



**Women in Informal Employment
Globalizing and Organizing**

**TECHNOLOGY & THE FUTURE OF *INFORMAL* WORK:
INSIGHTS FROM INDIA, PERU AND SOUTH AFRICA**

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REMARKS

- ▣ **Informal Workers Globally**
- ▣ **Continuum of Technologies**
- ▣ **Informal Workers & Technologies** – based on 2015 research study in Ahmedabad (India), Durban (South Africa) & Lima (Peru)
- ▣ **Policy Implications**

INFORMAL WORK TODAY: SIGNIFICANCE

% of Total Employment Globally and by Country Income Group & Geographic Region

Country Income Groups *	Total
World	61
Developing	90
Emerging	67
Developed	18

*2018 World Bank classification based on country levels of gross income per capita

Geographic Regions (excluding developed countries)	Total
Sub-Saharan Africa (excluding Southern Africa)	92
Sub-Saharan Africa as a whole	89
South Asia	88
Southeast & East Asia (excluding China)	77
Middle East and North Africa	68
Latin America and the Caribbean	54
Eastern Europe and Central Asia	37

Source: ILO 2018

INFORMAL WORK TODAY: COMPOSITION

By Status in Employment & Branch of Industry

Globally & Country Income Group (%)

Country Income Groups	Wage Workers	Self- Employed	<i>Employers</i>	<i>Own Account Workers</i>	<i>Contributing Family Workers</i>
World	36	64	3	45	16
Developing	21	79	2	54	22
Emerging	37	63	3	44	16
Developed	51	49	6	36	6

Country Income Groups	Agriculture	Services	Manufacturing
World	38	44	18
Developing	69	21	10
Emerging	36	46	19
Developed	10	71	19

Source: ILO 2018

CONTINUUM OF TECHNOLOGIES

- **basic technologies** – used by informal workers
- **technological systems** – choice of technology by cities in providing electricity, transport and waste management services impacts livelihoods of informal workers
- **information communication technologies** – computer technologies used by large formal firms to outsource production & mobile phones used by many informal workers, mostly basic mobile phones & few informal workers have access to computers
- **digital platforms** – used by businesses to mediate work between firms, individual customers and a global pool of labour (called ‘crowd’ who are often contracted informally)
- **robotics and AI** – used to replace repetitive and basic problem-solving work, mainly manual but also cognitive – impact on informal workers who work in public space or private homes not clear

BASIC TECHNOLOGIES USED BY INFORMAL WORKERS

- **Existing Technologies are Very Basic**
 - construction workers: hoe & iron pan
 - garment makers: sewing machines
 - street vendors: manual scales
 - waste pickers: sack & rope
- **Desired Technologies are Also Quite Basic**
 - construction workers: tools used by tradesmen
 - garment makers: newer models of electric sewing machine
 - street vendors: digital scales
 - waste pickers: carts + protective gear
- **Costs & Risks associated with Desired Technologies Well Understood**
 - cost: capital investment + energy requirement + maintenance
 - risk of theft or confiscation
 - lack of basic infrastructure services: electricity + storage space

URBAN SYSTEMS: CHOICE OF TECHNOLOGIES

- **Urban Technological Systems:** impact on informal livelihoods
 - **technological systems:** most significant for informal workers
 - electricity supply: garment makers & other home-based workers
 - public transport: street vendors & waste pickers & informal wage workers who commute to work
 - waste management: waste pickers
 - **current systems:** largely negative for informal workers
 - electricity supply: unequal access + irregular supply + high cost
 - public transport: inadequate + cannot be used to transport goods
 - waste management: waste pickers denied access to waste & city contracts for waste collection/disposal
 - **future systems:** should take into account impact on livelihoods
- **Local Government:** abuse of authority = threat of confiscation or theft
→ deterrent to investing in improved technology

INFORMATION COMMUNICATION TECHNOLOGIES

- **ICTs are Used by Large Formal Firms to Outsource Production** - to smaller formal or informal firms who, in turn, often outsource production to informal workers
- **Current Use of ICTs by Informal Workers is Quite Limited:**
 - informal workers in general: many use basic mobile phones, some use smart phones + few have access to computers
 - garment makers: some use cameras to document own designs & computers to research new designs
 - carpenters/masons: some use cameras to document own work

DIGITAL PLATFORMS

- Past decade, growth of the “on-demand” or “gig” economy = digital platforms mediate work between firms, individual customers and a global pool of labour (called ‘crowd’) for a variety of tasks and services (Rani forthcoming)
- Crowd work platforms include AMT, Crowd Flower, Click Worker, Micro worker; Task Rabbit; Uber; Airbnb; and domestic work apps (Berg et al., 2018)

ROBOTICS & AI

- ▣ applications are fast-growing in many areas of work
- ▣ jobs will be lost; workers will need new skills for new jobs
- ▣ impact on informal workers not yet clear:
 - those who work in manufacturing and in factories, firms and shops most likely to lose jobs
 - those who work in services and in public space and private homes least likely to lose jobs
 - many workers (formal and informal) displaced by robots and AI will seek self-employment opportunities in the informal economy→
increased competition within informal economy
 - are there applications which can be used and owned by informal workers?

TECHNOLOGICAL DIVIDE: BETWEEN FORMAL FIRMS & INFORMAL WORKERS

- **Deep technological divide** = major source of inequality today
 - ▣ Formal firms – use technologies to replace workers with robots/machines for routine repetitive tasks →
more and more workers losing jobs
 - ▣ Formal firms – use technologies to reconfigure their business model to compete in a globalized networked marketplace →
more and more workers being contracted informally
 - ▣ *Informal self-employed* – who represent over 40 per cent of all workers globally - use very basic technologies

POLICY IMPLICATIONS

- ❑ Technologies have potential for good & bad; technological innovations have winners & losers
- ❑ Majority of workers globally are informal + majority of informal workers are self-employed + majority of informal self-employed work in public space & private homes
- ❑ Need to understand:
 - Impact of technologies – on informal workers
 - Technological needs - of informal workers
 - inclusive city-systems
 - improved basic technologies
 - increased access to ICTs
 - digital applications used/owned by informal workers
 - skills suited to new work opportunities
 - Technological opportunities – for informal workers



THANK YOU!