-building initiatives which would be implemented by MoUD and
- midsize investment projects with demonstration potential in selected states and cities.

The project focused on four themes:

- public transport development,
- Non-Motorized Transport (NMT) development,

- Intelligent Transport System (ITS), and
- integrated land use and transport planning and Transit-Oriented Development (ToD).

The six cities, selected by the Government of India (GoI) through a competitive selection process, included Pune and Pimpri-Chinchwad (in Maharashtra), Naya Raipur (in Chhattisgarh), Jalandhar (in Punjab), Indore (in Madhya Pradesh), and Mysore (in Karnataka).

The project was amended several times to accommodate new developments, such as cancellation of the Pune city demo project and inclusion of the Hubli-Dharwad Bus Rapid Transit System (BRTS) and Mysore Public Bike Sharing (PBS) projects

### **Achievements**

**Institutional strengthening:** This was a core part of SUTP. A massive capacity-building, knowledge exchange, and training program was launched, targeted at institutions and individuals (officials and practitioners) to provide technical competence, better understanding and thereby greater willingness and ability to implement environmentally sustainable urban transport projects. This objective was achieved and substantially surpassed. More than 450 officials across India covering over 47 cities and 29 states underwent training and many of them proceeded to develop environmentally friendly initiatives in their states.





**City urban transport services:** Some of the projects/approaches taken forward by the officials in their respective cities included, strategies to decongest Delhi Metro in peak hours (covering differential pricing, multiple interchange points, and so on); revitalizing city bus in Nagpur; creating transit-oriented zones in Ahmedabad; policy guidelines for electric rickshaw; improving pedestrian infrastructure in Aizawl; water Metro system in Kochi; driver training in Delhi Transport Corporation to reduce road fatalities (reduction in fatal accidents from 73 to 28 between 2012 and 2018).

Four cities (Bhopal, Chandigarh, Jaipur, and Mira-Bhayandar) proceeded to implement city bus modernization programs. The success of the Pimpri-Chinchwad Bus Rapid Transit System (BRTS) can be gauged from the ridership share of people using public transport mode, which more than doubled in Pimpri-Chinchwad from 4.2 percent to 8.8 percent, overachieving the set target of 8 percent. Roughly 28 percent of the shift was from personal modes. After successful implementation of the BRT corridor in Pimpri-Chinchwad, its twin city Pune is now proactively planning a BRT network in the city.

Implementation of the Mysore ITS led to improved bus service quality in terms of punctuality, reduced incidents of bus bunching and rash driving, reductions in accidents and in fuel consumption. Bus ridership as a result increased by 12 percent between 2012 and 2015. After the success of the Mysore ITS, the Karnataka state transport has successfully scaled up the ITS to its entire fleet of 8,000 buses, and it has acted as a role model for many of the other Indian cities, like Bangalore and Chandigarh, that are in the process of implementing ITSs. In

addition, Bangalore has also launched its own PBS across 400+ stations across the city, seeing the success of the system in Mysore PBS.

In the cities of Naya Raipur and Raipur, over 42 percent of the people were using public transport at project close, a very significant achievement given the negligible public transport available in Raipur at the start of the project.

The public transport mode share data are not yet available as the Hubli-Dharwad BRTS was rolled out recently. However, preliminary surveys suggest an 18 percent shift to the BRTS from personalized modes of which nine percent were car users. The user feedback was very positive, and ratings were especially high regarding travel time savings, reliability, and facilities.

In Indore, following the opening of the first BRTS corridor, studies found significant improvements in transit ridership on the corridor (increase from 9,000 to 40,000 trips daily), in journey time (reduction by about 20 minutes end-to-end), and in customer satisfaction (increase from 64 percent to 82 percent). The overall city daily ridership increased by 35 percent by end-2018 due to a smart integration becoming operational between the BRTS and the city bus service.

**Environment:** The project targeted a GHG emission reduction of 128,000 tons of CO<sub>2</sub> owing to the demonstration projects. Based on end-of-project outcomes, the emissions over the first 10 years are estimated to reduce by 312,000 tons and another 427,000 tons over the following 10 years.

**Women:** Evaluation studies indicate that women favor high-quality and well-managed

urban transport systems such as the BRT. In Pimpri-Chinchwad, the percentage of women using the BRT increased by about 30 percent. In Naya Raipur, the share of women passengers also grew from 26.2 percent to 28 percent. User satisfaction surveys indicated that women particularly appreciated the less-crowded stations, security on board, and level of comfort.

### **Lessons Learned**

*Multicity projects require extensive preparation, robust structures, sustained management commitment, and state-level engagement over the project life.* SUTP was an ambitious project, taking on projects in multiple cities and multiple states. Efforts put in over a decade show that it can be done when management and financial commitment can be consistently ensured. Engaging the state government in the project was an effective means of ensuring stronger and continued commitment.

The project implementation in Hubli-Dharwad, Mysore, and Naya Raipur was far more stable precisely because of the strong role of the state government in these demo projects. Future projects in India must ensure a role for the state government in urban transport projects and consider multistate as opposed to multicity engagements or multicity engagements within a state.

*Capacity-building efforts can be potentially transformational if designed and implemented well.* The capacity-building effort under SUTP was backed by the central government and had a strong emphasis on engagement with practitioners and officials at the ground level, bringing together large groups of state and city officials for intense interactions and group work on live cases and issues. This format, though time and resource intensive, created forums for rich knowledge exchange and peer-to-peer learning and led to the development of a vibrant community of urban mobility practitioners.

*BRT projects need to establish comprehensive teams on par with Metro projects.* BRT projects are complex and are more than just infrastructure design and contracting of civil works. They include operational dimensions such as bus service

plan, design of operating procedures, traffic management, pedestrian access, safety processes, and so on. They also include land acquisition and safeguard management processes, communication, and consultation processes. The experience in SUTP was that the 'BRT Office' tended to be on a small scale and reliant on other units for much of the technical support (civil works) and non-construction elements (land acquisition and so on). This led to fragmentation in planning and delivery. BRT projects must be implemented through nodal entities such as Special Purpose Vehicles (SPVs) and should be more substantial and multifunctional, along the lines of a typical Metro project, so that they have the capability to deal with all the issues in an integrated way.

*Land acquisition readiness and adequate public consultations are prerequisites for improved outcomes and reducing delays.* Inordinate delays in land acquisition in Pimpri-Chinchwad delayed the civil works in certain sections by four to five years and led to considerable time and cost overruns. Whereas, the robust public consultations during preparation of the project helped Hubli-Dharwad BRTS incorporate the suggestions of the people in the project design and action plan and thus minimized resistance to implementation.

*Two-stage and temporary resettlement should be avoided.* The shifting of displaced families to transit housing for 18 months resulted in people living there for about six years due to inordinate delays in construction of alternative housing causing hardship to displaced families. Similarly, the three-month temporary displacement of shopkeepers in Hubli-Dharwad resulted in a 10-month wait for shopkeepers to bring them back to the original site due to delay in construction schedules. This suggests avoiding two-stage resettlement or temporary displacement and instead planning for permanent resettlement.

# *India's Solar Revolution: A Game-Changer for South Asia?*



Over the last decade, solar power has developed so fast in India that it can now produce it cheaper than anywhere else in the world. For the first time, electricity produced from solar is almost 15 per cent cheaper than coal-fired power generation in the country. These are momentous clean energy milestones, not just for India, but globally.

While India's solar success has caught global attention, its South Asian neighbours such as Bangladesh and Maldives are particularly keen to learn key lessons and go even one step further – have Indian industry players fire up their own solar markets.

To facilitate this crucial and promising knowledge transfer, the World Bank has supported a series of knowledge exchanges (KE) between India, Bangladesh and Maldives. In early May 2019, India hosted a 15-member delegation, including ministerial and director level officials, participants from

the Ministry of Power from Bangladesh, Infrastructure Development Company Ltd (IDCOL) from Bangladesh, Ministry of Energy and Environment from Maldives and officials from energy distribution companies in Bangladesh and Maldives.

During the knowledge exchange, the delegation interacted with senior policy makers, power distribution companies, the private sector and commercial banks to learn from their experience of implementing different models of solar power generation and integration with the grid.

### *Storing Solar Energy: Powering the future*

India now has its first and South Asia's largest battery-based energy storage system run by Tata-AES-Fluence in Rohini, Delhi. Delegates saw an example of how this 10 MW system stopped a 75MW grid from collapsing for over 7 hours after a power

\* India is APAC's cheapest power producer <https://tinyurl.com/t3brkb9>

outage, thus underscoring its capacity and credibility. The Bangladesh and Maldives delegates saw this as an opportunity for meeting “peak-time” demand and as having strong “replication potential.”

“What we would say to a country replicating is that first, you have to create a road map which is dynamic and can address your future requirements also. Second, make sure that all your customer requirements and customer evolution, future technology has been factored in. And third, it is extremely important to have a deployment strategy, which is very cost effective and optimizes the resources,” said Ganesh Das, Head, Strategy, Business Excellence & Collaborations at Tata Power.

### *Solar Parks and Rooftops: Madhya Pradesh Pioneers a PPP model to get Record Tariffs*

On another front but just as promising for the future of clean energy-powered infrastructure, 60 per cent of what powers the Delhi metro is sourced from a 1590-acre solar park in Rewa, Madhya Pradesh. Delegates got to experience this in real time during their second field visit of the study tour.

The project, a public-private partnership between private solar developers and the state-based energy development corporation, Madhya Pradesh Urja Vikas

Nigam Ltd., was able to get a solar tariff of Rs. 2.97/unit without any subsidy. They did it through a modern, transparent and electronic “reverse auction” – where the lowest bidder – the one who can develop the project at the cheapest cost, wins.

It was the first project in India in which solar power became cheaper than coal power and international players participated in a state bid. “A guaranteed buyer such as Delhi Metro had built confidence that produced energy can be sold,” observed Abdullah Nashith, Director, Fenaka Corporation Limited, Maldives.

For solar rooftops, a decentralized model for power generation, the solar tariffs achieved were as low as Rs.1.38/unit with 47% percent subsidy. This was achieved through a partnership with the Madhya Pradesh government and the World Bank, who developed data rooms for each building with solar rooftops. This proved very helpful for the project developers to understand the exact scope of work and bid.

“It was commendable, the way the PPP initiatives became successful in developing the solar parks, mitigating the implementation risks for the private sector and making it easier for them to participate in such projects,” said Farzana Rahman, Infrastructure Development Company Limited (IDCOL), Bangladesh.





As a result of the knowledge exchange, Bangladesh is doing a pre-feasibility assessment for a solar rooftop project bid using the reverse auction mechanism and exploring collaboration with Solar Energy Corporation of India (SECI) and other Indian agencies to help them run their bid.

Maldives learned about ‘island micro-grid’ and “floating solar PV projects” from SECI, which it may replicate and target for Lakshadweep Islands, to make them diesel-independent.

### *Win-Win: Cheaper Power Bills and Cheaper Power for DISCOMs*

Another area some countries are grappling with is how to strike a better balance between what are known as “net metering policies” and “net billing policies.” Falling solar prices is not just good news for consumers. In the medium to long term, it holds financial promise for energy distribution companies or “Discoms,” as they are better off to buy cheaper solar power from large scale developers or consumers under net metering policies.

In both, Maldives and Bangladesh, net metering policies are in place, but they want to find a happy equilibrium for Discoms, too. So, the delegation interacted with India’s Central Electricity Regulatory Commission (CERC), which has come out with draft regulation for stability between the pricing of power with support from the World Bank technical assistance program. They shared the example of BSES Rajdhani Power Limited (BRPL), highlighting that solar helps BRPL in minimizing their overloading issues, deferring capital expenditure, while meeting their renewable purchase obligations as part of national targets.

### *Key to Clean Energy Expansion: Lending for Solar Projects to Small and Medium Enterprises*

Lending for solar projects to Small and Medium enterprises (SMEs) can help attract private parties to get involved in clean energy development and substantially increase renewable energy penetration in a country.

The World Bank has partnered with the Ministry of New and Renewable Energy (MNRE) to boost solar lending through India’s largest public bank, State Bank of India (SBI). A World Bank-supported program has helped spur a competitive solar market across India by educating bankers on solar rooftop program design and lending to industry players for the same.

During discussions with SBI, the delegates learned, among other things, how they have a separate project implementation unit for facilitating loans to clean energy projects and built a robust due diligence mechanism.

There was also strong interest for SBI to invest in solar programs in Bangladesh and Maldives. Over 14 Indian companies bid in a World Bank tender for solar power in Maldives in 2019, reflecting the confidence and capacity of the Indian private sector to support large scale deployment of solar overseas.

And so, the South Asian neighbours are poised to take advantage of solar developments in India and indeed, fire up their own markets.

*“Lighthouse India” is a World Bank initiative supporting systematic knowledge exchanges on good practices and innovations in development programmes across Indian states and with the world.*

## Face to Face

# Trading for Development in the Age of Global Value Chains

*Aaditya Mattoo, Co-Director, World Development Report 2020, talks about the impact of the US-China trade war on global value chains and the lessons India could learn from countries like Bangladesh and Vietnam and why automation and artificial intelligence need not necessarily lead to job losses*



### *What would be the impact of the US-China trade war on GVCs?*

**T**o a limited extent, it is conceivable that a trade war between the US and China would divert trade to Vietnam or India. But that is myopic because the increase in policy uncertainty will eventually end up hurting everybody. Global value chains often require investments in relationships and the willingness to make those investments is diminished by uncertainty.

Some estimates suggest that the positive short-term benefits of trade diversion for India will be outweighed by the negative investment-inhibiting effects, which could lead to a decline in GDP by close to 1 percentage point and push another 7 million people into poverty. But trade wars are not inevitable.

A large country like India has the capacity to change the face of international trade and of international cooperation. On the one hand, it can help deepen traditional trade cooperation by defining an agenda that incorporates the legitimate concerns that the US has about China. On the other hand, it can continue to participate imaginatively and boldly by initiating international cooperation beyond trade, in areas like taxation. That wider cooperation would help resource

mobilization by governments in a globalized world where capital and skills are mobile. That would enable rich country governments help their workers adjust to international cooperation, and poor country governments build the hard and soft infrastructure needed to engage in trade. That needs India to be a leader that redefines and shapes the narrative around trade and cooperation.

*So, what are the steps that India should take to be part of GVCs?*

India has already taken important steps to improve its logistics services, infrastructure and introduce regulatory reforms. In the labour market you are aware of the rigidities which make it hard for firms to grow. In most countries, large firms dominate exports and trade, while in India we see that firms are not growing. Only 10% firms in India employ more than 500 people compared to more than 30% in China. Land reforms are crucial, they also have distortionary effects on capital markets. From 2012 the share of exports of goods and services in GDP has declined from 25% to 20%. Services reform too will enhance India's participation in both goods and services value chains. Past reforms — in telecom, finance, transport — have delivered benefits, but they are incomplete. Services like retail are important for development. Retailers often invest in logistics value chains. Restrictions in business services like accounting and legal services increase transactions costs for the whole economy. Those reforms are a priority.

*What are the lessons that India can learn from countries like Bangladesh and Vietnam because the report highlights these countries as successes?*

Bangladesh shows that it is sometimes a blessing not to be able to do everything. The fact that they did not have a major domestic textile industry to protect meant that they were able to allow cloth to be imported and focus on doing what they were good at – cutting and stitching. In India's case the need to protect the domestic textile industry has become a handicap for the domestic apparel industry. Bangladesh has 7% of the world's apparel industry. It has reduced poverty from more than 44% to less than 10%. But Bangladesh is not an entirely positive story because its GVC participation is relatively stagnant. It has been doing the same thing for the past 30 years. And this is where Vietnam is interesting. Vietnam has seen progression. It has moved from apparel to electronics to progressively more and more sophisticated participation by endogenously improving their skills and molding their dynamic comparative advantage.

*You have said that Artificial Intelligence/ automation need not be feared, it will not necessarily mean constricting employment rather it can lead to employment creation. Can you explain this?*

The industries that have seen the greatest roboticization are those that have seen the fastest growth in demand for imports from developing countries. It has always been true that human ingenuity does not just find ways to make human beings redundant. It also finds new tasks for human beings to do. But I don't think that's a reason to be complacent. I like to think of this as a race between two prices – one is the real wage in China, the other is the price of a robot. If real wage increases faster than the price of robot falls, then a company in China when it faces rising wages in China will move its production out to Vietnam, Bangladesh and hopefully India. But if the price of robot falls faster, then that company will not move in response to an increase in real wages, it will buy a robot. There is no doubt that the price of robots is falling and there is no doubt that the real wages are rising. There is a narrow window in between. It's not a window of complacency, it's a window of urgency and you need to find a way in which you implement reforms and take advantage of it.

*This is an edited version of Aaditya Mattoo's interview to Elizabeth Roche of MINT, published on December 4, 2019.*

# Recent Project Approvals

## Maharashtra Agribusiness and Rural Transformation Project

The World Bank Board of Executive Directors has approved a \$210 million Maharashtra Agribusiness and Rural Transformation Project that will benefit over one million farmer households in Maharashtra. The project will support small holder farmers participate in competitive agriculture value chains, facilitate agri-business investments, increase market access and productivity in focus



commodities. It will also help build resilience of crops to recurrent floods or droughts in the state.

The Project will help build capacity of the nodal departments and institutions; increase private sector investments in agricultural value chains; remove constraints for producers and entrepreneurs in accessing emerging domestic and export markets; build the capacity of the state to respond to commodity-price fluctuations by providing access to timely information on markets and production trends; and enhance adoption of climate resilient production techniques in the state.

The project will be implemented in all 36 districts of Maharashtra. At least 43 percent of farmers and farm-workers participating in project activities are expected to be women. Specific focus will be given to women-led enterprises and the participation of women in the decision-making processes of farmer producer organizations.

## Assam Inland Waterway Transport Project

The World Bank Board of Executive Directors has approved a \$88 million loan to help modernize Assam's passenger ferry sector that runs on its rivers including the mighty Brahmaputra.

The Assam Inland Water Transport Project (AIWTP) will help Assam improve the passenger ferry infrastructure and its services and strengthen the capacity of the institutions running the inland water transport in the



state. Technically better designed terminals and energy-efficient vessels (both new and retrofitted) will make the ferry services more sustainable with least disruption to nature.

The project will also help build modern ferry terminals. The terminals will have better access, lighting and signages while the new vessels will allow for individual seats, and separate toilets. Moreover, a strengthened regulatory regime will ensure reduction in

overloading, adherence to time schedule and better crew standards.

The project will support Government of Assam's efforts to corporatize its own ferry activities. The Assam Shipping Company (ASC) will operate the government ferries and the Assam Ports Company (APC) will provide terminals and terminal services on a common-user basis to both public and private ferry operators.

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## The West Bengal Major Irrigation and Flood Management Project



**T**he World Bank Board of Executive Directors has approved a \$145 million project to improve irrigation services and flood management in the Damodar Valley Command Area (DVCA) in West Bengal.

The West Bengal Major Irrigation and Flood Management Project will benefit about 2.7 million farmers from five districts of West Bengal across 393,964 ha area with better irrigation services and improved protection against annual flooding to mitigate the impact of climate change.

The DVCA is over 60 years old, and in need of modernization. Key challenges include degradation of infrastructure and inadequate irrigation management, including poor quality of service delivery, inefficient irrigation and the failure to serve the middle and tail parts of

the canal network with surface water.

To deal with these challenges, several institutional reforms are planned under the project. These include introduction of a modern Management Information System (MIS), benchmarking and evidence-based decision making, promotion of conjunctive use of surface and groundwater, introduction of rational asset management and improving transparency through citizen engagement. Irrigation Service Providers will be recruited on a performance basis to improve the quality of irrigation services.

The total value of the project is \$413.8 million, co-financed between IBRD (\$145 million), the Asian Infrastructure Investment Bank (\$145 million) and the Government of West Bengal (\$123.8 million).

# World Bank Publications – New Additions

**T**his is a select listing of recent World Bank publications – reports, policy research working papers and project documents – that are available in the library at the World Bank's New Delhi Office. These can also be downloaded from the website – [www.worldbank.org](http://www.worldbank.org) – 'Documents and Reports' and 'Publications.'

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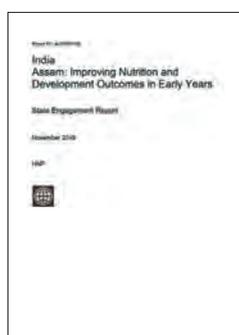
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## India Publications

### Improving Nutrition and Development Outcomes in Early Years: State Engagement Report



By Ashi Kohli Kathuria and  
Deepika Anand  
**Available On-Line**  
Published: November 2019  
**English**  
Report No: AUS0001183

The report is structured into four sections. Following this Introduction is a section that provides the context and rationale of the

TA, including the situation of key health and nutrition indicators in the state as well as in the three aspirational districts.

The third section outlines the key points of the TA, its objectives, activities, outputs and outcomes. The fourth and final section discusses the key learnings from this engagement.

### Community-Led Pilot in Meghalaya to Improve Early Childhood Development Outcomes



By Ashi Kohli Kathuria and  
Deepika Anand  
**Available On-Line**  
Published: November 2019  
**English**  
Report No: AUS0001190

Early childhood is the most crucial period for the overall development of children. Adequate health

care, nutrition, security, safety, responsive caregiving, and opportunities for early learning during this period are essential for children to achieve their full human potential. Poor health and growth during early childhood has life-long consequences. Children need nurturing care during their early years to grow into healthy, intellectually capable, socially, and emotionally mature individuals.

The World Health Organization (WHO) nurturing care framework encompasses five key early childhood development (ECD) elements – health, nutrition, security and safety, responsive caregiving, and opportunities for early learning.

This report provides a comprehensive description of the technical assistance (TA), the key results, outcomes, and the policy implications. It also talks about Government of Meghalaya's proposal to scale-up ECD interventions in the state.

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### The Jeevika Multisectoral Convergence Pilot in Bihar: A Process Evaluation Report



By Purnima Menon, Neha Kumar, Neha Kohli, Tarana Chauhan and et.al.  
Available On-Line  
Published: October 2019,  
English Version,  
Paperback  
Report No.: AUS0001167

The impact evaluation of a program primarily answers the question of what impacts (if any) did a program have on the outcomes of interest, while a process evaluation (PE) answers the questions of how and why a program did or did not have that impact. The challenges inherent in this type of evaluation are also well-understood, but here again, the science is evolving with methods that are particularly suited to illuminating pathways through which efforts to deliver nutrition interventions achieve their impact.

This document, therefore, lays out the objectives, approach, and methods to be used for the PE in the JEEViKA-Multisectoral Convergence (JEEViKA-MC) pilot, and presents the results of the PE that was conducted from April to June 2017.

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### Impact Evaluation of JEEViKA Multisectoral Convergence Initiative in Bihar: Engaging Women's Groups to Improve Nutrition



Available On-Line  
Published: October 2019  
English Version  
Report No.: AUS0001036

JEEViKA is a program that was launched in 2006 by the Bihar Rural Livelihoods Promotion Society (an autonomous body under the Department of Rural Development), with the support of the World Bank.

Over its 13 years of operation, JEEViKA has reached some 1.8 million women in thousands of

villages and has proven to be very successful at empowering women through their increased economic contributions.

This report presents a summary impact evaluation of a pilot program, the JEEViKA Multisectoral Convergence Initiative, that tested the use of the JEEViKA structure to address undernutrition in women and children. Under the pilot, SHG members received messages about mother and child nutrition and about various safe water, sanitation, and hygiene practices. To assess whether the approach is effective and cost-effective, the evaluation compares changes in practices among these women with those of a similar group that did not receive the intervention.

## South Asia Publications

### Baby-Friendly Hospital Initiative in South Asia: Implementing Ten Steps to Successful Breastfeeding – India, Nepal, and Bangladesh Challenges and Opportunities



Available On-Line  
Published: October 2019  
English Version  
Report No.: AUS0001178

This report documents the challenges and opportunities for implementing the baby-friendly hospital initiative (BFHI) and ten steps to successful breastfeeding (hereinafter called the ten steps) in India, Nepal, and Bangladesh. While BFHI was not being implemented well in Nepal and India, Bangladesh had recently made efforts to strengthen BFHI implementation. Therefore, a qualitative study was planned in India and Nepal to find out challenges and barriers, and a case study was planned in Bangladesh to find out success factors.

This report provides recommendations for the successful implementation of BFHI and ten steps in the three South Asian countries.

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### Unleashing E-Commerce for South Asian Integration



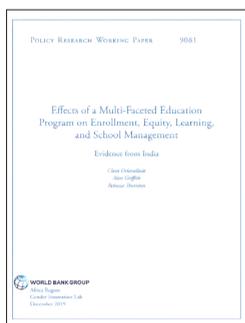
By Sanjay Kathuria, Arti Goswami Grover, Viviana Maria Eugenia Perego, Aaditya Mattoo and Pritam Banerjee  
Available On-Line  
Published: November 2019,  
English Version  
Report No.: 143862

This report is part of a broader work program on shaping a more positive narrative on regional integration in South Asia. It is a follow-up to a recent flagship report published by the South Asia Region of the World Bank, *A Glass Half Full: The Promise of Regional Trade in South Asia*. E-commerce is dramatically changing the way goods and services are transacted nationally, regionally, and globally. It facilitates international trade by reducing the cost of distance and remoteness and can be more inclusive of underrepresented groups such as women, small businesses, and rural entrepreneurs. Intraregional trade in South Asia is still below its potential, and the region lags behind other parts of the world in activating the potential benefits from e-commerce.

## India: Policy Research Working Papers

### WPS9081

#### Effects of a Multi-Faceted Education Program on Enrollment, Equity, Learning, and School Management: Evidence from India



By Clara Anne Delavallade, Alan Griffith and Rebecca Lynn Thornton

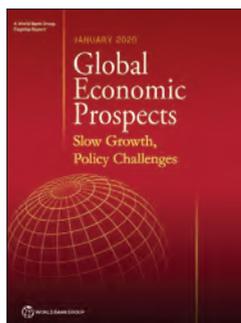
The Sustainable Development Goals set a triple educational objective: improve access to, quality of, and gender equity in education. This paper documents the

effectiveness of a multifaceted educational program, pursuing these three objectives simultaneously, in rural India. Using an experiment in 230 schools, the paper measures the effects of the program on students' school participation and academic performance over two years, while also examining heterogeneous impacts and sustainability.

The findings show that the program increased enrollment, especially among girls (8.1 percent in the first year, 11.7 percent in the second), reducing gender gaps in school retention. The findings show large learning gains of 0.323 standard deviation due to the program in the first year and 0.156 standard deviation at the end of the second year, which did not vary by gender. There were also large effects on school management outcomes, increasing the number of meetings by 16 percent and the number of improvement plans completed by 25 percent.

## Other Publications

### Global Economic Prospects - Slow Growth, Policy Challenges



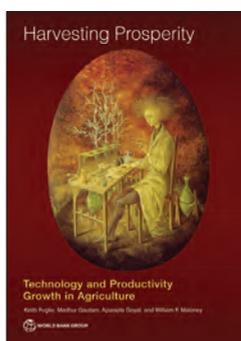
January 2020  
Available On-Line  
English version

Global growth is projected at 2.5 percent in 2020, just above the post-crisis low registered last year. While growth could be stronger if reduced trade tensions mitigate uncertainty, the

balance of risks is to the downside. A broad-based slowdown in labor productivity growth has been underway since the global financial crisis. The current wave of broad-based debt accumulation, since 2010, has already seen the largest increase in many emerging and developing economies (EMDEs). The use of price controls can dampen growth, worsen poverty, incur heavy fiscal burdens, and complicate monetary policy. There is an urgency to the need to rebuild macroeconomic policy space and undertake reforms to rekindle productivity.

This edition of *Global Economic Prospects* also includes chapters on the productivity growth slowdown in emerging markets and developing economies (EMDEs) since the global financial crisis and on the rapid debt buildup in these economies over the same period, and special focus pieces on the implications of price controls in EMDEs and on the challenges of maintaining low inflation in low-income economies (LICs).

### Harvesting Prosperity: Technology and Productivity Growth in Agriculture



By Keith Fuglie, Madhur Gautam, Aparajita Goyal, and William F. Maloney  
Available On-Line  
Published: November 2019  
English Version, Paperback  
ISBN: 978-1-4648-1393-1  
ISBN (electronic): 978-1-4648-1429-7  
ISBN (paper): 978-1-4648-1393-1

Rising agricultural productivity has driven improvements in living standards for millennia. Today, redoubling that effort in developing countries is critical to reducing extreme poverty, ensuring food security for an increasing global population, and adapting to changes in climate.

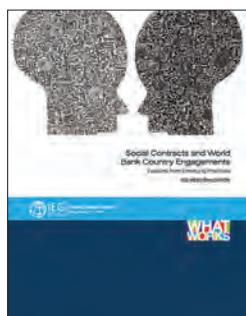
This volume presents fresh analysis on global trends

and sources of productivity growth in agriculture and offers new perspectives on the drivers of that growth. It argues that gains from the reallocation of land and labor are not as promising as believed, so policy needs to focus more on the generation and dissemination of new technologies, which requires stepping up national research efforts.

Harvesting Prosperity is the fourth volume of the World Bank Productivity Project, which seeks to bring frontier thinking on the measurement and determinants of productivity to global policy makers.

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### **Social Contracts and World Bank Country Engagements Lessons from Emerging Practices**



By Independent Evaluation Group  
Available On-Line  
Published: October 2019  
English Version,  
Paperback

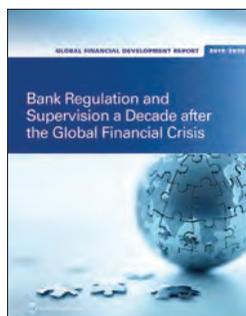
The objective of this evaluation is to take stock of social contract knowledge to assess the

World Bank's role in helping countries reshape their social contracts, especially through the integration of social contract diagnostics into country engagements. Social contracts can be understood as the implicit, mutual bargaining over what citizens expect from the state, and what the state can legitimately demand of citizens in return.

At the country level, this evaluation identified 21 Systematic Country Diagnostics (SCDs) that use a social contract framing to diagnose and explain complex development challenges such as entrenched inequalities, poor service delivery, weak institutions, and why decades of policy and institutional reforms promoted by external development actors could not fundamentally alter countries' development paths.

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### **Global Financial Development Report 2019/2020: Bank Regulation and Supervision a Decade after the Global Financial Crisis**



By World Bank  
Available On-Line  
Published: December 2019  
English Version,  
Paperback  
ISBN (paper): 978-1-4648-1447-1  
ISBN (electronic): 978-1-4648-1496-9  
ISSN: 2304-957X

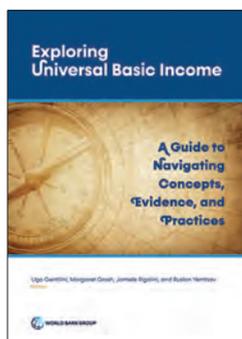
Over a decade has passed since the collapse of the

U.S. investment bank Lehman Brothers marked the onset of the largest global economic crisis since the Great Depression. The crisis revealed major shortcomings in market discipline, regulation, and supervision, and reopened important policy debates on financial regulation. Since the onset of the crisis, emphasis has been placed on better regulation of banking systems and on enhancing the tools available to supervisory agencies to oversee banks and intervene speedily in case of distress.

Drawing on 10 years of data and analysis, the Global Financial Development Report 2019/2020 uncovers new evidence on the regulatory remedies adopted to prevent future financial troubles, and particularly the impact of reforms on market discipline and bank capital. Countries should design and enforce regulations that are appropriate for the institutional environment, strength of market discipline, supervisory capacity, and business models of banks in a given country.

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### **Exploring Universal Basic Income: A Guide to Navigating Concepts, Evidence, and Practices**



By Ugo Gentilini, Margaret Grosh; Jamele Rigolini and Ruslan Yemtsov  
Available On-Line  
Published: December 2019  
English Version,  
Paperback  
ISBN (paper): 978-1-4648-1458-7  
ISBN (electronic): 978-1-4648-1511-9

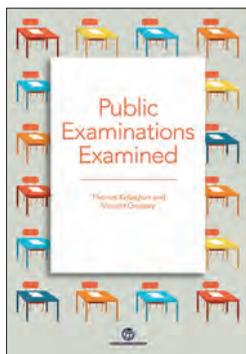
Universal basic income (UBI) is emerging as one of the most hotly debated issues in development and social protection policy. But what are the features of UBI? What is it meant to achieve? How do we know, and what don't we know, about its performance? What does it take to implement it in practice?

Drawing from global evidence, literature, and survey data, this volume provides a framework to elucidate issues and trade-offs in UBI with a view to help inform choices around its appropriateness and feasibility in different contexts. Specifically, the book examines how UBI differs from or complements other social assistance programs in terms of objectives, coverage, incidence, adequacy, incentives, effects on poverty and inequality, financing, political economy, and implementation.

It also reviews past and current country experiences, surveys the full range of existing policy proposals, provides original results from micro-tax benefit simulations, and sets out a range of considerations around the analytics and practice of UBI.

## Other Publications

### Public Examinations Examined



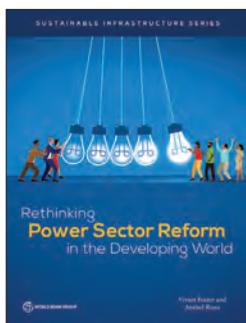
By Thomas Kellaghan and Vincent Greaney  
**Available On-Line**  
Published: November 2019  
**English Version, Paperback**  
ISBN: 978-1-4648-1418-1  
ISBN (electronic): 978-1-4648-1419-8

High-stakes public examinations exert a dominant influence in

most education systems. They affect both teacher and student behavior, especially at the middle and upper levels of secondary education. The content of past examinations tends to dictate what is taught and how it is taught and, more important, what is learned and how it is learned. By changing aspects of these examinations, especially their content and format, education systems can have a strong positive impact on teacher behavior and student learning, help raise student achievement levels, and better prepare students for tertiary-level education and for employment.

This book addresses current issues related to the development, administration, scoring, and usage of these high-stakes public examinations, identifying key issues and problems related to examinations in many emerging market economies as well as in advanced economies.

### Rethinking Power Sector Reform in the Developing World

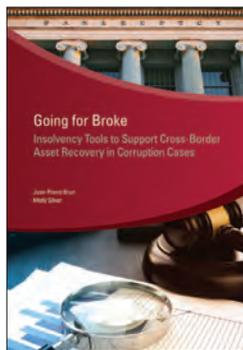


By Vivien Foster and Anshul Rana  
**Available On-Line**  
Published: December 2019,  
**English Version**  
Paperback  
ISBN (paper): 978-1-4648-1442-6  
ISBN (electronic): 978-1-4648-1443-3

A new paradigm for power sector reform emerged during the 1990s, under the influence of the Washington Consensus, and began to spread across the developing world. This approach advocated restructuring of national power utilities to create scope for competition, while delegating responsibilities to the private sector under a clear regulatory framework. After 25 years, few developing countries have managed to adopt the model in its entirety, while many others encountered political and economic challenges along the way.

This book provides a comprehensive evaluation of developing country power sector reform, sifting the evidence of whether reforms have contributed to improved sector outcomes. It also examines to what extent the reform paradigm remains relevant to the new social and environmental policy agenda of the twenty-first century, and is capable of adaptation to emerging technological disruption.

### Going for Broke: Insolvency Tools to Support Cross-Border Asset Recovery in Corruption Cases



By Jean-Pierre Brun and Molly Silver  
**Available On-Line**  
Published: December 2019  
**English Version, Paperback**  
ISBN (paper): 978-1-4648-1438-9  
ISBN (electronic): 978-1-4648-1439-6

Corruption is the abuse of entrusted power for private

gain. Corruption holds back economic development, prevents a free market from operating for businesses and consumers, and further exploits already marginalized groups. Economist Daniel Kaufmann has estimated that 2 percent of global GDP is lost to bribery alone every year. But these corrupt proceeds may not be gone forever—nations can use asset recovery to fight corruption, restoring stolen funds to the people for sustainable development and deterring further corruption. The international framework governing such cooperation is laid down in the 2003 United Nations Convention Against Corruption (UNCAC), which went into force in 2005. Despite the great advances in international efforts to recover assets from corrupt officials since the UNCAC went into effect, there is still much work to do. These challenges can impede justice in many corruption cases.

This book offers a rarely used way to recover the proceeds of corruption insolvency proceedings—thus contributing to the development of an additional tool for the realization of the UNCAC's principle on asset recovery.

### Simulation on Connecting Climate Market Systems



By World Bank Group  
**Available On-Line**  
Published: December 2019  
**English Version,**  
Paperback  
Report No.: 144022

The Paris Agreement introduced a bottom-up approach for addressing climate change by

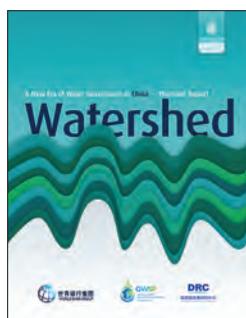
enabling countries to pledge individual commitments through nationally determined contributions (NDCs). Furthermore, Article 6 of the Paris Agreement recognizes that Parties may engage in bilateral cooperative approaches, including through the use of internationally transferred mitigation outcomes (ITMOs), to achieve their NDCs. Heterogeneous climate markets may have different governance systems and technological approaches. Information about mitigation outcomes (MOs) or emission reductions is currently collected in a variety of repositories, including spreadsheets and registries, with different levels of information. The differences in these processes may constrain market integration and add to the complexity of tracking and recording transactions.

Against this backdrop, there is a need to create a new architecture to support transparency and enhance the tradability of climate assets across jurisdictions while ensuring the integrity of trades. The Kyoto Protocol utilized an International Transaction Log (ITL), operated by the United Nations Framework Convention on Climate Change (UNFCCC), to facilitate communication between registries and maintain a transaction log to ensure accurate accounting and verification of transactions proposed by connected registries.

However, under the Paris Agreement, which may rely on a decentralized approach to markets under Article 6.2, climate negotiators are still determining whether a centralized infrastructure should continue, the functions it could perform, and to which market mechanisms or transactions it would apply. Consistent with the bottom-up ethos of the Paris Agreement, there is value in demonstrating an approach to link registry systems in a peer-to-peer arrangement.

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### **Watershed: A New Era of Water Governance in China – Thematic Report**



By World Bank  
**Available On-Line**  
 Published: December 2019  
**English Version,**  
 Paperback  
 Report No.: 144197

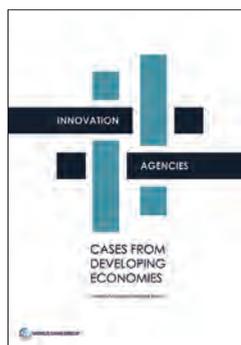
Each of the chapters presented in this report is based on a series of 15 thematic reports. They provided the basis for the joint identification of key priority reforms by the World Bank and China that were bought together and published in an accompanying Synthesis Report.

The discussions emphasized key issues for water governance in China, including the need for a stronger legislative foundation for water governance; enhanced basin-scale governance institutions; harmonization

of existing policy tools, such as water permits and water rights; better information and data-sharing; and the need to promote ecosystem resilience. Based on these consultations and discussions, a final set of 15 key recommendations have been put forward. These recommendations form the core of the accompanying Synthesis Report. Each priority area is the subject of a separate chapter focusing on the rationale for each of the policy recommendations, drawing on research completed by each study team.

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### **Innovation Agencies: Cases from Developing Economies**



By Anwar Aridi and  
 Natasha Kapil  
**Available On-Line**  
 Published: November 2019  
**English Version, Paperback**  
 Report No.: 143606

Many high-income and developing countries have established agencies to promote innovation.

This study examines the origin and evolution, organizational structure, policy interventions, delivery challenges, and evaluation mechanisms of 13 innovation agencies in developing countries and one case (SPRING in Singapore) for comparison purposes.

This study does not assume that the only approach to improving innovation lies in a dedicated agency – each innovation system is governed differently and the same intervention may have very different results in different contexts. Rather, our goal is to capture how these agencies dealt with the major challenges that confront establishing an innovation agency in a developing country context, where innovation is often hampered by significant market, coordination, and institutional failures, investments in innovation tend to be limited, and the capabilities required for effective innovation are often lacking.

The analysis is presented according to seven building blocks that emerged from the analysis of the cases' patterns and dynamics as pre-requisites for the success of innovation agencies, including a clear but adaptable mission, capable staff, effective governance and management structures, diagnostic-based interventions, robust monitoring and evaluation (M&E), sustainable funding, and strategic partnerships and networks. A diagnosis of NIS gaps and global trends is required to design policy interventions.

## From the Blogworld

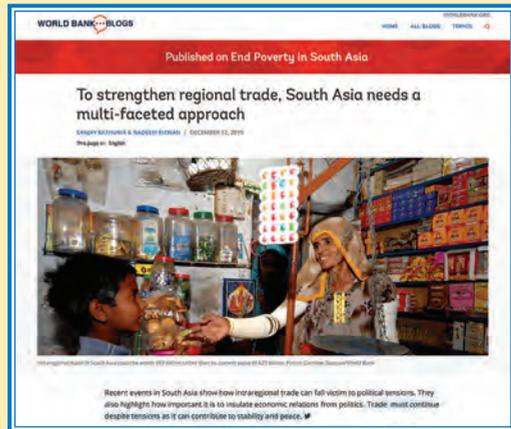
### To strengthen regional trade, South Asia needs a multi-faceted approach

By Sanjay Kathuria and Nadeem Rizwan

Recent events in South Asia show how intraregional trade can fall victim to political tensions. They also highlight how important it is to insulate economic relations from politics. Trade must continue despite tensions as it can contribute to stability and peace.

Economic engagement within South Asia is suboptimal. Our recent report, *A Glass Half Full: The Promise of Regional Trade in South Asia* estimates that the total goods trade within South Asia could be worth \$67 billion rather than its current value of \$23 billion.

Read More: <https://tinyurl.com/ssvg9ak>



### India's female tech workers can reach the top

By Ramalatha Marimuthu



Studies indicate that in India alone, only 30 percent of the IT workforce is female. Most women in IT start well, but their careers are disrupted in five to 10 years, thanks to marriage or motherhood. Lack of family support and non-congenial work environments also contribute to the under-representation.

The Returning Mothers program, of the World Bank's WePOWER Network, aims to address this by introducing women to female role models in science, technology, engineering, and math (STEM).

Read more: <https://tinyurl.com/syvxeem>

### Now is the time to invest in South Asia's future

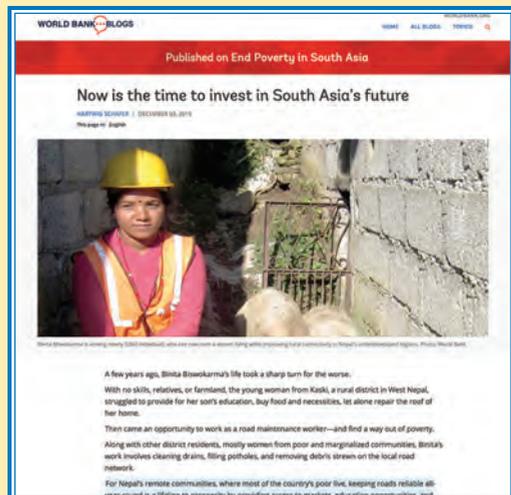
By Hartwig Schafer

A few years ago, Binita Biswokarma's life took a sharp turn for the worse. With no skills, relatives, or farmland, the young woman from Kaski, a rural district in West Nepal, struggled to provide for her son's education, buy food and necessities, let alone repair the roof of her home.

Then came an opportunity to work as a road maintenance worker along with other district residents, mostly women from poor and marginalized communities.

IDA, the World Bank's fund for the poorest countries, has been a reliable partner in South Asia for more than six decades and contributed to a sharp decline in poverty in the region.

Read More: <https://tinyurl.com/swt4hze>



## From the Blogworld

### South Asia needs to act as one to fight climate change

By Ditte Fallesen, Haris Khan, Ahsan Tehsin and Atishay Abbhi

**S**outh Asia is home to some of the world's countries most vulnerable to climate change. In the past decade alone, nearly 700 million people—half of the region's population—were affected by one or more climate-related disasters.

Now, changing weather patterns are expected to impact directly over 800 million people by 2050 and will continue to burden South Asian countries' economies.

Between 2000 and 2017, disasters caused by natural hazards in the region caused damages worth \$149.27 billion (Calculations based on Em-Dat data).

Read More: <https://tinyurl.com/tqzfy1w>



### South Asia can turn the tide on oceans plastics pollution

By Hartwig Schafer



**I**magine a pristine beach in the Maldives. Turquoise water, white sand, gleaming sun.

But something does not belong here as you notice a small plastic bottle drifting past you. Instantly, this vision of paradise is lost.

Sadly, this bottle is but a tiny fragment of the million tons of plastic waste that threaten Maldives' fragile environment. The accumulation of plastic waste is equally worrisome in the rest of the South Asia region. Ranking third globally, South Asia generates a staggering 334 million metric tons of solid waste every year.

Read More: <https://tinyurl.com/tr4xq4k>

### How labor markets in South Asia can benefit from higher exports

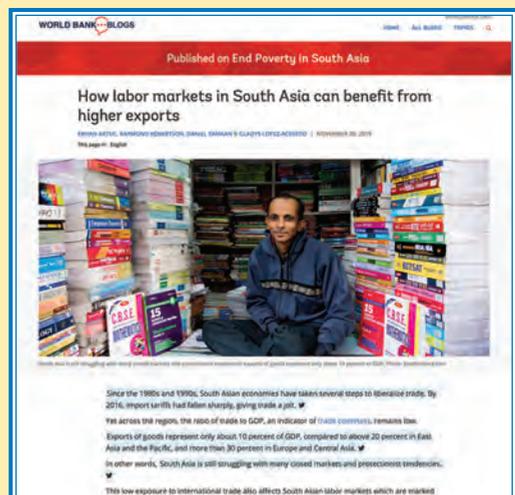
By Erhan Artuc, Raymond Robertson, Daniel Samaan and Gladys Lopez-Acevedo

**S**ince the 1980s and 1990s, South Asian economies have taken several steps to liberalize trade.

Yet across the region, the ratio of trade to GDP, an indicator of trade openness, remains low. South Asia is still struggling with many closed markets and protectionist tendencies.

More international trade could boost economic growth, create jobs, and improve labor market outcomes. But how much of a boost can South Asia expect by beefing up its exports?

Read More: <https://tinyurl.com/vg5fn4g>



## World Bank Policy Research Working Papers

### WPS9082

**Exiting Financial Repression: The Case of Ethiopia**  
By Jean-Pierre Christophe Chauffour and Muluneh Ayalew Gobezie

### WPS9081

**Effects of a Multi-Faceted Education Program on Enrollment, Equity, Learning, and School Management: Evidence from India**  
By Clara Anne Delavallade, Alan Griffith and Rebecca Lynn Thornton

### WPS9079

**Markups, Market Imperfections, and Trade Openness: Evidence from Ghana**  
By Kaku Attah Damoah

### WPS9078

**Financial Risk Management in Agriculture: Analyzing Data from a New Module of the Global Findex Database**  
By Leora Klapper, Dorothe Singer, Saniya Ansar and Jake Richard Hess

### WPS9077

**Quality Education and the Efficiency of Public Expenditure: A Cross-Country Comparative Analysis**  
By Elise Wendlassida Miningou

### WPS9076

**Estimating Poverty for Refugee Populations: Can Cross-Survey Imputation Methods Substitute for Data Scarcity?**  
By Hai-Anh H. Dang and Paolo Verme

### WPS9075

**Intergenerational Impact of Population Shocks on Children's Health: Evidence from the 1993-2001 Refugee Crisis in Tanzania**  
By Soazic Elise Wang Sonne and Paolo Verme

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