

4 Education and skills challenges in the context of informal employment

This chapter examines the skills supply of informal workers and the skills demand for workers in formal and informal jobs. It shows that not only informal workers often have substantially lower levels of schooling compared with formal workers but they also have more limited opportunities to upgrade their skills, whether through employer-provided training, public training programmes or other forms of learning. Moreover, skills recognition remains an important challenge for informal workers. However, formal economy employers generally demand higher-order skills. As a result, economies with a large share of informal employment face sizeable skills mismatches.

When examining the question of skills, one needs to consider the supply of skills, the demand for skills, and how they match each other. The supply of skills essentially tells us about the skills that workers – formal or informal – possess. The demand for skills is the needs that employers – formal or informal – have in order to produce and deliver their goods and services. A good match of skills supply and demand enables economies to function optimally, and creates the potential to improve the socio-economic well-being of workers and their families.

The COVID-19 crisis has added to the uncertainty that education and training systems on the one hand, and labour markets on the other hand, were already facing. On the labour demand side, the crisis has adversely affected the level of production and the rate of economic growth. Lockdowns, social distancing measures, and reductions in the movement of people, goods and services meant that enterprises had to adjust to the contraction of their activities, introduce new methods and practices at work, and modify their activities. Informal enterprises and informal workers have suffered disproportionately, as they are often concentrated in the sectors that were most strongly impacted by the lockdowns and did not always benefit from government support measures. As the world recovers, there is increasing demand for new skills, including those related to telework and new health and safety regulations. On the labour supply side, the social distancing measures adopted during the crisis and the downsizing of economic production that followed have inflicted an unprecedented shock on both young people's education enrolment, school attendance and learning, and on adults' skills development. The crisis has also increased the size and complexity of the challenge to leverage the availability of skills and match them better with the changing nature of work.

As the world faces new challenges (such as those associated with the wars and military conflicts throughout the world and the resulting influx of refugees and children in other countries, the disruption of global food supply chains, and climate change), skills development systems must contribute to filling important gaps. Not only do they need to recover from the setbacks of the COVID-19 crisis but they also need to pave the way for a productive “new normal”, including for informal workers.

On the skills supply side, informal workers have lower education levels and fewer chances to upgrade their skills than formal workers do

Workers in the informal economy can acquire skills both before they start working in the informal economy and through their practical experience gained at work in the informal environment. Many informal workers have experienced periods of formal education and training of varying duration and quality, and will bring these skills to work. The quantity and quality of their initial education and training will determine not only their chances of becoming employed – formally or informally – but also their subsequent capacity and opportunities to learn and acquire new skills as working adults in a world with constantly changing skills demands. This, in turn, will also influence the education outcomes of future generations, determining whether or not they are able to break the intergenerational cycle of informal employment.

A static analysis at informal workers' education levels reveals their disadvantages compared with formal workers

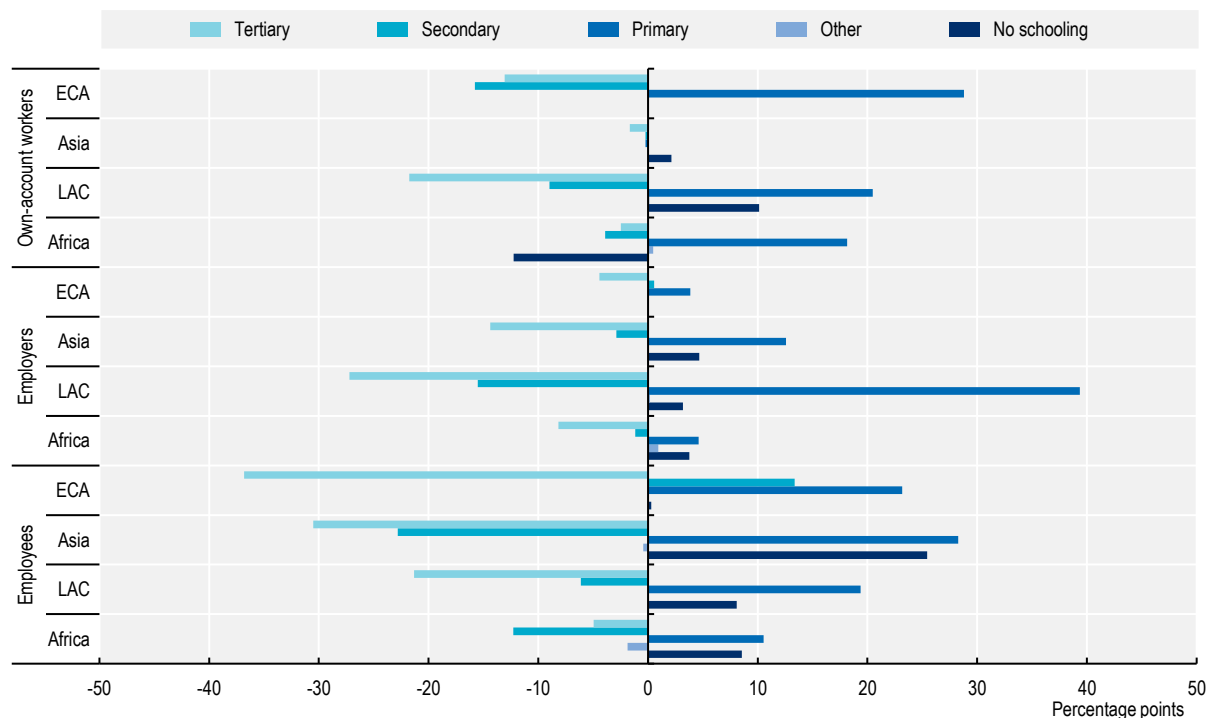
Education received in school is the main way to acquire foundational skills, such as reading, writing and numeracy, and is the base on which all other technical, work-specific and job-specific skills can be built. These are the skills that make further learning possible.

Informal workers have a considerably lower level of schooling when compared with formal workers. Globally, close to 45.0% of informal workers have at best a primary level of education, whereas the comparable figure for workers in formal employment is 7.0%. By contrast, a minority of informal workers have tertiary education (less than 7.0% globally but close to one-third in developed countries) compared

with one-third among their formally employed counterparts (ILO, 2023^[1]). In the vast majority of regions and statuses in employment, there is a significantly higher share of informal workers with primary schooling, or no schooling, compared with formal workers. By contrast, in the vast majority of regions and statuses in employment, there is a higher share of formal workers with secondary and tertiary education compared with informal workers (Figure 4.1).

Figure 4.1. Education gaps between informal and formal workers

Difference in the distribution of informal and formal workers in various employment statuses, by educational attainment (circa 2019)



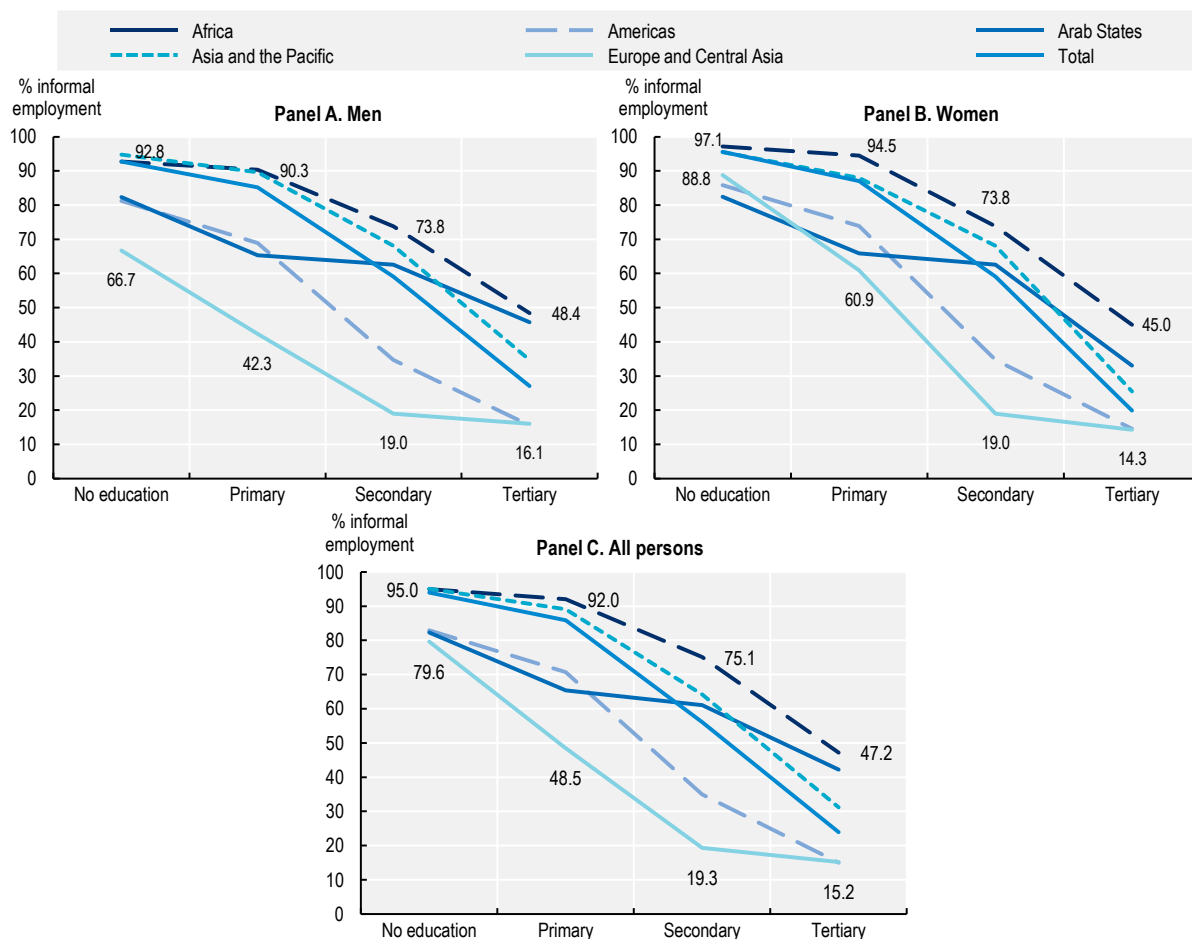
Note: Contributing family workers not represented, as all of them are considered to be part of the informal economy. LAC – Latin America and the Caribbean. ECA – Europe and Central Asia.

Source: (OECD, 2021^[2]), *Key Indicators of Informality based on Individuals and their Household (KIIBIH)* (database), <https://www.oecd.org/dev/Key-Indicators-Informality-Individuals-Household-KIIBIH.htm>.

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Conversely, the share of informal employment among workers with no education is 94.0% globally.¹ It stands at 95.0% in Africa and 79.6% in Europe and Central Asia (Panel C of Figure 4.2), although in Europe and Central Asia, the absolute numbers are very small. The share of informal employment falls, but only slightly, to 85.2% among those with primary education. It is significantly lower, at 52.1%, among those with secondary education. The share is lower but does not disappear among those with tertiary education, of whom 24% are found to be in informal employment. Women and men are also affected differently. There is a higher share of informal employment among women with no education or with only primary education compared with men (Panels A and B of Figure 4.2). The share of informal employment between men and women with secondary education is nearly identical; the share of informal employment among women with tertiary education is slightly lower than among men with the same level of education.

Figure 4.2. Share of informal employment by level of education



Note: Global and regional estimates based on data for 144 countries representing 92.4% of the world's employed population. Harmonised definition of informal employment and employment in the informal sector.

Source: (ILO, 2023^[1]), *Women and Men in the Informal Economy: A Statistical Update*.

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Schooling “is only a proxy for the skills mastered at the moment of completion of an educational programme” (ILO, 2018^[3]). Workers with the same amount of formal schooling may also display different degrees of ability and competency to perform the same job (Fialho, Quintini and Vandeweyer, 2019^[4]). Thus, ideally, the amount of schooling also needs to be considered in conjunction with its quality, while simultaneously considering measures of work-related professional skills. Evidence on this, for formal and informal workers, is rare. Where it does exist, it indicates that informal workers also have poorer literacy, numeracy and problem-solving skills compared with formal workers (Jaramillo and Escobar, 2022^[5]).²

Informal workers also face challenges to upgrading their skills compared with formal workers

The supply of skills in any given economy is dynamic. It is affected by structural factors, such as demographic changes including migration, or increasing labour force participation of women. It is also affected by various forms of lifelong learning, including non-formal training and informal learning.

- **Training provided by the employer is less frequently available for informal workers**

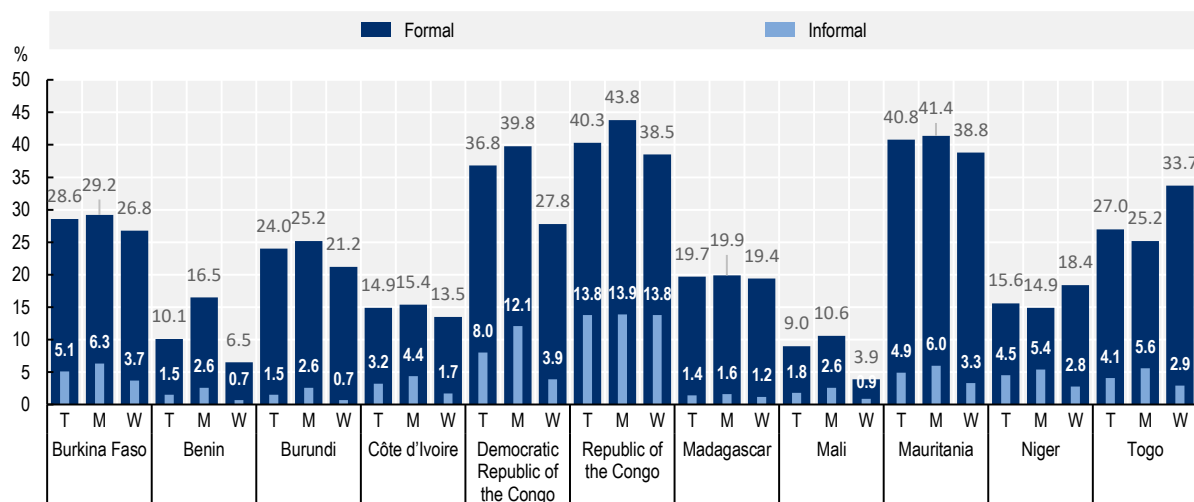
In what concerns employees, enterprises are a natural place to equip workers with the right technical skills. This is particularly true in sectors requiring relatively new types of skills that may be enterprise specific. Indeed, across OECD member countries, the main provider of reskilling and upskilling opportunities for adults is the employer (OECD, 2021^[6]). In some countries, governments provide subsidies and other financial incentives to encourage employers to facilitate training provision and provide access to training for their employees.

The situation is different in developing and emerging economies, where such incentives may be absent, and where employers may have fewer resources to provide training. This is especially true of informally operating enterprises. As a result, informal workers are more vulnerable than formal workers to a “low-skill trap”: not only are they more likely to have a low level of initial education and as a result occupy low-skill, low-level positions but they also have more difficulties accessing training to upgrade and acquire higher-order skills.

Available evidence from 11 African Francophone countries shows that participation in job-related professional training in the last 12 months, financed by the enterprise or one of its partners, concerns at most 5% of workers in informal employment in 8 of the 11 countries considered. This proportion is 3-15 times lower than that of workers in formal employment. The situation among women is the most critical, as they face more limited access to training regardless of the formal or informal nature of their employment. Moreover, the gap in access to employer-sponsored training between workers in informal and formal employment is greater among women than among their male counterparts (Figure 4.3).

Figure 4.3. Training courses financed by enterprises

Percentage of workers having taken a professional/retraining course relevant to their main job, financed by their enterprise or one of its partners, in the last 12 months



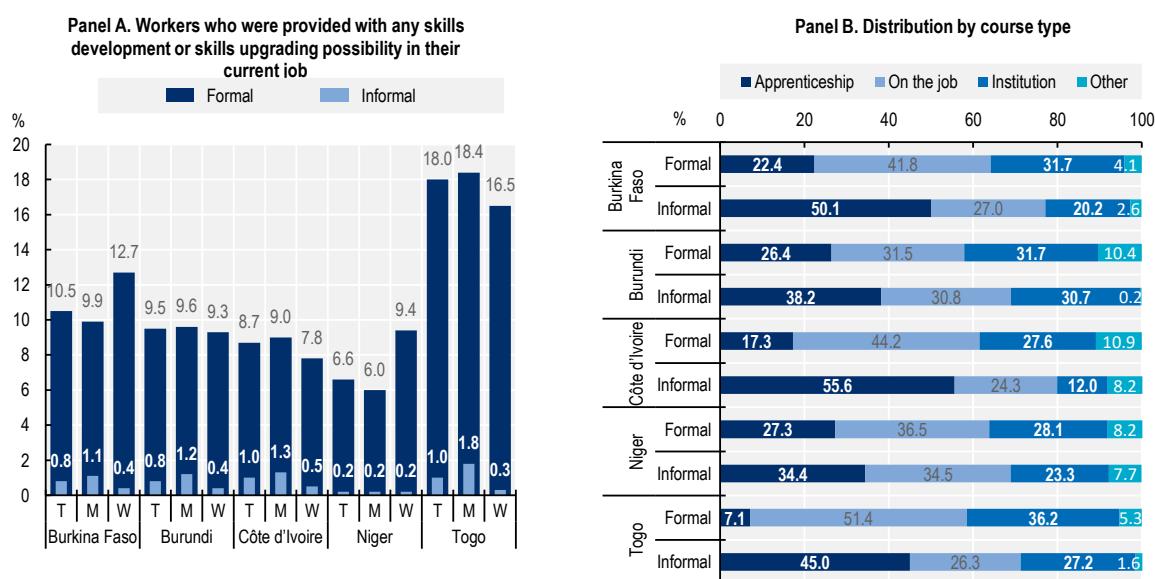
Note: T – total, M – men, W – women.

Source: Courtesy of the International Labour Organization (ILO). Calculations based on national household survey data: Burkina Faso, Côte d'Ivoire, Niger and Togo (Enquête régionale intégrée sur l'emploi et le secteur informel, 2017-2018); Benin (Enquête Modulaire Intégrée sur les Conditions de Vie, 2011); Burundi (Enquête sur les conditions de vie des ménages, 2014); Democratic Republic of the Congo (Enquête nationale sur l'emploi et le secteur informel, 2012); Republic of the Congo (Enquête nationale sur l'emploi et le secteur informel, 2009); Madagascar (Enquête nationale sur l'emploi et le secteur informel, 2015); Mali (Enquête modulaire et permanente auprès des ménages, 2018); Mauritania (Enquête nationale sur l'emploi et le secteur informel, 2017).

With regard to the possibility of further developing their skills and upgrading them, the gap in access to further training between informal and formal workers since entering their current job is even more pronounced. Among the five countries with similar information on this issue (Figure 4.4), between 0.2% of informally employed workers in Niger and 1.0% of informally employed workers in Côte d'Ivoire and Togo benefitted from this opportunity. The corresponding proportions among their formally employed counterparts range from 6.6% in Niger to 18.0% in Togo. Only a tiny minority of women in informal employment had this opportunity.

The few workers who were able to access further training did so in different ways depending on the formal or informal nature of their job. Apprenticeship is the most common modality among workers in informal employment in Francophone African countries to develop work-related skills (ranging from 34% in Niger to more than 50% in Burkina Faso and Côte d'Ivoire among those who received retraining). The corresponding proportions in formal employment range from 7% in Togo to 27% in Niger. On-the-job retraining appears to occur in both formal and informal employment, although at very different rates. Finally, retraining within an educational institution is more likely to benefit workers in formal employment.

Figure 4.4. Skills development and skills upgrading possibilities for formal and informal workers



Note: T – total, M – men, W – women. Apprenticeships include formal and informal apprenticeships, the latter being particularly widespread in the study countries (Werquin, 2021^[7]).

Source: Courtesy of the ILO. ILO calculations based on national household survey data: Burkina Faso, Côte d'Ivoire, Niger and Togo (Enquête régionale intégrée sur l'emploi et le secteur informel, 2017-2018); Burundi (Enquête sur les conditions de vie des ménages, 2014).

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Similar evidence is available for LAC countries, such as Mexico and Peru. There, informal employees (with informality measured by the absence of a written work contract) have a significant gap in participation in any type of on-the-job training when compared with formal workers (Jaramillo and Escobar, 2022^[5]).

Available training for employees within enterprises greatly depends on enterprise characteristics, and notably whether the enterprise itself is formal. Evidence from more than 70 countries suggests that enterprises “born formal”, as opposed to enterprises that were informal at the time of their establishment and later became formalised, have a significantly higher probability of providing training to their employees, and also of training more staff (Box 4.1). It is possible that enterprises that were informal from the outset were more resource constrained, and as a result did not have skills upgrading as a priority in their business model. This business model might persist to a certain extent even after such enterprises formalise.

Box 4.1. Enterprises “born formal” offer more training to more staff

Does training offered by enterprises vary across formal and informal enterprises? To answer this question, one would need enterprise survey data covering formal and informal enterprises as well as questions about training offered. Such data are hard to find. Nevertheless, the World Bank Enterprise Survey enables us to get as close as possible to answering this question.

The World Bank Enterprise Survey is conducted among formal, registered enterprises. However, the questionnaire contains a question on whether the establishment was formally registered when it began its operations. In other words, it allows distinguishing between enterprises “born formal” and enterprises that were informal when they began operations and that only became formalised at a later stage. It is well known that such enterprises may be very different from each other, including in their *raison d’être*, their resource constraints, their management style and the approach of their workforce. One of the questions also inquires whether, over the last fiscal year, the establishment had formal training programmes for its permanent, full-time employees. The two questions together facilitate investigation of whether “formally born” enterprises have a different propensity to offer training to their staff compared with enterprises that were initially informal but became formalised after they began operations.

The World Bank Enterprise Survey is a representative enterprise-level survey in developing and emerging economies. The survey data are collected from face-to-face interviews with top managers and business owners of enterprises with five or more employees, operating in the manufacturing and services sectors. The survey covers a broad range of questions on other enterprise-level characteristics, business environment topics and characteristics of the enterprise’s workforce, thus enabling researchers to better identify the relationship between past informality status of the enterprise and the training it offers, and separating it from a range of other factors.

Using the data collected between 2006 and 2014, and restricting the sample to enterprises containing non-missing answers to these questions and other key enterprise characteristics, the sample is reduced to 30 537 observations in 74 countries. Most countries are surveyed twice.

Regression results show that establishments that were formally registered when they began operations have significantly greater chances of offering training to their staff than establishments that were not registered (first column of Table 4.1). Moreover, they train significantly more staff (second column). The results also show that enterprises that are more likely to offer training are also larger in size, are older, serve national or international markets (as opposed to serving only local markets, the reference category), and are more efficient (efficiency is defined as sales per employee). They also have a higher share of skilled production workers among total employees than unskilled workers (measured by the variable skill production mix). Enterprises with domestic private ownership tend to offer fewer training options compared with domestic publicly owned establishments (the reference category), while foreign private enterprises do not differ from domestic publicly owned establishments in this regard.

Table 4.1. Enterprises “born formal” more systematically offer training to their staff, and train a higher share of staff: results from a regression analysis

	Training offered? (probit model)		Share of trained staff (OLS model)	
	Coefficients	Standard errors	Coefficients	Standard errors
“Born formal”	0.171***	(0.028)	1.390***	(0.304)
Total number of employees	0.001***	(0.000)	-0.001	(0.001)
Enterprise age	0.005***	(0.001)	-0.066***	(0.019)
Ownership: private domestic	-0.254***	(0.050)	0.896	(1.703)
Ownership: private foreign	-0.011	(0.058)	2.834	(1.941)

Market served: national	0.245***	(0.018)	-0.563	(0.737)
Market served: international	0.347***	(0.031)	1.183	(1.092)
Efficiency	0.109***	(0.007)	-0.355	(0.253)
Skill production mix	0.010*	(0.006)	11.209***	(1.056)
Number of observations	30 573		12 776	
R-squared				0.186

Note: The table presents the results of the regression analysis (estimation of a probit model and of an ordinary least squares (OLS) model). In the probit model, the dependent variable is equal to 1 when the enterprise offers any training to its workers, and 0 otherwise. In the OLS model, the dependent variable is continuous, and shows the share of trained staff compared with the total number of workers. All regressions include additional controls for sectors, countries and year of survey. The symbol (***) represents statistical significance at $p < 0.01$, (**) represents statistical significance at $p < 0.05$ and (*) represents statistical significance at $p < 0.1$.

Source: Authors' computations based on the World Bank Enterprise Surveys.

The COVID-19 crisis put a strain on private sector financing for skills development. Many enterprises found themselves unable to allocate resources for training due to a contraction of sales, closures and lockdowns.

A global survey of enterprises in mid-2021 found that four out of five enterprises had completely or partially suspended their operations in the midst of lockdowns. As a result, globally, training was interrupted for 90.0% of employees, 86.0% of apprentices and 83.0% of interns and trainees, with micro-, small and medium-sized enterprises (MSMEs) (most often informal) affected the most (ILO, World Bank and UNESCO, 2021^[8]).³ Nearly one-half of enterprises stopped paying a stipend or wages to apprentices and interns/trainees. Although online learning increased following the lockdowns and social distancing measures, training delivery faced considerable challenges arising mainly from infrastructure issues (inadequate Internet connectivity and poor access to computers). Other factors were limited digital literacy among users (particularly among low-skilled informal workers); a lack of adapted training programmes and resources; and the difficulty of delivering practical training online (particularly in low-income countries, but also in middle-income countries in remote rural areas).

The availability and type of training also greatly depends on the sector of activity, occupation and size of the enterprise – all of which tend to correlate with the extent of informal employment. For example, findings from the comparative study of rapid assessments of reskilling and upskilling needs due to the COVID-19 crisis in nine African countries show that, on average, 58.0% of surveyed employers responded that they provided training to their existing employees during the COVID-19 pandemic. However, employers in the services sector were more likely to provide training to their employees, whereas agricultural enterprises were less likely to provide training during the pandemic (ILO, 2021^[9]). Where training was taking place, 87.7% of the surveyed employers focused on health and safety training, 43.6% focused on the use of digital technologies for communication, and 28.0% focused on the use of digital technologies for Internet connection. The latter two training areas were given a special priority by larger establishments and those in the services, industrial and construction sectors, but not in the agricultural sector.

- **Few informal workers benefit from quality learning on the job and other learning opportunities**

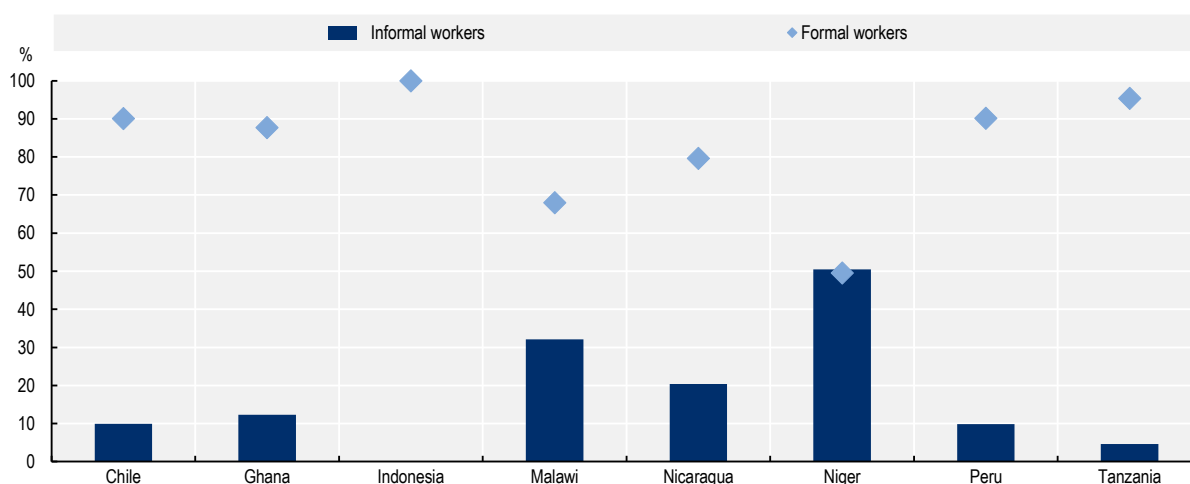
One of the important ways to acquire knowledge and skills is to learn on the job, from observation and learning by doing. Many informal workers – especially when their informal job is not a choice – perform elementary jobs or those requiring little skill. As a result, informal learning on the job is limited. Workers do not develop advanced skills, and when they do, these skills are often non-transferable to formal jobs. There is also evidence that informal workers are less likely than formal workers to acquire good-quality informal learning on the job, suggesting that they are not acquiring enough skills to compensate for the lack of formal on-the-job training, and which could help them with moving into formal jobs (Jaramillo and Escobar, 2022^[5]). When learning happens, it is often not recognised and not certified, thus impeding informal workers from proving their skills when they wish to apply for formal jobs.

- **Informal workers also tend to be excluded from public training and skills upgrading programmes**


When skills upgrading and reskilling are less frequently available through the employer or in the workplace, the role of public programmes of skills upgrading can become critical.

Yet, informal workers are also less likely to benefit from training and skills programmes provided through public labour market programmes. For example, in Indonesia, due to regulation of access, 100% of such labour market programme beneficiaries are formal workers. In Chile, Ghana, Peru and Tanzania, around 90% of such labour programme beneficiaries are formal workers (Figure 4.5). In Niger, state-provided labour market programmes such as vocational training or skills development are provided equally to formal and informal workers. However, to the extent that there is a larger share of informal workers than formal workers in the economy, in order to attain equity (rather than equality), more training needs to be provided to informal workers in Niger.

Figure 4.5. Share of workers who benefitted from vocational training or a skills development programme, by formality status



Source: (OECD, 2021^[2]), *Key Indicators of Informality based on Individuals and their Household (KIbIH)* (database), <https://www.oecd.org/dev/Key-Indicators-Informality-Individuals-Household-KIbIH.htm>.

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- **Informal workers may upgrade their skills, or reskill, in ways that are different from formal workers, but which are not always well understood, developed or supported**

The majority of informal workers are own-account workers (OECD, 2023^[10]); they have to provide their own training. In reality, such training is rare, not least because most workers – especially informal low-skilled workers with low pay – cannot afford to forego even one day’s earnings (OECD, 2019^[11]). As a result, they cannot engage in formal training that might be organised far from their workplace and require time and monetary resources.

Many own-account workers do, however, engage in non-formal learning, defined as forms of learning that are “intentional or deliberate but may not be institutionalised” (UNESCO, 2016^[12]). In some countries, informal learning options, with direct relevance to work needs and easier access, are offered to own-account workers in agriculture by farm extension services, agricultural advisory services, and/or farmers’ organisations and co-operatives (Ryan, 2023^[13]). Yet, in many other developing countries, such learning

possibilities remain underdeveloped. They lack resources and content, and information about such possibilities is not distributed widely.

The advent of digital technologies created many opportunities for learning in general, and for non-formal learning specifically. Along with e-learning and open educational resources, open learning through massive open online courses (MOOCs) emerged as a modern way of acquiring skills (ILO, 2021^[14]). By 2016, there were more than 100 specialised platform providers offering MOOCs in co-operation with educational institutions (Music and Vincent-Lancrin, 2016^[15]). MOOCs – online distance courses that can be accessed by everyone without entry requirements – opened up access to training anytime, anywhere. However, questions increasingly are focused on the completion rates of such programmes, certificate uptake, and the recognition and validation of credentials obtained through such learning platforms. Moreover, the traditional models of credential evaluation are being challenged, as both for-profit and non-profit verification agencies step into the field, calling for new standards in credentialing (ibid.).

Despite these concerns, the emergence of MOOCs and other online facilities democratised learning, including for informal workers. For informal workers in services and creative professions, MOOCs became an important means to gain up-to-date and highly demanded knowledge and skills. In addition, YouTube, Instagram, Facebook or Telegram (among others) channels and “how-to” videos also allowed many workers, regardless of their status, to learn about new tools and work techniques, equipping them with skills and knowledge on demand. Even informal workers working in agriculture and living in rural areas are increasingly using these tools, such as, for example, in order to get advice on new and more resistant seeds, or to learn how to operate and repair drones used in agriculture (ILO, 2021^[14]). The COVID-19 crisis has further spurred not only demand for these resources but also their supply: they are often provided by informal workers themselves as a new means of earning their livelihood. The true role of these new tools of knowledge for informal workers has yet to be assessed in the coming years.

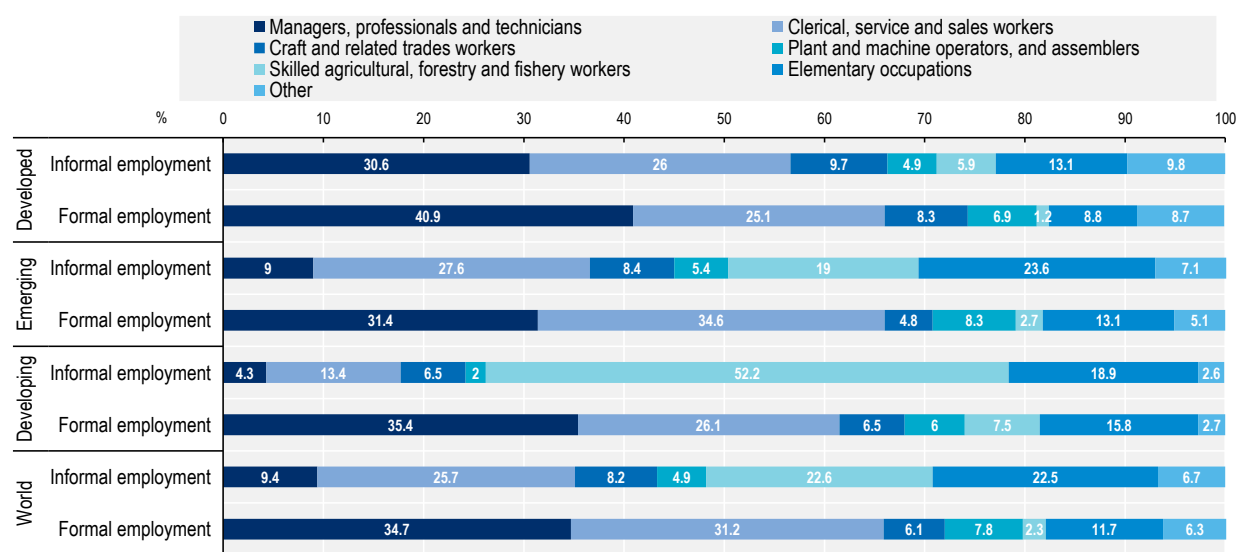
On the skills demand side, informality cuts across all occupations and skills, yet formal jobs generally require higher-level skills and qualifications

The proper functioning of an economy depends on the ability of production units (enterprises as well as own-account workers) to produce and deliver the goods and services that are in demand. This ability, in turn, depends on the availability of the right skills among workers.

- **There are important disparities in the distribution of occupations between formal and informal jobs**

Globally, among workers in informal employment, there is a higher share of workers in elementary occupations, of and related trades workers, and of skilled agricultural, forestry and fishery workers, than among workers in formal employment (Figure 4.6). Among workers in formal employment, there is a higher share of managers, professionals, and technicians, as well as clerical, service, and sales workers, than among workers in informal employment. These differences are observed among countries at all stages of development, but they are especially pronounced in developing and emerging economies. It is also remarkable that, in some settings, informal employment is so widespread that it cuts across all occupations and is not uniquely an elementary occupations phenomenon (although in developed countries, the shares of informal employment are low).

Figure 4.6. Distribution of formal and informal employment by occupation



Note: International Standard Classification of Occupations (ISCO-88) classification of occupations. Global and regional estimates based on data for 144 countries representing 92.4% of the world's employed population. Harmonised definition of informal employment and employment in the informal economy. Latest available year.

Source: (ILO, 2023^[1]), *Women and Men in the Informal Economy: A Statistical Update*.

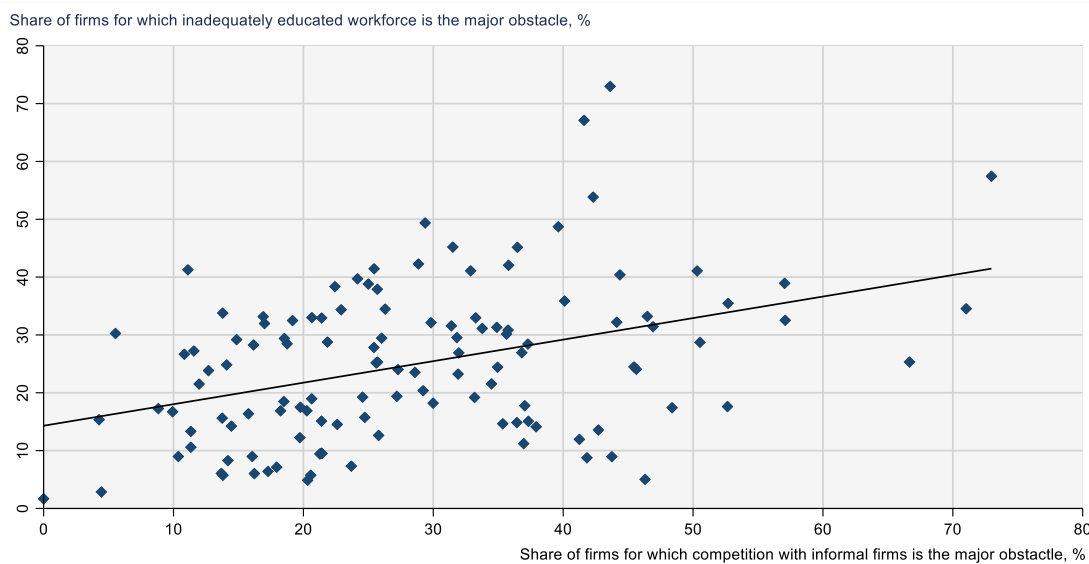
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- **Formal jobs may be hard to fill because they require skills that informal workers do not have or cannot prove having**

One problem with the current distribution of employment across occupations and skill level, however, is that it reflects only that portion of demand that is satisfied by the current supply of skills. It does not tell us much about skills shortages in specific occupations. The latter may be inferred from the information about job vacancies, which can be collected by public agencies and by private enterprises. It can also be inferred from employers' own assessments of skills shortages.

The World Bank Enterprise Survey, which is carried out regularly in more than 100 countries at the enterprise level, contains the following question: "What is the most serious obstacle affecting the operation of your business?" It features, among various answers, the "educated workforce". Availability of workers with the right training is indeed an important obstacle for productive activity in many enterprises. Globally, around 25% of registered enterprises indicate that an inadequately educated workforce is either a major obstacle or a very severe obstacle affecting the operation of their business. Moreover, this obstacle is positively correlated with concerns regarding informality. Evidence from the World Bank Enterprise Survey shows that in settings where formal enterprises are concerned about the practices of their competitors in the informal sector, they are also concerned about an inadequately educated workforce as an obstacle to the current operation of their business (Figure 4.7). For example, in countries with some of the highest levels of informal employment, such as Benin, Chad or Niger, there is also the highest share of formal enterprises that report inadequate skills as the most critical obstacle to the operation of their business. The formal sector may require skills that workers in the large informal sector simply do not have. As a result, the formal enterprises that were surveyed may have particular difficulties in creating and filling formal jobs.

Figure 4.7. Countries where employers are concerned about the skills of their workforce are also countries where the informal sector affects the operation of their business



Note: The horizontal axis shows the share of enterprises, by country, which answered that the practices of competitors in the informal sector were either a major obstacle or a very severe obstacle affecting the operation of their business. The vertical axis shows the share of enterprises, by country, which answered that an inadequately educated workforce was either a major obstacle or a very severe obstacle affecting the operation of their business. The sample includes only registered enterprises with five employees or more.

Source: Authors' computation based on the World Bank Enterprise Surveys (2014-20, latest year available for each country), <http://www.enterprisesurveys.org>.

Talent shortage surveys, such as those conducted by the Manpower Group in Colombia, Costa Rica, Guatemala, India, Mexico, Peru, Romania, South Africa and Türkiye in 2022, show that three-quarters of formal sector employers are facing difficulties in hiring. The top three reasons are a lack of experience, a lack of hard skills among applicants and simply a lack of applicants (Manpower Group, 2022^[16]). Skills gaps in the local labour market and an inability to attract the right talent are also cited by 55% of formal multinational employers as the leading barriers to the adoption of new technologies across the world (World Economic Forum, 2018^[17]). Given this situation, the critical lack of productive formal employment in countries with a high overall level of informal employment may be at least partly due to the lack of skills and the inability of enterprises to create or fill formal employment positions. Among informal workers, there is a high share of low-skilled workers who do not have the skills needed to obtain jobs in the formal sector, or cannot prove having them.

- **Skills demand is dynamic, and should be anticipated**

The demand for skills is not static and is changing very rapidly due to a wide range of factors, such as structural transformation; technological changes, including digital transformation; climate change; and the sophistication, diversification and disruption of global and regional value chains, and the resulting changes in consumer demand and in enterprise organisation and practices. These changes will affect job availability, the task composition of jobs and the skills required in the labour market. Some current jobs will disappear and some new jobs and tasks will emerge, while most of the existing work tasks within traditional jobs will be modified (OECD, 2016^[18]; OECD, 2016^[19]; OECD, 2017^[20]). However, the effects of these changes will vary according to country context. Effects will also depend on how some of these factors (for example, technology) can either complement, or substitute, workers in these tasks (World Bank Group, 2015^[21]).

Structural transformation and automation reduce the demand for medium-skilled occupations and create more demand for higher-skilled occupations, which require not only relatively more advanced literacy and numeracy skills but also good interpersonal, analytical, communication and problem-solving skills, as well as skills to adapt and learn. Over time, the skills content of jobs becomes less intensive in terms of routine and manual skills and more intensive in terms of non-routine analytical and interpersonal skills, and this trend is expected to persist in the future (ILO, 2021^[14]; UNICEF, 2019^[22]).

This poses additional challenges for informal workers in developing and emerging economies: many of them have jobs requiring mostly routine skills with low analytical and interpersonal skills. This means that these informal workers face a relatively high risk that their job will become automated, and they currently lack the skills needed to transfer to occupations with a lower risk of automation. Even if two occupations are related, it may still take significant reskilling and upskilling to acquire the average skill set to transition to another occupation that may offer more chances for formal employment.

The COVID-19 job disruption has further precipitated the change in skills demand through various channels. First, the COVID-19 crisis highlighted the reliance of economies on “essential workers”, including healthcare workers, carers, delivery personnel, food shop workers and agricultural workers, many of whom are informal. In some of these occupations, the demand for work surged during the COVID-19 pandemic, but so did the need to reskill workers in order to adapt to new work practices and security concerns (World Economic Forum, 2020^[23]). Second, through lockdowns, closures, and further disruptions in global commerce and tourism, the COVID-19 crisis had a detrimental effect on workers in sectors disproportionately affected by these measures, including retail, hospitality, tourism and travel. A disproportionate share of these workers were also in informal jobs. As these sectors recover from the pandemic, their skills requirements are changing, across both formal and informal sectors (Box 4.2). The speed with which the labour force can adjust to these new skills demands will determine at least in some part the speed of the economic recovery.

Box 4.2. COVID-19, coupled with technological change, modified skills demand in one of the largest economic sectors: Tourism

The tourism sector encompasses accommodation, food, entertainment, and travel management and activities, as well as activities to serve tourist attractions (ILO, 2022^[24]). The global tourism sector has experienced almost constant growth and diversification since the 1960s, and by 2020 had become one of the world’s fastest growing and largest economic sectors (ILO, 2022^[24]). The tourism sector is also one of the most labour intensive. Prior to the COVID-19 pandemic, it accounted for 10.6% of total global employment (ibid.). Women, young workers, migrant workers, and ethnic and cultural minorities are overrepresented in the sector’s labour force.

Globally, the sector also features a high level of informal employment. In Asia and the Pacific, more than 75% of workers in the tourism sector work informally (ILO, 2021^[25]). In LAC, more than 60% of restaurant and catering workers and more than 25% of hotel workers work informally (ILO, 2021^[26]). Informal employment in the tourism sector is due to several factors. First, immediately prior to the pandemic, almost one-third of the total tourism sector workforce was employed in micro-enterprises with between two and nine employees. There is a higher share of informality among micro-enterprises than among larger enterprises. Second, even formal economic units have been relying extensively on seasonal, casual, part-time and zero-hour work due to the particular labour needs in the sector – arrangements that feature a significant risk of informal employment. This risk is exacerbated by loopholes in regulations, weak enforcement and poor organisation of labour in this sector. Third, many formal economic units have also been relying on outsourcing and subcontracting as part of their business models, with such models also featuring a higher risk of informal employment. Finally, the sector generates many jobs in related occupations, such as the provision of driving services, cleaning,

tourist guiding, the production and sale of gifts and crafts, and photography – often performed by own-account workers who are not formally registered (ILO, 2016^[27]).

A large share of jobs even in formal economic units have been performed by low- and medium-skilled workers. This is largely due to the nature of jobs that do not require skills, but also due to the fact that work processes are often highly standardised and simplified – especially within large chains and enterprises operating under franchises (such as hotels and catering) – and require little training. The majority of jobs created indirectly also have low skill requirements. This means that a low level of skill can still be valuable and demanded in this sector, even though these jobs often exhibit significant work quality deficits (ILO, 2021^[14]).

The global COVID-19 pandemic led to a collapse of the sector (UNWTO, 2021^[28]), with consequent devastating effects on the labour force. It is estimated that employment supported directly or indirectly by the sector fell 18.5% in 2020 alone, representing a loss of almost 62 million jobs. Global employment in accommodation and food services suffered the largest decline in employment of all sectors. MSMEs were particularly hard hit, with millions of enterprises going bankrupt and millions of workers losing their jobs as a result. More informal workers than formal workers have lost their jobs in absolute terms. Yet, because workers losing formal jobs moved to informal employment, the total share of informal employment increased in some countries, such as Viet Nam (ILO, 2021^[25]).

As the sector recovers from the crisis, it is becoming apparent that the pandemic has also modified the demand for skills in this industry. Among other issues, it has prompted an acceleration of digitalisation, such as contactless services in hotels and restaurants, as well as registration processes for checking the testing and/or vaccination status of guests – with a surge in demand for at least basic digital skills (ILO, 2022^[24]). As such, digital skills have become a key determinant of employability, even for generally low-skilled workers, whether formal or informal.

Multinational businesses operating in the sector also have a strong appetite for adopting new technologies. The COVID-19 pandemic precipitated an already growing demand for general and operations managers, data analysts and scientists, sales and marketing professionals, and information security analysts in the tourism sector specifically (World Economic Forum, 2018^[17]). New developments, such as M-tourism (the use of smartphones throughout the entire customer experience, including to present travel documents, passports and visas, or digital identities, as well as vaccination certificates), require professionals to handle new digital tools; develop, troubleshoot and repair these tools; and facilitate the wide adoption of these devices by businesses and customers. New tasks and occupations in high demand include programming and securing driver-free passenger transportation, as well as managing interactive cobot-operated terminals at airports and train stations. Many of these jobs require either a specialised technical or university education, or substantial retraining (ILO, 2021^[14]). The extent to which businesses will be able to adopt new technologies and expand formal employment will depend on the availability of such technical skills, as well as medium- and high-level skills in hybrid occupations. A lack of necessary skills will likely to be an impediment for the sector's recovery, especially in terms of formal employment. In recognition of these trends, reskilling, upskilling and enabling workers to develop their skills, especially digital skills, have been an important part of government support for businesses and for unemployed workers in the tourism sector in many countries (UNWTO, 2020^[29]). In several countries, travel and tourism were designated as a special sector for employment support.

Source: Authors' compilation based on the sources cited in the body of this box.

Third, important shares of workers experienced remote work. The availability of jobs that could be performed remotely – coupled with access to the Internet, computers and mobile phones, as well as the right digital skills – were key in sustaining economies and livelihoods during the pandemic. It is estimated

that the share of jobs that could be performed remotely stood at 33.6% of jobs in high-income economies, 17.8% of jobs in upper middle-income economies, 10.0% of jobs in lower middle-income economies and just 4.0% of jobs in low-income economies; the vast majority of these jobs are formal (World Economic Forum, 2020^[23]). Notwithstanding sectoral differences, demand for digital skills that are complementary to other professional skills, and that can enable remote work, is expected to continue increasing in all countries.

Finally, the upsurge of digital consumption accelerated by the pandemic is also propelling the expansion of the e-commerce, logistics, digital media and digital financial services sectors, along with the demand for new jobs and related new skills (ILO, 2021^[14]). Analysis made by LinkedIn of job and skill trends for 2021 in 19 countries around the world, including Brazil, the People's Republic of China, India, Indonesia, Malaysia, Mexico, the Philippines and Thailand, showed that the most in-demand jobs are related to e-commerce and logistics. There is a growing demand for skills in data storage, software development life cycle, social media management, digital marketing and advertising, graphic design, search engine optimisation, warehouse operations, supply chain management and co-ordination, and cybersecurity (LinkedIn, 2021^[30]). With more working time and life spent in front of screens, there is also an increased demand for workers to provide consumers with digital engagement in terms of knowledge and information sharing, online entertainment, and social networking, all of which were boosted by the measures adopted during the COVID-19 crisis. This has spurred the demand for digital content creators, podcasters, video editors, social media managers, digital marketing specialists and content moderators in many countries. In developing and emerging economies, there is also a surge in demand for digital methods to access financial services and fintech (World Bank and WEF, 2020^[31]). Many of these skills are required for formal jobs. However, having such digital skills can also improve the general employability of informal workers, especially in settings where new modes of work and work organisation, also boosted by digital innovation, increasingly blur the distinction between formal and informal jobs (OECD, 2023^[10]).

In summary, in some occupations, skills needs differ across formal and informal jobs, but in others they may be similar. With changing skills demand, and under the pressure of structural factors, job requirements featuring more sophisticated skills may not always be synonymous with a formal job. But having such skills is clearly a guarantee of better employability, and improves the chances of having a formal job.

Skills mismatches are an important challenge, in particular for informal workers

If labour markets were perfectly competitive, remuneration and employment levels would adjust until the market clears: enterprises would adapt production processes to the available stock of human capital, while workers would instantaneously adapt to new skills requirements (Hartog, 2000^[32]). In reality, labour markets are far from being perfect. Information asymmetries, the lack of geographical mobility, the industrial structure of an economy, the macroeconomic situation and unattractive working conditions in places that require a particular skill lead to skills mismatches in any labour market (OECD, 2017^[20]).

What is remarkable, however, is that skills mismatches differ across formal and informal workers.

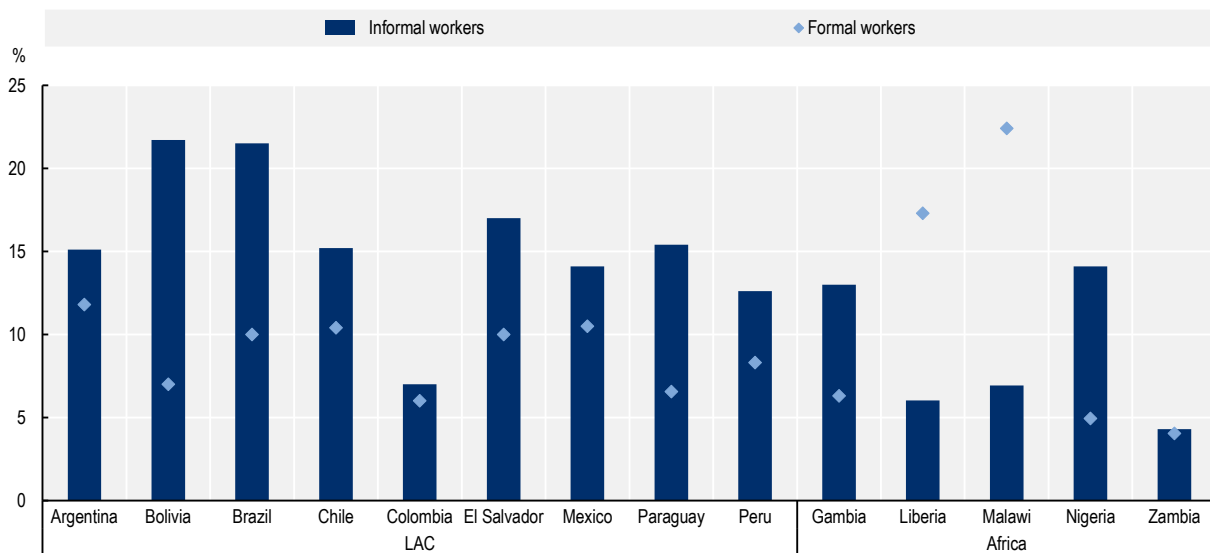
Workers in informal employment are particularly prone to undereducation, compared with workers in formal employment

Among informal workers in 14 emerging economies with available data, the incidence of undereducation ranges from 4% in Zambia to 22% in Bolivia and Brazil (Figure 4.8).⁴ Among formal workers, the incidence of undereducation also ranges from 4% in Zambia to 22% in Malawi. There is a higher incidence of undereducation among informal workers than among formal workers in 11 of the 14 countries with available data. It is twice as high for informal workers compared with formal workers in Brazil, and Paraguay, and it is three times as high in the Plurinational State of Bolivia (hereafter: Bolivia) and Nigeria.

The incidence of undereducation is similar among formal and informal workers in Colombia and Zambia. The only countries where the incidence of undereducation is lower among informal workers than among formal workers are Liberia and Malawi.

Undereducated workers include two types of workers. The first type is workers who do not have the level of formal education that is generally required for this type of jobs. For example, in many developing and emerging economies, limited availability of tertiary-educated workers has meant that employers looking for high-skilled workers in emerging and innovative sectors have had little choice but to hire genuinely underqualified workers who do not fulfil the skills requirements of the job (OECD, 2017^[20]). The second type is workers who have relatively low levels of education but nonetheless have the right skills, although these skills are not properly recognised (not certified). Among them are workers who did not have access to formal schooling, as well as those whose formal skills became obsolete too quickly. They include those workers whose competencies acquired through informal work experience, as well as informal and non-formal learning are not recognised. Such workers may have particular issues with proving their aptitudes. This, in turn, may hamper their labour market transitions, including to formal jobs. Given this situation, informal economy jobs are generally unproductive because they disproportionately absorb both unskilled and undereducated labour. Improving labour market matching would require different policy solutions for these two types of workers: helping to develop skills for the first group, and helping recognise existing skills for the second group.

Figure 4.8. Incidence of undereducation among informal and formal workers



Note: Undereducation is computed as follows: within each country and within each occupation (at 1-digit classification of occupations), the mean and standard deviation of workers' years of education are computed. Then, individuals with years of education that are one standard deviation below the mean are qualified as undereducated. LAC – Latin America and the Caribbean.

Source: Authors' computation based on household data of each respective country. For details, see (Aleksynska and Kolev, 2021^[33]), "Education-occupation mismatch in the context of informality and development", *OECD Development Centre Working Papers* No. 346.

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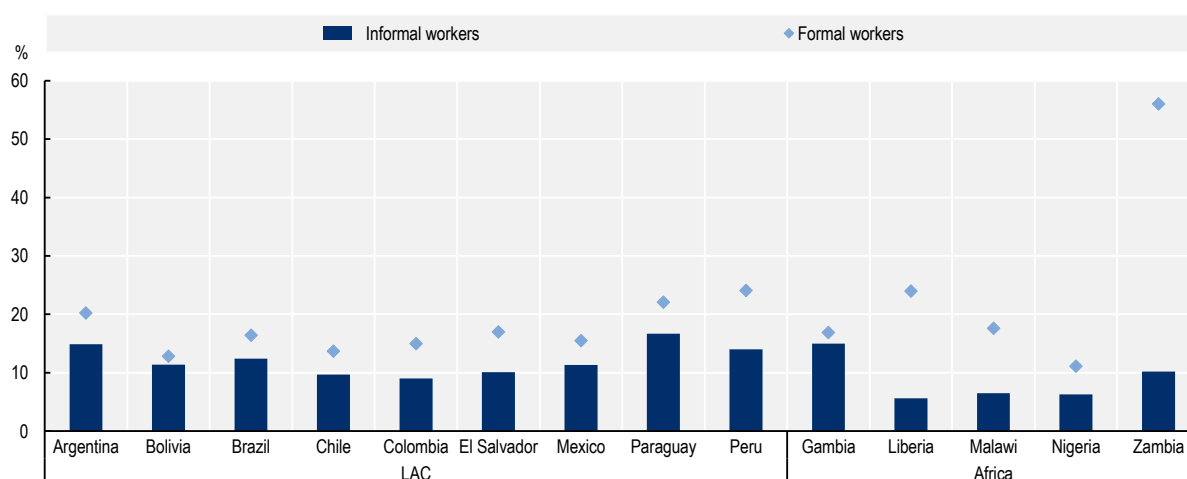
As shown in other studies (e.g. (OECD/ECLAC/CAF, 2016^[34])), among young people, the reasons for being undereducated often relate to their family background and the fact that they come from vulnerable households, often with low-qualified parents who are informally employed themselves. In other words, undereducated workers are often trapped in the informal-work, low-skill, low-productivity intergenerational cycle.

Formal workers, in contrast, are more likely to experience overeducation

There is a lower incidence of overeducation among informal workers than among formal workers in all 14 countries with available data (Figure 4.9). Among formal workers, the incidence of overeducation ranges between 11% in Nigeria and 56% in Zambia. In contrast, in Zambia, only 10% of informal workers are overeducated: this is also the average rate of overeducation among informal workers in countries with available data.

The pool of overeducated workers is also heterogeneous. Among overeducated workers in medium- and high-skilled jobs, there are workers who possess more education than what is required for their job, often because competition for such jobs is fierce. In developing and emerging economies in particular, where there are large pools of unemployed secondary school graduates and school dropouts, there is often a displacement of workers without qualifications, as employers looking for low-skilled workers hire secondary school graduates instead, generating overeducation (OECD, 2017^[20]). Overeducation thus usually means that human resources are not efficiently used: there is an underutilisation of human capital, and workers operate below their productive capacity. This is made all the more challenging as overeducation is a feature of formal employment: it hampers productivity growth in the formal sector and reduces the economy-wide benefits of formalisation.

Figure 4.9. Incidence of overeducation among informal and formal workers



Note: Overeducation is computed as follows: within each country and within each occupation (at 1-digit classification of occupations), the mean and standard deviation of workers' years of education are computed. Then, individuals with years of education that are one standard deviation above the mean are qualified as overeducated. LAC – Latin America and the Caribbean.

Source: Authors' computation based on household data of each respective country. For details, see (Aleksynska and Kolev, 2021^[33]), "Education-occupation mismatch in the context of informality and development", *OECD Development Centre Working Papers* No. 346.

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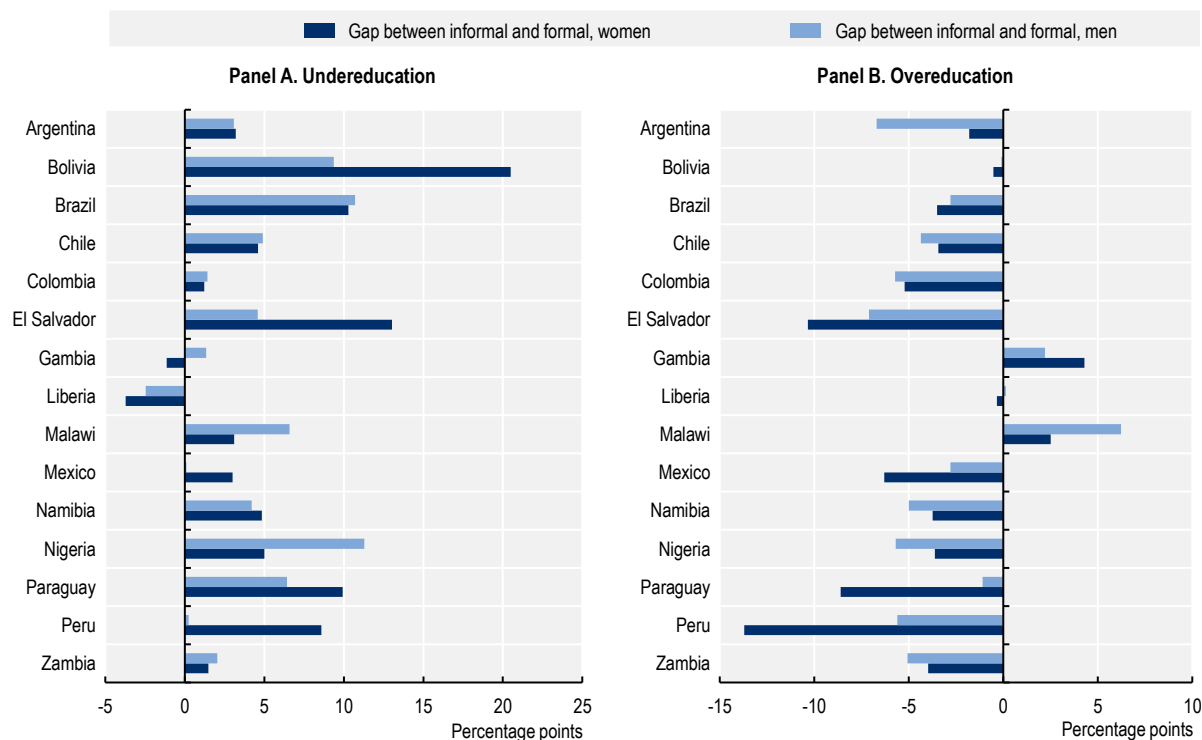
The patterns for over- and undereducation hold true for both men and women

Both men and women working informally are more likely to be undereducated compared with formally employed men and women. Conversely, both men and women working informally are less likely to be overeducated. However, in most countries, the incidence of mismatch is generally more strongly pronounced for women than for men. The gap is substantially higher for women than for men in Bolivia, El Salvador, Mexico, Namibia, Paraguay and Peru (Figure 4.10). For example, in Bolivia, 26% of informally employed women are undereducated, in contrast with 6% of formally employed women (20 percentage

points gap). Among men in Bolivia, the incidence of undereducation is 17% among informally employed, in contrast with 8% of formally employed (9 percentage points gap). Similarly, the incidence of overeducation is greater among formally employed men and women in all countries except Gambia and Malawi; the gap is pronounced stronger for women than for men in Brazil, El Salvador, Mexico, Paraguay and Peru.

Figure 4.10. Gaps in under- and overeducation between informal and formal workers, by gender

The sample of all employed; percentage points



Source: Authors' calculations based on country-specific household data. For details, see (Aleksynska and Kolev, 2021^[33]), "Education-occupation mismatch in the context of informality and development", *OECD Development Centre Working Papers* No. 346.

StatLink  <https://stat.link/06mker>

Other types of mismatches are also likely to be found across formal and informal workers

In addition to education-occupation mismatches, there can be mismatches in qualifications, field of study and various types of skills. Evidence on these mismatches in developing and emerging economies is scarce. Available evidence points to important general qualification and field-of-study mismatches. For example, in Peru, more than 50% of workers have a field-of-study mismatch (OECD, 2017^[20]). In South Africa, there is a 52% incidence of qualification mismatch, and more than 30% of South African workers are employed in an occupation unrelated to the field of study of the qualification that they hold. The incidence of qualification mismatch is substantially higher in informal jobs than in formal ones: 36% of workers in informal employment are underqualified compared with 27% of those in formal employment. Moreover, among those in informal employment, 55% are mismatched in the field of study, compared with only 28% of those in formal employment. The difference in the probability of being mismatched by field of study remains significant even among individuals with the same gender, age and occupation (Vandeweyer

and Verhagen, 2022^[35]). In Ghana, in response to the question, “Do you feel that your training/educational qualifications are relevant in performing your present job?”, 75.8% of workers in informal employment declare that they are not relevant, compared with 42.0% of formal workers (own computations based on Labour Force Survey 2015).

Key policy messages

This chapter has shown that informal workers possess poorer skills compared with formal workers, and also have fewer opportunities to upgrade them. In turn, formal jobs generally require a higher and more sophisticated level of skills than what an abundant informal workforce can provide. As a result, in countries with a widespread level of informal employment, not only are there major skills shortages but skills mismatches in the labour market are also ubiquitous. Moreover, the types of mismatches differ for informal workers (who tend to be undereducated and underskilled for the jobs they perform) and for formal workers (who tend to be overeducated and overskilled), thus creating asymmetric inefficiencies across formal and informal workers. These mismatches aggravate the unemployment problem, hamper productivity and impede socio-economic development. They also become major barriers to public and private sector strategies for formal job creation and adoption of new technologies.

To address these problems, actions on several fronts are needed, with a view to better matching the demand for skills and the supply of skills. Countries should:

- continue raising the general level (in terms of quality and quantity) of schooling in order to strengthen foundational skills as a basis for future learning for all workers
- encourage employer-provided training for formal and informal workers
- make public programmes more inclusive for informal workers and their needs
- recognise prior learning of informal workers
- anticipate change in skills demand, and prepare the workforce accordingly
- strengthen opportunities for more creative learning.

Continue raising the general level (in terms of quality and quantity) of schooling in order to strengthen foundational skills as a basis for future learning for all workers

As shown in this chapter, informal workers have a disproportionately low level of schooling. Conversely, workers with low levels of schooling (including due to dropping out of school) are found mainly in informal jobs, suggesting that formal employment opportunities remain out of their reach.

Given this situation, countries should continue devoting efforts to increasing the quality and quantity of schooling provided to would-be workers and ensuring that access to education is equal for boys and girls, across urban and rural areas, and for children from vulnerable and non-vulnerable households (UNESCO, 2017^[36]). Other key areas for action include eradicating child labour by raising and enforcing the minimum age for employment; instituting and enforcing free and compulsory education; providing free education materials and meals; and making quality education available in rural areas (Doepke, 2018^[37]).

Improving education quality and preventing school dropouts are essential for building basic foundational skills across a larger pool of would-be workers. In addition to these skills, education systems should also be able to deliver skills related to analytical thinking, problem-solving and innovation, particularly for occupations in science, technology, engineering and mathematics (STEM). Social and emotional skills – such as communication, collaboration, teamwork, conflict resolution and negotiation, as well as adaptability, curiosity and a learning mindset – will help students maximise the ability of humans to add value beyond that of machines in the future of work (OECD, 2015^[38]). These skills will be in particular

demand for all workers as countries undergo structural transformation and adopt new technologies, and as new formal job opportunities emerge.

Beyond secondary schooling, governments should also pay particular attention to improving school-to-work transitions by making the skills obtained in school relevant to the labour market. In this regard, tertiary education delivering relevant labour market skills, technical and vocational education and training (TVET) systems, dual apprenticeship skills, and paid apprenticeship programmes have an important role to play. In order for such initiatives to be successful, they need to engage employers to develop relevant curricula and provide ways to alleviate the financial burden of participation in them for both employers and students (OECD, 2023^[39]).

Raising the level and the quality of schooling requires substantial resources (UNESCO, 2021^[40]). Such resources are needed in order to create the conditions necessary to attract qualified individuals to the teaching profession and to improve the quality of teaching. Underinvestment in existing and/or new educational infrastructure and supporting materials also impedes progress in schooling performance (OECD, 2016^[41]). Often in developing and emerging economies, more spending is devoted to primary schooling than to secondary and tertiary levels. The COVID-19 pandemic has put a strain on public resources, with many countries cutting their public education budgets in its aftermath (Global Education Monitoring Team and World Bank, 2021^[42]). In this context, it is important that governments devote adequate expenditure to education, reverting to pre-pandemic funding levels or even increasing funding where necessary.

Encourage employer-provided training for formal and informal workers

Given the mismatches between skills demanded in the formal sector and skills held by workers in the informal economy, greater emphasis should be placed on improving access for informal workers to skills development opportunities with a view to matching them to the demands of the formal sector.

If a lack of skills is an obstacle for enterprises to create more formal job opportunities, employers should play a greater role in equipping workers with the right skills, rather than simply trying to find workers with the relevant skills in the labour market. However, it is important to recognise that skills provision that relies uniquely on employers faces a certain market failure. On the one hand, employers do not always recognise the value of investing in their workers, seeing training costs as a financial burden in the short term. Moreover, employers face the risk that, despite investing in an employee, the employee would not be productive or would leave for another employer. As a result, many enterprises, and especially informal small and medium-sized enterprises (SMEs), usually avoid this burden and do not pay for the training of candidates. On the other hand, employers are willing to pay wage premiums to trained candidates. Yet, workers are often not willing or able to pay for training, although they are willing to pay a recruiting agency to help them find a job. As a result, there is an undersupply of skills provision at the workplace.

One way to address this market failure is to create an environment where employers see the financing of skills development as an investment and where they also have a certain guarantee of receiving a return on this investment. Workers, in turn, should have incentives to acquire skills, not least in the form of a guarantee of getting a formal job. Examples of such approaches may be found in India (Box 4.3). Another (complementary) solution is to provide financial incentives both to employers to provide training and to workers to avail of it. Such incentives may include wage and training subsidies, tax incentives, loans at preferential rates, and individualised learning account schemes transferable across jobs and open to all workers, including own-account workers. Targeted programmes and incentives for informal employers can be created, and programmes can be made available to informal workers who may not be eligible for standard support measures due to their informal status. For informal enterprises, access to such programmes may be conceived in a way that encourages enterprise formalisation and is part of the overall formalisation strategy.

Box 4.3. Degree apprenticeships as a way to provide skills sought by employers

In India, the skills of adult workers can be improved through degree apprenticeships offered at Skills Universities. The innovative approach of Skills Universities consists of several elements. First, Skills Universities are fully oriented towards employers who design curricula and offer real-world practical training in the industrial and services sector. Employers are involved in the skills assessment and pre-screening of candidates for training. Applicants to the university, in turn, are self-selecting into a future job with the employer. As a result, employers can achieve a faster hiring time, and enjoy lower attrition and higher productivity, while applicants are guaranteed access to a formal job upon completion of training. Second, in contrast to the state-financed TVET programmes, up to 96% of Skills Universities fees are covered by employers and 4% are paid by students, thus ensuring that enterprises see this cost as an investment while also alleviating the financial burden for students. Finally, Skills Universities are established under public-private partnerships with regional governments, thus alleviating the burden on employers in terms of providing training space and staff, and creating quality guarantees for skills acquisition.

However, the caveat is that no student can learn in 3 months what they would normally have learned in 3 years, let alone in 12 years of proper schooling. As a result, the success of Skills Universities can only build on successful universal secondary schooling. Another caveat is that labour laws and taxes should also create enabling environments and incentives for “employed learning” – both for employers and for workers. For this, it is important to involve employers’ associations in the development of such environments and skills qualification frameworks, defining occupation standards, specifying definitions of occupations, and organising the recognition of prior learning.

Yet another caveat is that Skills Universities are mainly aimed at achieving collaboration between public sector entities and formal enterprises. There is still a need for dedicated strategies to reach out to informal SMEs and informal workers specifically. For this, well-targeted vouchers, grants and stipends may incentivise training by reducing training costs for employers, such as training fees, transportation and accommodation fees. Such incentives can be fully or partially funded by governments.

Source: (Singh, 2020^[43]), “Emergence of Skill Universities in India” in *Emerging Issues in Business Management* as well as discussions at the OECD Expert Meeting on Informality and Skills, fall 2021.

The COVID-19 crisis has seriously disrupted the skilling, upskilling and reskilling of employees, apprentices and interns in all types of enterprises and organisations around the world (ILO, World Bank and UNESCO, 2021^[8]). Many enterprises have permanently closed their operations. As a result, public support, including through publicly provided skills development programmes, will be particularly important.

Make public programmes more inclusive for informal workers and their needs

If formal and informal workers receive unequal amounts of training through publicly provided programmes, often it is because many skills development programmes target formal workers (even if only implicitly) by requiring people to have prior formal experience or credentials. Relatedly, public funding for such programmes may only be available for formal workers. Another reason is differences in training uptake: many informal workers do not undertake training even when it is available, either because the solutions are not tailored to their needs, or because the opportunity costs are too high, or because they are not aware of such opportunities. Most informal workers cannot forego a day’s income, and cannot afford the costs of training and foregone income. The opportunity cost of training versus working plays a role. Urban and gender bias of existing offers exacerbate inequalities between formal and informal workers.

In this regard, there is a need to design more inclusive training and skills programmes in order to facilitate access to training, improve information about available training, and improve financial and non-financial incentives for participation. However, public training opportunities specifically for informal workers are among the most difficult to design. Such workers are often the hardest to reach, and are also the most heterogeneous. They include adults who dropped out of school or left the labour force very early, and who lack foundational skills; for these workers, training opportunities would include a package that provides for such skills. This group also includes workers with outdated advanced technical skills who are seeking skills upgrading and more specialisation, and informal workers with skills that are not in demand for formal jobs. Such workers would require conceptually different training, possibly oriented towards the needs of the formal sector.

Effective design and financing of training for these two groups is best realised through training funds and vouchers specifically targeted at informal workers with specific needs, and which can be accessible through non-governmental organisations (NGOs), co-operatives or various associations, including informal workers' associations (Ryan, 2023^[13]).

It is also important to target not only individuals but specific sectors and occupations where informal employment is widespread and workers are disadvantaged in terms of training (e.g. certain essential workers, waste pickers and agricultural workers). Last but not least, these programmes should be made available where informal workers are located, i.e. predominantly in rural areas and small towns. This would be important in order to enable workers, especially young workers and women, to economise on transportation and accommodation costs, and to boost their participation, especially when secure travel remains challenging (OECD, 2023^[39]).

A systemic challenge for public training systems has to do with their governance, affected by weak representation and organisation of informal workers and employers (OECD/ILO, 2019^[44]). Formal governance arrangements (such as training councils, and employers' and workers' organisations) have been created for and are dominated by the formal economy and do not reach the majority of the world's workers, many of whom work in the rural and informal economy. For this reason, it is necessary to engage various actors – workers' and employers' associations, local community actors, and local learning systems – in creating solutions that are most suited to informal workers' needs. Public-private partnerships can also reduce pressure on public funds and increase the relevance of skills. The fact that there is no area of education in which non-state actors are not involved requires the participation of all stakeholders in the design, objective setting and implementation of policies to ensure policy coherence and shared benefits.

Recognise prior learning of informal workers

Many informal workers acquire skills in the informal economy itself. Informal sources of knowledge and skills acquisition, such as family, the workplace, informal apprenticeships, the community, co-operatives or learning by doing are commonly observed in the informal economy. Informal apprenticeships constitute a major source of training, especially for school dropouts and low-skilled young people. Yet, many of the skills obtained through these other ways of learning are not properly understood, and neither are they officially recognised. This impedes informal workers' access to other formal training opportunities, as well as formal jobs.

Recognition of prior learning (RPL) is a significant part of the skills development process of informal workers. It helps to identify skills and knowledge acquired outside of formal education systems; it can provide informal workers with incentives to invest in skills; it offers pathways to further education and training; and it facilitates access to formal employment opportunities (Palmer, 2020^[45]).

In many developing and emerging economies, skills recognition programmes remain undeveloped. In Morocco, for example, the legal texts enacting the development of such programmes have been in the

production stage since 2007 but had not been adopted at the time of writing this report. In their current draft form, they cover only a limited number of sectors (OECD, 2023^[39]; Chatagnon, 2023^[46]).

In light of this, governments should develop systems that offer certification of both formal and informal skills acquired through prior experience and learning, on a competency basis. The current value of skills should be readily recognised by employers, and their potential value should be appreciated by all workers, including informal workers. This should encompass not only technical skills but also core business skills for own-account workers, including negotiation, communication and digital skills.

For informal workers, there is often an opportunity cost in getting their skills recognised. In some instances, they may be fearful of having their skills assessed because it may damage their reputation. It is important to effectively communicate the benefits of skills assessment, which may be linked to securing better access to formal jobs, obtaining further access to public markets, receiving a licence to perform a specific activity, receiving a subsidy for undergoing further training, or acquiring a certificate with a recognised value in the market.

It is also important to involve informal workers' associations in the development of joint assessments and certifications with employers' associations, unions, public agencies and associations, including those representing informal workers. Governments can either directly finance the related costs, such as assessment fees and certificates, or they can provide funds to other actors.

In some instances, training and skills recognition should not only focus on individuals but also on sectors of activity and contexts in which the activity takes place. For example, in the case of waste pickers, their skills and knowledge may be quite different if they work for a community as opposed to a private enterprise. Sector- and community-centred skills recognition of informal workers is more likely to pave the way for formalisation, because the meaning of formalisation can be constructed together with informal workers during the process of skills recognition.

Anticipate change in skills demand, and prepare the workforce accordingly

As this chapter has shown, one reason why employers cannot fill formal jobs is that demand for skills is changing very rapidly in line with a wide range of factors, such as structural transformation; technological changes, including digital transformation; the need to adapt to climate change; and the sophistication, diversification and disruption of global and regional value chains. Together, these are resulting in changes in consumer demand and in enterprise organisation and practices. While these factors will cause some current jobs to disappear, they will also stimulate the emergence of new jobs and tasks, or trigger the modification of existing work tasks within traditional jobs (OECD, 2016^[18]; OECD, 2017^[20]). Yet, many future and current workers, especially those in the informal sector, are not aware of these changes and the possibilities they offer. Where such workers are aware, they may not have either the relevant skills or the opportunities to upgrade their skills.

Here, the role of government is twofold. On the one hand, it needs to anticipate skills demand and skills requirements (skill change); on the other hand, it also needs to provide better information and career guidance to workers, regardless of their formal or informal status. Efficient skills anticipation, especially with a view to improving skills matching of informal workers, is possible when governments join forces with social partners (OECD, 2019^[47]; OECD, 2019^[48]) and also with informal workers' associations.

Strengthen opportunities for more creative learning

Because informal workers upgrade their skills through forms of learning that are different from how formal workers upgrade their skills, governments, social partners and informal workers' associations should also work towards better supporting other learning opportunities.

For example, informal training may be available through farmers' associations or co-operatives. To improve the quality and relevance of informal training, governments should engage with informal providers and help

them find opportunities to develop their capacity (including pedagogical skills), support them financially to acquire modern equipment, and promote community involvement in order to reduce the administrative and organisational burden of delivering training (OECD, 2018^[49]).

The COVID-19 crisis had a double effect on various learning opportunities. On the one hand, the decline in economic activity and a reduction in post-employment training was associated with a decline in skills acquisition. On the other hand, lockdowns also “liberated” the time for learning, especially for distance and digital learning, albeit in a very uneven way.

For governments, it is necessary to create enabling environments for dynamic, active learning over the life cycle (ILO, 2018^[50]). Together with social partners and wider community engagement they can help to reach out to more disadvantaged groups, such as informal workers, through dedicated lifelong learning centres (a practice that has proved successful in Iceland), comprehensive one-stop shops for guidance on lifelong learning (as in Portugal), family skills training programmes, community-based approaches (as in Argentina (OECD, 2019^[11])), and municipal digital hubs and libraries that enable access to digital technologies in areas with poor connectivity. Providing a legislative framework for paid educational and training leave, as well as financial support for various forms of training, is equally important. These efforts should be complemented by measures that would increase the take-up rate of “second chances” programmes, including among those who missed out on opportunities during the COVID-19 pandemic.

Notes

¹ These workers would have extremely low levels of skills. According to (OECD, 2019^[10]), adults with low skills are those “whose highest qualification is at lower secondary level (ISCED 0-2), which means they have not completed high-school or equivalent; and adults with low cognitive skill levels, namely those who score at proficiency level 1 or below in the literacy and/or numeracy dimension of the OECD Programme for the International Assessment of Adult Competencies (PIAAC). These are adults who can at most complete very simple reading tasks, such as read brief texts on familiar topics, and mathematical tasks, such as one-step or simple processes involving counting, sorting, basic arithmetic operations and understanding simple percentages”.

² Evidence for Peru, based on the PIAAC survey. Informal status is proxied by the absence of a written work contract for an employee.

³ The survey was not representative.

⁴ Some of this result is obtained by construction: adults with low levels of education are more likely to be undereducated, compared with adults with higher education.

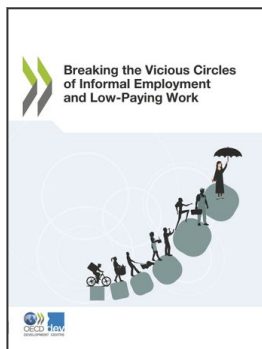
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