POLICY ANALYSIS

Servicing Development: Productive Upgrading of Labor-Absorbing Services in Developing Economies

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ABSTRACT

Manufacturing generates very little employment in the developing world. Urban jobs are predominantly informal, unproductive, and in services. It seems unlikely that manufacturing will be able to absorb the new increments to the labor force or create more productive jobs for those that are already stuck in petty services. Raising productivity in services has been traditionally difficult, but is now necessary to achieve long-term growth in the standard of living. We discuss and provide evidence for four broad strategies: (a) incentivizing large, productive firms to expand their employment; (b) enhancing productive capabilities of smaller firms through the provision of public inputs; (c) providing workers or firm's technologies that explicitly complement low-skill labor; (d) vocational training with "wrap-around" services to enhance job seekers' employability, job retention, and eventual promotion.

JEL Classification: O40, O17, O25

1 | From Manufacturing to Labor-Absorbing Services

The future of developing countries lies in services. Enhancing productivity in labor-absorbing services in particular must be an essential priority, for reasons of both growth and equity. In this paper we provide a broad overview of what such a strategy might look like, drawing on a wide range of existing programs on which it might build.

Emphasizing a services-driven model may seem odd in view of the phenomenal success that countries such as South Korea, Taiwan, and China have had with the strategy of export-oriented industrialization. Indeed, historically industrialization has been the main vehicle for modern economic growth. The aptly-named Industrial Revolution in Britain was itself the product of the application of new technologies to manufactures such as cotton textiles. Almost all subsequent and sustained cases of economic catch-up, from the United States to Japan, were the result of industrialization. The conventional recipe for low-income countries such as those of Sub-Saharan Africa is to replicate these experiences, by removing obstacles to (or actively promoting) rapid industrialization so their firms can plug into global manufacturing value chains. Today, even advanced economies are engaged in industrial and other policies to reinvigorate their manufacturing sectors, weakened by decades of competition with China.

There are good reasons why manufacturing is distinctive and may deserve special attention. In advanced economies, manufacturing contributes a disproportionate share of R&D and innovation and therefore plays a particularly important role in driving economy-wide productivity growth. In developing countries, formal manufacturing sectors reliably exhibit "unconditional" labor productivity convergence to the technological frontier. Manufacturing establishments that are very far from the frontier experience especially rapid productivity growth, even in economic environments characterized by bad policies or disadvantageous external conditions (Rodrik 2013). Moreover,

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manufacturing is tradable, meaning that firms do not face domestic demand constraints; for smaller economies, and especially developing countries, this means that their manufacturing firms can expand virtually without limit, driving economic growth.

Historically, manufacturing presented an additional advantage for developing economies—and this one was critical in enabling rapid economic growth through industrialization. Many if not most segments of manufacturing did not demand significant skills from production workers, beyond some manual dexterity, punctuality, learning on the job, and ability to work with others. Machinery and equipment could be imported from abroad (and eventually produced at home with the requisite capabilities in place). Governance and regulatory requirements from the state were either similarly minimal, or when more extensive, could be provided in a targeted manner (through special zones or customized policy regimes, for example) without requiring economy-wide institutional improvements. In short, industrialization needed resources which were plentiful in poor countries (cheap, unskilled labor) and economized on resources that were scarce (education, physical capital, high-quality institutions). This in turn meant that industrialization faced few constraints on the supply side either: manufactures could expand rapidly without driving costs up and profitability down, at least until countries reached middle-income stage.

The features summarized in the previous paragraph no longer describe the realities of today's manufacturing (Rodrik 2016). It is well documented that innovation in manufacturing has taken a predominantly skill-biased form, reducing demand for workers with relatively low levels of education (Acemoglu and Restrepo 2022). In many manufacturing segments, new technologies such as automation, robots, and 3D printing serve to directly substitute physical capital for labor. Of course, given their relative factor prices, firms in developing countries have the incentive to use more labor-intensive techniques. But they face a limited range of factor substitution possibilities. Competing in the global marketplace requires employing production techniques that cannot differ significantly from those employed in the frontier countries, because the productivity penalty would be otherwise too high. The need to produce according to the exacting quality standards set by global value chains restricts how much unskilled labor can substitute for physical capital and skilled labor (Rodrik 2022). The rising skill- and capital-intensity of manufacturing in turn means that globally competitive, formal segments of manufacturing in developing countries have lost the ability to absorb significant amounts of labor. They have effectively become "enclave" sectors, not too different from mining, with limited growth potential and few positive effects on the supply side of the rest of the economy.

This is why countries, such as Ethiopia, that were not so long ago touted as the next manufacturing miracles, have been unable to experience manufacturing-led growth. While overall manufacturing output and employment shares have increased in Ethiopia, the aggregate statistics hide a discomforting productive dualism: the productive and mostly large firms are essentially not creating any employment, while the manufacturing firms that are absorbing labor are predominantly small, informal, and productively stagnant (Diao et al. 2024). It is also the reason why countries such as Bangladesh that have done exceptionally well in certain manufacturing segments, such as ready-made garments, are now finding it very difficult to diversify and move into more sophisticated segments (as East Asian countries eventually did). As virtually every report on Bangladesh argues, the country requires a significant investment in skills and new technologies if it is to continue building on its manufacturing success. True as far as it goes, this recommendation is also an implicit acknowledgement that manufacturing is no longer the growth escalator it once was: what made industrialization special in the first instance was that it allowed productive upgrading within the limited resource endowments of low-income countries.[1]

More broadly, all over the developing world we now see a pattern of structural change that is very different from what the usual process of economic development is supposed to look like. As young workers flock to urban areas from the countryside, they find very little employment in manufacturing (unlike earlier eras, whether under Latin American-style import-substitution or East-Asian style export-promotion). The urban jobs that are created to employ them are predominantly informal, precarious, unproductive, and in services. While we might be tempted to argue that this reflects errors in government policy, the considerations above suggest there is something more structural, beyond the government's ability to control, that is at play. In the years ahead, manufacturing will neither be able to absorb the new increments to the labor force, where the labor force is still growing rapidly (as in the low-income countries of sub-Saharan Africa), nor create more productive jobs for those that are already stuck in petty services.

This brings us back to the opening sentence of this paper. The future of developing countries is in services in the sense that, that is where the jobs will be. Those jobs need to be productive ones, for reasons of both economic growth and equity. Economic growth requires that we move people from less productive to more productive activities. If services are the preponderant source of new employment, they have to be more productive than the rest of the economy in order for aggregate incomes to rise. And as for equity, the only sustainable way to lift people at the bottom of the income distribution is to provide them with better paying jobs. Those jobs will have to be in services, whether we like it or not (Rodrik and Stiglitz 2024).

Here we face a conundrum though. We do not know much about how to raise productivity in labor-absorbing services. While some services, such as banking, IT, and business process outsourcing (BPO) are both productively dynamic and tradable, they are not going to be labor-absorbing for the same reason that manufacturing is not. These are relatively skill-intensive services which, even under the best of circumstances, will not provide the answer to the challenge of productive job creation.[2] In India and the Philippines, two countries where these types of services have been successful (IT in India and BPO in Philippines), the bulk of employment continues to be generated by informal services. The challenge is to increase productivity in labor-absorbing services, such as retail, care, personal and public services, where we

have had limited success, in part because such services have never been an explicit target of productive development policies. Industrial policies, as the name makes clear, typically focus on fostering innovation, investment, and productivity in manufacturing. But if developing countries are going get richer under present conditions, they will have to adapt these policies to labor-absorbing services.

Services have traditionally been the laggards of productivity. Will Baumol's (2012) famous "cost disease" argument is predicated on slow productivity growth in services and explains why the relative prices of services rises as the rest of the economy become more productive. In manufacturing, the labor units required to produce steel or cars has been slashed drastically over time, especially if we adjust for quality improvements. But it takes just as long today for a barber to cut a customer's hair or a conductor to lead the orchestra through a Beethoven symphony as it did centuries ago. As we mentioned previously, technological catch-up has been far easier for developing countries in manufacturing than in labor-absorbing services. The broad historical record suggests it will be difficult to achieve comparable rates of productivity growth in areas such as care, education, retail, or public services. But if we are right about the eroding power of industrialization as a growth strategy, there is no alternative other than making services productivity an explicit government priority.

The literature on this paper's themes is not large, in part because the term productive upgrading is not typically associated with services. It tends to be used in connection with tradable sectors of the economy, such as manufacturing or agricultural supply chains. The recent survey by Verhoogen (2023) on firm-level upgrading focuses almost entirely on manufacturing firms. Magruder (2018) surveys experimental evidence on technology adoption in agriculture. But there is other work that, while not explicitly focused on services, covers some aspects of the approaches described above, such as training or fostering entrepreneurship. McKenzie and Woodruff (2014) and Quinn and Woodruff (2019) survey experimental interventions—such as the provision of grants or management training—aimed at improving entrepreneurship among smaller firms, including microenterprises. Many of the firms covered in these experiments are in services. Carranza and McKenzie (2024) discuss job training policies in developing countries. Kremer et al. (2021) present a compendium of interventions, some in services, that have been evaluated that hold promise for scaling up. We have drawn on this literature in selecting our cases.

Since the bulk of firms in services is informal, this paper also relates to the extensive literature on informality (Chen 2012; La Porta and Shleifer 2014; Portes and Haller 2010). This literature scrutinizes the reasons for informality and its consequences for economic performance. In general, there is a two-way relationship between informality and productivity. Firms with little opportunity to expand may not be able to afford the costs of formality, such as registration and taxes. But barriers to formality may also serve as obstacles to firm expansion and productive upgrading, by hindering access to credit markets, technology, and new markets for example. So informality can be both a cause and a consequence of low productivity. In this paper, we sidestep these questions, focusing directly on strategies that enhance productivity regardless of firms' formality status.

The plan of the paper is as follows. In the next section we provide a typology of different strategies for creating productive employment in services. Section III briefly summarizes our cases. Section IV provides more details on four of the cases, as illustrations of the four strategies in our typology. Section V presents a discussion and some preliminary conclusions.

2 | A Typology of Strategies for Productivity Enhancement

There are four broad strategies for expanding productive employment in services. The first focuses on established, large, and relatively productive incumbent firms, and entails working with them to incentivize them to expand their employment, either directly or through their local supply chains. These firms could be large retailers, platforms such as ride-sharing services, or even manufacturing exporters (with potential to generate upstream linkages with service providers). The second strategy focuses on smaller firms (which constitute the bulk of firms in developing countries) and aims to enhance their productive capabilities through the provision of specific public inputs. These inputs could be management training, loans or grants, customized worker skills, specific infrastructure, or technology assistance. Given the heterogeneity of firms in this segment, ranging from micro-enterprises and self-proprietorships to mid-size firms, policies in this domain require a differentiated approach, to respond to the distinct needs of firms of different size. Given the numbers involved, often they also require a mechanism for selecting among the most promising, since most such firms are unlikely to become dynamic and successful.

The third strategy focuses on the provision, to workers directly or firms, of digital tools or other forms of new technologies that explicitly complement low-skill labor. The objective here is to enable less educated workers to do (some of) the jobs traditionally reserved for more skilled professionals and to increase the range of tasks they can perform. The fourth and final strategy is centered on less-educated workers and combines vocational training with "wrap-around" services, a range of additional assistance programs for job seekers to enhance their employability, job retention, and eventual promotion. Modeled after Project Quest and other similar sectoral workforce development schemes (Katz et al. 2022), these training programs typically work closely with employers, both to understand their needs and to reshape their human resource practices to maximize employment potential. In different ways, these strategies all aim to increase productivity and/or employment possibilities in services for workers with limited skills.

We want to explore the potential of these kinds of programs to address the productive service jobs conundrum. To that end, this paper centers around 20 different initiatives from around the developing world, encompassing illustrations from each of the four strategies we just described. Our cases do not constitute a random sample. They have been selected among those

that are well-documented to indicate the range of programs that is already in place. Our goal is to highlight the richness of experimentation and to suggest that there is already a reservoir of practice on what might be called productive development policies for labor-absorbing services on which future efforts can build and expand. We shall draw some provisional conclusions from our cases at the end of the paper.

Not all of the programs we will summarize have been formally or rigorously evaluated; and among those that have, not all have been successful. We are more interested in suggesting a general direction for future development policy than to pass judgment on what kind of programs work best. We suspect that local context matters greatly—as it does in general, but even more so when it comes to the kind of service activities that are our focus. Even programs that produce superlative results in one setting may prove difficult to replicate in others.

Moreover, regardless of the success of individual programs, it is important to bear in mind the scale of the challenge a services-oriented development strategy faces. A randomized policy intervention that increased earnings of low-income workers by, say, 20% would normally be judged a great success (assuming reasonable program costs). Even if it were successfully scaled up to the economy at large, this gain would not make up even 1% of the income gap that currently exists between a country like Ethiopia and the U.S. Real success will require greater ambition, continuous experimentation, and the cumulation of a very wide range of different programs.

3 | A Brief Description of Cases

We cataloged 20 initiatives from around the world to study their respective approaches, experiences, and results. Table 1 provides a summary. These are initiatives that have been well-documented in the academic and/or policy literature. Our cases represent a range of geographies: eight of these initiatives are from Africa, eight from South and East Asia, four from Latin America, and one from Europe. The initiatives vary based on the type of implementer, the goals of the program, and nature of intervention. Not all of them have been formally evaluated. Several of these initiatives are administered by multistakeholder coalitions, with actors from government, social enterprises, and multilateral or bilateral funders. In 11 cases, the lead implementer is an international development actor, including multilateral agencies such as the World Bank and UNICEF or large non-profit organizations such as Plan International and Swisscontact. In seven cases, the government (either national or subnational) was a lead player; in four, a social enterprise was a lead implementing agent.

We distinguish programs in the table according to whether they target (a) employment creation, (b) productivity improvement, or (c) both. We have tried to identify interventions on both the demand and supply sides of the labor market, to unpack their mechanisms and approaches. The specific approaches include business competitions, training, technology tools, financial assistance, internships, and addressing policy barriers. In many cases, partnership between different stakeholders—as opposed to policy or "innovation"—was the primary value add of the initiative.

4 | Illustrative Cases

In this section, we provide summaries of four of the twenty initiatives. These case descriptions are meant to serve as illustrations of the four broad strategies we outlined previously. The first case represents an intervention focused on established, large incumbent firms (Uber and Ola), and their partnership with the state government of Haryana, India, to expand employment. The second case focuses on the provision of public inputs, such as management training and financing to small enterprises in Nigeria, through a business plan competition called Youth Enterprise With Innovation in Nigeria (YouWiN!). The competition element of this intervention enabled self-selection of the most promising and dynamic small enterprises. The third case summarizes the use of new technologies to complement less-skilled labor to enhance the tasks workers can perform. In this case, frontline health workers, called Accredited Social Health Activists (ASHAs) in Jhansi, India were provided a mobile phone-based multimedia job aid. This mobile application served as a combination of a self-learning, client management, decision support, and reporting tool for ASHAs. Our final case focuses on labor market intermediation provided by Harambee in South Africa, where less-educated workers are provided vocational training combined with wrap-around services, including psychometric data, career counseling, and internships, to enhance employability.

4.1 | A. Saksham Saarthi Partnership With Uber and Ola in Haryana

In 2018, the state of Haryana in India faced a youth unemployment rate of 9.2%. In July of that year, the state government launched a unique public-private partnership—called *Saksham Saarthi*—with taxi aggregators Uber and Ola, to increase employment opportunities for youth in the state.[3] The partnership was based on mutual benefit rather than a financial obligation, enabling the government to address youth unemployment and the taxi aggregators to expand their services in the state.

Saksham Saarthi, which translates to "capable charioteer/driver," was initiated via a Memorandum of Understanding (MoU) between the Government of Haryana and taxi aggregators Ola and Uber. Both companies responded to a request for 'expressions of interest' from the government's Department of Employment. The Government of Haryana provided the companies targeted access to their database of registered unemployed youth, enabling the companies to more efficiently recruit new drivers. In return, Ola and Uber were requested to provide periodic employment targets to the government; but these numbers were intentionally flexible with no penalty if stated targets are not met.

The partnership is predicated on a consistent feedback loop between the partners, through regular calls and meetings, to maintain good faith and goal alignment. The government also uses its existing resources such as media campaigns and jobs fairs held by district employment offices to publicize the program.

While the program hasn't been formally evaluated, intermediate reporting reveals several positive trends:

TABLE 1 | Summary of 20 programs.

Name of program	Region	Dates of operation	Strategy type[a]	Objective (Employment/ productivity)	Lead agency	Public sector role	Partners	Mechanisms	Formal or information evaluation results	Source
Ridesharing cab driver program (Saksham Saarthi)	South Asia	2018–present	Type 1	Employment	Government	Lead agency	Large firms (Uber and Ola)	Unemployment data sharing; policy barriers; Firm recruitment	Successful (informal)	Muglur et al. (2019)
Shortening Supply Chains for Fruit and Vegetable Vendors in Bogota (Agruppa)	Latin America	2016–2018	Type 3	Productivity	Social Enterprise	None	None	Technology tool	Partially successful (Formal)	Iacovone and McKenzie (2022)
Wage subsidies to microenterprises in Sri Lanka	South Asia	2008–2014	Type 2	Employment	Global Development Actor	None	None	Financial assistance	Not successful (formal)	De Mel et al. (2019)
Apprenticeship training in Ghana	Africa	2012–2016	Type 4	Both	Government	Lead agency	Trade associations, think tank	Internships	Partially successful (formal)	Hardy et al. (2019)
Business plan competition in Nigeria	Africa	2011–2017	Type 2	Both	Government	Lead agency	MSMEs, private firms, think tanks, educational institutions	Business competition	Successful (formal)	McKenzie (2017)
Recruiting and training community health workers in Zambia	Africa	2010–present	Type 3/ Type 4	Employment	Government	Lead agency	Think tanks, international aid agencies	Training	Successful (informal)	Ashraf et al. (2020)
Software for community health workers in India	South Asia	2012–present	Type 3	Productivity	Government	Lead agency	Private firm (Qualcomm)	Training; technology tool	Successful (informal)	Hamilton and Bora (2015)
Harambee	Africa	2011—present	Type 4	Employment	Social Enterprise	Collaborator	Philanthropy, Global Development Agency	Training; Technology tool; unemployment data sharing; firm recruitment	Successful (informal)	Carranza et al. (2022)

(Continues)

TABLE 1 | (Continued)

Name of program	Region	Dates of operation	Strategy type[a]	Objective (Employment/ productivity)	Lead agency	Public sector role	Partners	Mechanisms	Formal or information evaluation results	Source
Kuza	Africa	2014–2017	Type 2	Both	Global Development Actor	Partner	County government, Community-based organizations, private sector firms	Training; internship; unemployment data sharing; firm recruitment; policy barriers	Successful (informal)	ILO 2016
U-LEARN II	Africa	2016–2021	Type 2	Both	Global Development Actor	Partner	Philanthropy, Businesses, Local government authorities, Directorate of Industrial Training	Training; Firm recruitment	Yes (informal)	Lefebvre et al. (2018)
Youth Building the Future (YBF)	Latin America	2015–2017	Type 4	Both	Global Development Actor	Collaborator	Government (Colombia National Training Service and Mayors), Philanthropy	Unemployment data sharing; Trainings; firm recruitment	Yes (informal)	Kleijn et al. (2017)
New Employment Opportunities (NEO)	Latin America	2012–2018	Type 4	Both	Global Development Actor	Partner	Private firms, Government of Panama; intermediaries (Chamber of Commerce, industry associations), training institutions; and civil society	Training; technology tool; firm recruitment	No (informal)	Romero and Barbarasa (2017)

(Continues)

TABLE 1 | (Continued)

Name of program	Region	Dates of operation	Strategy type[a]	Objective (Employment/ productivity)	Lead agency	Public sector role	Partners	Mechanisms	Formal or information evaluation results	Source
Generation India	South Asia	2015–2020	Type 4	Employment	Social Enterprise	Collaborator	Community based organizations, larger firm employers	Training; internship; firm recruitment; financial assistance	Yes (formal)	Romero and Barbarasa (2017)
UPSHIFT	Europe	2014–2018	Type 2/ Type 4	Both	Global Development Actor	Collaborator	Government ministries, NGOs	Training; financial assistance	Yes (formal)	Romero and Barbarasa (2017)
Kenya Youth Employment and Opportunities Project (KYEOP)	Africa	2016–2021	Type 4	Both	Global Development Actor	Partner	Government; Businesses (trade associations)	Training; internships; financial assistance	Yes (informal)	Romero and Barbarasa (2017)
Little Giants Program	Asia	2018–present	Type 2	Productivity	Government	Lead agency	Universities, local think tanks, financial institutions (e.g., Beijing Stock Exchange, People's Bank of China)	Selection (using a 'pyramid cultivation system'); subsidies; training; policy support	Mixed (informal)	Brown et al. (2023)
Open Network for Digital Commerce (ONDC)	South Asia	2021–present	Type 3	Productivity	Government	Lead agency	National Stock Exchange, banks	Open network e-commerce platform	Pilot in progress	ONDC (2022)
World Class Suppliers Program	Latin America	2009–present	Type 1	Productivity	Large firm (BHP Billiton)	Partner	Codelco (Chile's state-owned mining firm), Chilean economic development organization, private foundations	Collaboration between large firms and suppliers; selection of high-performing suppliers; mentorship and consulting support; market linkages	Mixed (formal)	Navarro (2018)

(Continues)

TABLE 1 | (Continued)

Name of program	Region	Dates of operation	Strategy type[a]	Objective (Employment/ productivity)	Lead agency	Public sector role	Partners	Mechanisms	Formal or information evaluation results	Source
AliExpress Global E-Commerce Platform	Asia	2021	Type 1	Productivity	Private firm (Aliexpress)	None	Academic researchers, SMEs	E-Commerce platform for SMEs (for exports); information about product quality	Mixed (formal)	Bai et al. (2021)
Job search expectations in Uganda	Africa	2012	Type 4	Employment	Global Development Actor	None	Researchers	Training; matching; firm recruitment	Yes (formal)	Bandiera et al. (2023)

[a]Type 1: Collaboration with large firms; Type 2: Public inputs to smaller firms; Type 3: Technology provision; Type 4: Vocational training.

- Job creation: Between July 2018 and April 2019, 24,000 youth were on-boarded by Ola and Uber in Haryana and the opportunity to drive bike taxis with these aggregators was created.
- Policy reform: As part of the program, the Government of Haryana implemented policy changes to reduce the administrative burden of obtaining commercial licenses, which are required to operate a taxi in the state. This included reducing the processing time from 4 to 2 weeks, standardizing the application and requirements, and allowing non-resident migrants to apply for commercial licenses. These changes were piloted in the district of Gurugram with plans to scale to the entire state.
- Market expansion: The program has facilitated Uber and Ola's introduction and expansion of two-wheel/bike taxi services in Haryana. Although not a stated goal of the program, this could also serve to benefit the government and public by increasing the availability of low-cost transportation, contributing positively to local economic development.

4.2 | A. Youth Enterprise With Innovation in Nigeria (YouWiN!)

Youth Enterprise With Innovation in Nigeria (YouWiN!), a business plan competition for young entrepreneurs, was launched in 2011, with the aim of encouraging innovation and job creation through the creation of new businesses and expansion of existing businesses.[4] The program was developed as a collaboration between the Ministries of Finance, Communication Technology, and Youth Development, with support from the U.K. Department for International Development (DFID) and the World Bank. At the time YouWin! was implemented, 99.6% of firms had <10 workers. Multiple market failures and informational asymmetries prevented individuals with good ideas from accessing finance. Female entrepreneurs faced even more difficulties to secure funding.

The competition was implemented over multiple stages, comprising an initial application, a 4-day training, submission of detailed business plans, evaluation and selection, and disbursement of grants. At the outset, awareness about the program was created through several outreach programs, including a high-profile launch by the President, roadshows, rallies, and social media campaigns. At the first stage, applicants submitted basic information about their business. This was scored along various parameters (including, quality and viability of business ideas and number of jobs created) by an independent evaluator. Subsequently, successful applicants were invited to a short training on preparing a business plan, which was scored by the Enterprise Development Center (EDC) of the Pan-African University and the professional services firm PricewaterhouseCoopers (PwC). The program also had a regional dimension; applications were sourced and selected from geographical zones, and winners were linked to banks, financial institutions, and mentors in their respective regions.

Successful applicants were notified and eligible to receive up to 10 million naira (around $7000) in grants, depending on their

business plans. The disbursement of each tranche of the award was conditioned on the firm's performance on specific milestones, such as business and job creation and opening of corporate bank accounts. The partnership between the government and independent external monitors enabled easier tracking of "problem awardees." Winners received one-on-one mentoring from seasoned local entrepreneurs and business managers. An additional bootcamp session provided deeper training on topics such as business planning and management, operations, finance and accounting, and communication (including business writing and public speaking).

Evaluations of the program reveal that it has had significant impact on the rate of business start-up, employment, profit, and survival of existing firms (McKenzie 2017). It has been able to accurately identify high potential entrepreneurs who invest in innovation, physical, and human capital in a largely informal Nigerian economy. More than 9 billion naira was awarded to winners through the program. The success of the initial pilot led to its replication in subsequent years. Some of its key successes include:

- Better visibility of smaller businesses: YouWiN! has funded 1200 businesses between 2011 and 2014. The Government has also created websites by industry and zone to boost the visibility of growing businesses. As per a survey in 2013, more than 85% of the awardees felt that the websites were useful (Aina 2016).
- Mechanism for identifying high potential entrepreneurs: McKenzie (2017) finds that the program attracted entrepreneurs who invest in higher innovation, resulting in higher sales and profits, even during periods of economic crises (e.g., in 2016).
- Higher job creation: the competition had a positive impact on individuals starting new businesses as well as those growing their existing business. Notably, winning firms were also more likely to have 10 or more workers. Overall, the competition created 7027 jobs (McKenzie 2017).

4.3 | The Manthan Project in Uttar Pradesh, India

In 2012, the Manthan Project provided Accredited Social Health Workers (popularly known as ASHA workers or ASHAs) in two districts of the state of Uttar Pradesh, India, a mobile phone-based multimedia job aid called mSakhi.[5] This project was initiated as a collaboration between the Bill and Melinda Gates Foundation, Qualcomm, IntraHealth International, and the Government of Uttar Pradesh, with the objective of enhancing the training support provided to ASHAs to improve maternal and newborn health outcomes in Uttar Pradesh. Despite the establishment of routine training procedures, ASHAs struggled with inadequate knowledge and skills, lack of supervisory support, and onerous reporting requirements. In addition, from a personnel management perspective, there was no mechanism for coordination between ASHAs and auxiliary nurse midwives (ANMs) who provided additional support to ASHAs during home visits.

The mSakhi app sought to address these challenges by combining self-learning, client management, and reporting in an easy-to-use format. The content on the app was sourced from national government repositories. Upon registration, mSakhi generated a home visit schedule for each beneficiary and provided a set of audio-video guided instructions for counseling, assessment, and referral specific to each visit. ASHAs entered beneficiary data such as names and village information into the app during home visits. Data was stored in a centralized database, which was integrated with existing government systems for real-time tracking of both ASHAs and beneficiaries.

The initial pilot studied over 140 ASHAs, covering more than 80,000 beneficiaries in the Bahraich and Jhansi districts of Uttar Pradesh. The results indicate that adoption of the technology contributed to improved knowledge, skills, and productivity of ASHAs. In 2015, the mSakhi app scaled to five districts of Uttar Pradesh. In 2018, the app was also scaled to other functions, like screening people over 30 years of age for non-communicable diseases like diabetes and hypertension in the state of Jharkhand. Surveys conducted by the implementing partners of the program highlight the following:[6]

- Higher productivity: The initial pilot results highlight that for the ASHAs treated, average monthly usage per ASHA increased from 52 min at start-up to 121 min at endline. ASHAs gained confidence in using the application as a counseling tool. Having a mobile phone enabled them to quickly access counseling messages without carrying heavy flipbooks during visits.
- Improved knowledge: ASHAs showcased significant improvements in knowledge of critical RMNCH (reproductive, maternal, newborn, child, and adolescent) topics along with greater recall of at least six critical newborn conditions warranting referral.
- Improved Skills: ASHAs were able to deliver complete counseling messages with all critical steps using mSakhi: giving the message, explaining its importance, and using a counseling tool during their interaction with the beneficiary. ASHAs who used the mSakhi app were also able to correctly identify sick newborns needing immediate referral and those needing home-based treatment more often than ASHAs who did not use the app during the pilot.
- Better tracking: mSakhi enabled better monitoring of ASHAs by their supervisors (ANMs) and Medical Administrator of the Community Health Centre of Baragaon along with timely intervention to improve health outcomes. Seamless integration with the Government's Mother–Child Tracking System (MCTS) and the Health Management Information System (HMIS), also led to better tracking of beneficiaries and community practices regarding maternal and newborn health.

4.4 | Harambee Youth Employment Accelerator in South Africa

South Africa has some of the world's highest rates of unemployed youth, at 61% (Chutel 2023). The social enterprise Harambee, established in 2011, has been one of the most celebrated solutions to this crisis. It was founded by private equity firm Yellowwoods Capital, has partnered with the National

Treasury and subnational governments, and received funding and support from USAID and a variety of global private philanthropic organizations. Its goal is to target two key drivers of youth unemployment: (1) poor education leading to youth who lack employable skills, and (2) reliance of most South African firms on their own limited social networks for recruitment and biases against 'unskilled' workers from poor backgrounds (Altbeker 2015).

Harambee operates a Youth Employment Accelerator Program that aims to: (1) recruit unemployed youth, (2) assess and develop youth skills and competencies, (3) partner with employers on job matching and creation, and (4) support youth in the job search process through trainings and tools (skills certifications, reference letters). It leverages mobile networks and data analytics to reach and match excluded, poor youth to long-term employment opportunities. This includes partnerships with employers to rethink the skills they are looking for and to recruit using Harambee's platforms. It also includes conducting door-to-door and social media outreach to get the most excluded youth to join the platform. Harambee conducts standardized skills assessments of jobseekers and analyzes psychometric and other data to better match them with jobs and provide job-specific training to prepare them for success and retention in their roles.

Harambee reports the following key outcomes to measure its overall impact (Harambee 2023):

- Job creation: 3.8 million jobseekers have been supported through the program and 1.2 million opportunities enabled.
- Partnerships: 1386 employer partners.

In addition, formal evaluations have generated evidence to support the following outcomes of Harambee's interventions:

- Information: Providing job seekers with certified information on their skills assessments that they can share with prospective employers led to increases in employment (+5.2 percentage points), hours worked (+20%), earnings (+34%), and the likelihood of obtaining a formal job with a contract (+2 percentage points) (Carranza et al. 2022).

Reference letters: Providing job seekers with a reference letter template that they can share with prospective employers increased the likelihood an employer would respond to them (+60%) (Roode 2021).

5 | Conclusion and Takeaways

Traditionally, jobs initiatives have been framed in terms of skilling and workforce development policies. However, research over the past decade has found that such policies have limited impacts on employment and earnings and that they are seldom cost-effective (McKenzie 2017; Blattman and Ralston 2015). This traditional approach is rooted in the notion that policy should address training shortcomings while letting firms create jobs. However, creating employment at the scale we need requires more active productivity-enhancing labor market strategies on the demand side of labor markets as well. Policy interventions need to focus on creating productive jobs as well, rather than simply training workers (Carranza and McKenzie 2024). The interventions we study help us uncover some of the underlying mechanisms and approaches to affect the demand side of labor markets, and in some cases, the intermediation space.

The programs we study show that interventions focusing on the demand side tend to outperform solely supply-side strategies. Successful demand-side interventions take several forms. A key feature that emerges is the need for close coordination between governments and firms. For example, Haryana's *Saksham Saarthi* job creation program enabled the state government to make data on unemployed youth available to large existing firms, to expand employment. While the government didn't impose any explicit conditionalities or employment targets for the firms, the partnership served as an avenue for the government to better understand the firms' operational challenges and provide public inputs. Among other changes, the government reduced the administrative burden of obtaining commercial licenses to operate taxis in the state, by cutting the processing time in half, changing application requirements, and allowing non-resident migrants to apply for commercial licenses. The program also enabled an expansion of Uber and Ola's two-wheel and bike taxi services. Such productivity-enhancing policy interventions are likely to have downstream impacts on employment.

Another demand-side approach involves appropriately targeting SMEs and providing intensive coaching, mentoring, and incubation services. Nigeria's YouWIN! Program sought applications from firms with business plans. This multi-round application process was evaluated along a range of parameters—job creation goals, viability of ideas, management skills and experience, and profitability. Winners of this program received financial support (conditioned on milestones), entrepreneurship training, and targeted mentoring. UPSHIFT in Kosovo similarly selected youth groups to receive seed funding for start-up projects. These groups were then provided incubation support, access to mentors, equipment, and co-working spaces.

The goal here isn't to just provide SMEs financial support and incentives, though that is a crucial element of these programs. The long-term effects of such interventions depend on their ability to enhance firms' productivity and entrepreneurial capabilities. By contrast, the provision of a wage subsidy to urban microenterprises in Sri Lanka in 2009 had limited impacts on long-term employment and profitability. De Mel et al. (2019) conclude that it wasn't labor market imperfections per se that prevented these microenterprises from hiring more.

Focusing on productivity is key, both in targeting firms that have the capacity to grow and enhancing their capabilities. The competition element of YouWIN! and UPSHIFT allow the more dynamic firms to self-select. China's Little Giants program, which focuses on the high-tech manufacturing sector, serves as a case study for the targeting of SMEs more broadly. We also include it among the programs we study given its potential supply chain effects. The program is a part of a support framework that classifies SMEs as Innovative, Specialized, Little Giants, and Manufacturing Champions. The first two categories are determined at the provincial level and the latter at the national level, with a goal of identifying 1 million 'Innovative SMEs' and

10,000 'Little Giants' by 2025. Brown et al. (2023) describe this as a continuous competition-based process, involving multi-level evaluation and cultivation at the national and local levels. The program has also brought in national and local banks and financial institutions, large firms to serve as clients and mentors, and universities and research institutions.

A third approach we studied includes providing new technologies to complement less-skilled labor to enhance the tasks workers can perform. As the mSakhi case reveals, a well-designed technological intervention combining self-learning, client management, and reporting in an easy-to-use format can produce greater adoption, higher productivity, and improved knowledge and skills among community health workers. This app-based support not only provided continuous, on-the-job training and resources to the health workers, but was also integrated with their day-to-day management and reporting systems.

Employment problems are likely to be less effective if the productivity component is neglected. The Zambian government created a new Community Health Assistant (CHA) position both as a public employment program and to plug gaps in the delivery of health services in rural areas. CHAs are provided training for a year before they return to work in their communities. Research finds that bad management and governance and inconsistent supervision adversely affected the performance of the CHAs (Zulu et al. 2015; Shelley et al. 2016). The contrast with the mSakhi intervention highlights the importance of interventions that can serve as skill-enhancing complements to workers on the job and be effectively integrated with their day-to-day needs.

Our case studies reveal that the training programs that work are often led by social enterprises and are combined with other types of labor market intermediation and wraparound services. This is consistent with Alfonsi et al. (2020) that finds training interventions that are most effective are those that are intensive, target specific sectors, and rely on selecting high-quality training institutions. Among our cases, the U-Learn II program in Uganda offered comprehensive training to unemployed youth around technical skills, financial literacy, and life skills. Notably, the program partnered with large firms to offer youth internships and training in fields related to supply-side challenges faced by firms. In Kenya, the Mombasa County Government established Labor Market Information and Training Centers (LMTCs) to provide competency development trainings, career counseling, and internships. Notably, these centers worked with local suppliers of consumer goods to create—and fill—micro-distributor jobs to deliver goods to the thousands of small retailers across Mombasa County (ILO 2016).

To be effective, training programs require significant labor market intermediation and coordination with firms to understand employment needs, co-design training, establish apprenticeships and internships, and in some cases, to rethink the skills they are looking for (as in the case of Harambee's intervention). Additionally, successful training interventions also tend to target specific sectors. For instance, Panama's New Employment Opportunities (NEO) program sought to address the skills gap across construction, logistics, and tourism—sectors it identified as having the highest need for trained personnel. Notably, the initiative also brought the private sector on board in a formal capacity on sectoral development strategy and skills councils. The private sector involvement also required a $3:$1 match, which could be in-cash or kind.

The 'training' in these programs is just one element in a suite of concomitant interventions. Three common themes emerge across these programs. First, they provide important wrap-around services, ranging from career counseling and internships to transportation stipends for workers to increase job retention. Second, and relatedly, several of these programs are localized, implemented at the county and city levels, rather than nationally. And finally, these require a variety of stakeholders to work in concert.

This final theme is generalizable across all four of the strategies we have identified. These programs are fundamentally implementation intensive, requiring coordination of a range of inputs, a multitude of incremental steps, and real-time monitoring. Accordingly, successful interventions are predicated on partnerships. Coordination between governments and firms, and intermediary institutions (like Chambers of Commerce and civil society) are critical. The success of programs also depends on coordination across government departments, including local agencies which are able to respond iteratively. For instance, in Haryana, while there was a high-level partnership between the state government and Uber and Ola, action at the district level was critical to help address constraints to the firms' productivity.

Our goal in this paper wasn't to formally assess the effectiveness of different types of programs. Even when successful, programs of the type discussed here are unlikely to travel well. Accordingly, we are skeptical that this is a domain where 'best practices' can be formulated and disseminated—at least for the moment. The more important priority is to multiply such interventions, foster policy experimentation, and scale initiatives that seem locally successful.

Nevertheless, our review highlights some of the critical systemic aspects that have to be in place. It underscores the need to think about productive employment generation within a larger system. The supply and demand sides of labor markets are equally important, and successful programs tend to address both. Productive employment creation requires enhancing the skills of both workers and firms, as well as the provision of the intermediation services that connect the two sides of labor markets.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Endnotes

[1] Vietnam stands out as a possible exception, a country that has managed to rapidly expand output, exports, and employment in manufacturing, replicating many of the features of earlier East Asian experiences. As we argue in Rodrik and Stiglitz (2024), Vietnam had several distinctive advantages. The country's geographical proximity to China and other East Asian exporters made it a natural landing spot for firms from those countries when their labor costs began to rise. This positioned the country as the leading beneficiary of the Trump tariffs on China, and eventually the U.S. emphasis on "friend-shoring." But in Vietnam too, integration into the world economy through inward direct investment has made increasing demand on skills. 'Skill shortages' (and consequent problems of "job hopping" and "employer poaching") are reported to be among the most important constraints export-oriented foreign investors such as Samsung face.

[2] The book by Rajan and Lamba (2024) on India provides an interesting complement to our line of argument. Like us, these authors emphasize that manufacturing will play a much smaller role in driving growth. But their focus is mainly on tradable services.

[3] This case study is based on Muglur et al. (2019).

[4] This case study is based on McKenzie (2017) and Aina (2016).

[5] This case study is based IntraHealth International (2013) and Kumar et al. (2013).

[6] See: Qualcomm (2015) and IntraHealth International (n.d.).

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