

Barriers to skills development in India's informal economy

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Abstract:

India's informal economy accounts for more than half the country's GDP but is characterised by low levels of skills, and considerable barriers to skills development for workers. The Government of India has implemented ambitious policy initiatives for upskilling, designed to catalyse 'formalisation' of the economy, and improve productivity. However, evidence on skills development remains weak. Drawing on systematic review methodologies, this article reviews and synthesises the literature on the practical barriers to upskilling. It finds that access to, and quality of, training (especially for women) are serious limitations, while skills are often under-utilised in the absence of supportive labour market and wider business environment conditions. Training is often insufficiently linked to labour market and learner needs, and the capacity of the training system is limited. Government should increase investment in training for the informal sector, and consider strengthening incentives for training providers to focus on improving training quality and relevance.

1. Introduction

This article reviews the empirical literature on the barriers to 'upskilling' in India's informal economy. The informal economy is of fundamental importance to India's economy as a whole; accounting for the livelihoods of 93% of the workforce, some 420 million people. It generates 60% of India's GDP and is growing at twice the rate of the formal sector (World Bank, 2008; Government of India, 2015). Yet, India starts from a low base in seeking to upskill its informal sector. As its own National Commission for Enterprises in the Unorganised Sector (NCEUS, 2008) highlights, India has 'an abysmally low level of formal skill availability by even developing country standards'.

Since the late 2000s, India has embarked on an ambitious programme of reforms to its vocational education and training (VET) system, aiming to upskill 500 million people. It published its first National Skills Development Strategy in 2009, and a revised National Policy for Skill Development and Entrepreneurship in 2015. The Indian context is highly diverse, so attention here focuses on national-level policy and evidence rather than on state-level initiatives. Geographical variation is however acknowledged in the literature reviewed. UNDP (2015) acknowledges significant variation in the barriers to accessing training across geographies, while the major evaluation conducted by the World Bank (2015) identifies that the same programme, implemented in different states, led to different results. It is not clear whether this is due to differences in programme implementation or differences in the geographical

context. Inter-state heterogeneity therefore remains an important area for further research.

India's recent efforts to increase levels of skill development in the informal sector are of wider international interest and significance. As the *2019 World Development Report* on the changing nature of work highlights, the advance of digital technology will bring significant opportunities and challenges to persistent informal economies in the global South (World Bank, 2018). While skills development for the informal sector has been a focus for research and analysis internationally since the 1980s (e.g. McLaughlin (1989), McGrath and King (1995), ILO (2000), Liimatainen (2002), Adams et al (2013)), in many countries this has rarely translated into concrete action or policy. Analysis by Engel (2012) found that 'very few [governments] had detailed policies' to address skills development of workers in the informal sector. India, which has the largest informal economy in the world, is a notable exception – one of only a handful of low and middle-income nations whose skills development strategy makes explicit reference to the informal sector (UNESCO, 2012).

However, the evidence base which is being used to guide policy and programme design is limited. Many empirical studies in this area are programme-specific (i.e. evaluations of single initiatives), and there is surprisingly little cross-cutting literature or evidence syntheses.

The contribution this article makes to VET knowledge is through presenting the first meta-analysis (produced using systematic review methods) of the published empirical literature on barriers to informal sector upskilling in the Indian context. The study identifies and conceptualises the key barriers to upskilling workers, and identifies four challenges which have implications for policy and practice. Whilst much of the existing non-empirical literature on barriers to skills development in the informal sector focusses on the meta-aspects of the challenge faced – for example, the heterogeneity of the sector or the scale of numbers involved - this synthesis identifies numerous much more practical dimensions of the challenge. The four key challenges identified are:

- (1) Improving access to training;
- (2) Improving skill acquisition (improving the quality of training);
- (3) Improving skill utilisation;
- (4) Improving system capacity;

Section 2 below discusses the characteristics of the informal economy in the Indian context and provides an overview of selected previous reviews. Section 3 examines recent skills development reforms in India and identifies (i) 'formalisation of the economy'; and (ii) 'efforts to increase productivity' as the two major themes which are central to understanding the intended mechanisms, and theory of change, underlying the reforms. Section 4 presents the review methodology. Section 5 reports the substantive results of the review of barriers and challenges to upskilling. Finally, Section 6 discusses the limitations of the study and sets out an agenda for future research.

2. The informal sector in India

King (2007) argues that from a firm-level perspective the abundance of the informal sector in India can be explained, to some extent, by India's regulatory environment,

with enterprises operating in the informal sector to avoid regulatory requirements that are perceived to be excessive. Chandra (2007) identifies four principal types of informal sector workers – whose skills needs, incomes and living conditions vary enormously. ‘Entrepreneurs’ are the owners of micro-enterprises; meanwhile ‘establishment workers’ work for an informal enterprise, as an employee, an apprentice, or as an unpaid family member supporting the household. ‘Footloose workers’ are self-employed workers without a fixed location of work, with the most numerous among this group being street vendors. Finally, ‘home-based workers’ are predominantly female, and are either workers on their ‘own account’, producing goods to sell at market, or are paid a piece rate to manufacture items for sale by another party (Vanek et al, 2012).

Within the sector, there are high levels of poverty and precariousness. Indeed, the incidence of poverty is higher among informal sector workers than among the unemployed (Chandra 2007). Many workers have precarious and fragile sources of income, particularly self-employed or ‘own account’ workers, who often do not have adequate access to forms of social protection (Chen, 2012; World Bank, 2018). Precariousness is often compounded by relatively low barriers to entry into some forms of self-employment. This which can lead to intense competition between workers in the sector (and consequently low profit margins) with localities experiencing saturation of similar businesses without meaningful differentiation. From a worker-level perspective, a livelihood is typically sought in the informal sector in the absence of better options. The World Bank (2006) argues that most workers in the informal sector would prefer more stable employment in the organised sector. However, the sector is also extremely heterogeneous and there are also some ‘very profitable economic ventures’ (ILO, 2000:2). In some niche areas of the informal economy, as in other emerging economies (see Ng’weno and Porteous (2018) on Africa), technological change is driving a growing ‘gig economy’. This is creating opportunity but often this is in the form of ‘vulnerable’ forms of self-employment, with somewhat unclear overall effects (Dabhadkar, 2018).

Productivity levels in the sector as a whole are typically low. In the absence of resources for capital investment, enterprises often rely on more traditional labour-intensive means of production and outdated technology (Chandra, 2007). Conversely, the literature also highlights the relative versatility and multi-skilling of workers in the sector. NCEUS (2008:8) highlights that non-specialisation and diversification of workers is used as a strategy for survival, while Woetzel et al (2017:9) note that ‘a significant portion of the informal workforce is employed in more than one sector through the year.’

Chandra (2007:39) characterises those working in the informal sector as having a “generally poor educational level”, with many not having participated in formal education. Indeed, across the entire Indian workforce, participation in vocational education and training remains rare. Analysis of 2011 data by NITI Ayaog indicates that 75.8 percent of the workforce had not received any training, whilst only 56 percent had completed primary education (Sanghi and Srija, 2014:41). Substantially fewer women possess primary level literacy skills than men. The latest available survey data finds that 5.4 percent of the population aged 15+ have participated in VET (with 3.4 percent participating in informal training, and 2.0 percent in formal training) (Government of India, 2016:14). The run-up to the publication of the 2009 National

Skills Development Policy saw the publication of three policy commentaries related to skilling for the informal sector. These studies make important contributions to the literature but predate the current reform agenda. Chandra & Khanijo's (2007) collection of seminar papers, 'Training for Informal Economy', provides an insightful account of the experience of key actors working on skills development in the sector. A World Bank (2008) report commissioned by the government, to inform the development of policy proposals provided an analysis of the strengths and weaknesses of India's skills development system, including the informal sector, and options for reform. Several recommendations for reform are also made by the National Commission for Enterprises in the Unorganised Sector [NCEUS] (2008), in a report focussed solely on skill formation in the sector. While informing the development of policy at the time, these studies made only limited reference to the empirical literature and did not use systematic review methodologies. There was, therefore, a need for a systematic review of the evidence on barriers and challenges to upskilling the informal sector in India.

3. Recent reforms in the Indian skills system

3.1 The 2009 reforms

The government published its first National Policy on Skills Development in 2009, with an entire chapter dedicated to the informal sector (Government of India, 2009). Notably, skills for the informal sector are much more prominent in the 2009 policy than in its successor. The content of the policy is largely high-level and strategic, with little detail on plans for implementation. The policy led to the creation of a National Skills and Qualifications Framework and to a new governance structure for skills in India with several new institutions being created to lead skilling efforts. The National Policy commits the government *inter alia* to:

- Explore a 'separate institutional mechanism' which will 'plan, implement and monitor the skill development efforts for the unorganised sector'
- 'Suitably address' barriers to engagement in training, including lack of existing qualifications, opportunity cost / lost wages, language, transport to training
- 'Encourage' organisations to provide skill development programmes
- Upgrade informal apprenticeship through the development of new skill development programmes
- Develop standards and certification systems to enable recognition of prior learning.
- Focus on entrepreneurship skills.

The reforms, particularly the government's embrace of public-private partnerships to build capacity in the system, are described by the British Council (2016:5) as being a 'paradigm shift' away from previous approaches. However, several organisations and individuals have critiqued the ambition and scale of the reforms. Venkatram (2012) argues that the initiatives in place by 2012 were only catering to a 'small number' of the workforce in the informal sector, a criticism echoed by business organisations EY and FICCI (2013). Mehrotra (2014) has described the capacity of the system as 'woefully inadequate' and argued that India should have been skilling up four times as many people as it was. The OECD and ILO (2011) meanwhile found that participation by the unorganised sector in the design of the reforms had been 'limited' and highlighted a lack of trainers and a lack of government coordination. Ghosh (2016:28)

concludes the 2009 reforms have led to ‘a proliferation of poorly coordinated training schemes and...all sorts of duplication and working at cross purposes.’ Singh (2012:198) meanwhile critiqued the extent to which policy-making processes relied on policy borrowing from approaches used in other countries rather than taking a path designed specifically for the Indian context.

3.2 The 2015 reforms

Following the change in government following the 2014 General Election, a further set of reforms began in July 2015, with the launch of the National Policy for Skills Development and Entrepreneurship [henceforth NPSDE] (Government of India, 2015). The new policy was closely linked to the ‘Make in India’ initiative, with both initiatives focussed on the same 25 key priority sectors of the Indian economy where the government intended to build its competitive advantage in manufacturing.

The NPSDE argues that a major challenge in the informal sector is that it is difficult to ‘map existing skills...and gauge the skilling requirement’, making it challenging to design successful skills interventions. It provides a long list of policies designed to tackle problems in India’s skilling landscape, though proposes Recognition of Prior Learning (RPL) as its ‘key instrument’. Certification of skills through RPL allows the government to improve its understanding of current levels of skilling within the sector. It also makes it easier for workers to transition to jobs within the formal sector by signalling to prospective employers the skills which a worker already possesses. Crucially, the RPL process (which includes ‘pre-assessment, skill gap training and final assessment’) is intended to improve workers’ human capital, allowing them to build and reorient their skills, rather than merely accrediting existing skills. The NPSDE also proposes the creation of a Labour Market Information System (LMIS) which would offer an aggregated view of skill availability (supply) within a locality, and enable workers to become more accessible to formal sector employers looking for skilled labour.

A further focus of the policy is on fostering an effective environment for entrepreneurship. In the informal sector, this includes a commitment to explore the feasibility of a ‘National Fund for the Unorganised Sector’ to support entrepreneurship. There is also a focus on workforce, with measures set out to increase the number of appropriately qualified trainers. Finally, the policy looks to create incentives to train. This includes promoting the use of labour with certified skills, through incentivising suppliers to the government to either solely use certified labour or pay a premium to workers with certified skills. The ILO’s Ghosh (2016) however dismisses the reforms as being ‘effectively... more of the same’.

3.3 Theory of change for the reforms

Two overarching mechanisms for change can be identified in the policy reforms considered above. These are central to the underlying ‘theory of change’ which is sometimes explicit and often implicit in the policy documents and debates. The first is the *formalisation* of the informal economy. It is clear from the strategy that the Indian government sees formalisation, making it easier for workers to transition from the informal sector into roles in the formal sector, as one of the key policy outcomes of their interventions in this space. This also reflects the orthodoxy promoted by international institutions, including the World Bank (2006:27) and the ILO (2013). A

second identifiable mechanism concerns *improving the productivity* of the informal sector through upskilling the population. This is a straightforward application of human capital theory which considers increased earnings in the informal sector to be the main 'return' to the development of skills and capacities. Moreover, it reflects concerns around low skill levels being a limiter on productivity identified in much of the secondary literature (Chandra 2007, NCEUS 2008).

4. Study methodology

This study rigorously reviews the empirical literature on barriers to upskilling in India's informal sector, drawing on the principles of 'systematic review' methodology. The evidence-base in this field is not suited to *quantitative* systematic review approaches and indeed the evidence is too sparse for a conclusive synthesis of study findings. The intention is instead to systematically identify studies (and the evidence they report); to undertake appropriate quality appraisal, and to generate new insights through organising and 'configuring' (see Gough et al 2006) the evidence available. The evidence base in this area is highly heterogeneous and eclectic, with identified studies including ethnography, surveys, case studies, and programme evaluations. It also ranges across several disciplines including education, economics and social policy. This study, therefore, adopts a broad definition of 'data' and 'evidence', given the scarcity and heterogeneity of relevant existing research. We focus on empirical studies only, excluding conceptual studies and those which do not draw on 'new evidence' such as literature reviews. A critical approach to study findings, interpretations and conclusions is taken to satisfy the authors that as far as possible, these inferences were justified by the evidence and argumentation presented in each study.

To capture the breadth of this potential evidence base, searches were conducted of 7 major academic databases, two major libraries, and the websites of 14 key research organisations. Forward and backward snowball searching was used on studies selected for inclusion. An initial search returned 727 results. The title and abstract of each identified study were screened based on relevance, geography and date to create a longlist of 72 studies. The full texts of these longlisted studies were screened against the inclusion criteria detailed below. Of these, 12 studies which were deemed to have fulfilled the inclusion criteria and were taken forward for analysis. Snowballing identified a further 10 documents for full-text review, of which one was selected for inclusion. Details of the databases and other locations searched, and the search strings used are detailed in the appendix. Search, selection, synthesis and reporting were carried out between September and December 2017.

The synthesised studies were selected on the following criteria:

- *Relevance*: (clearly relevant to the research question);
- *Date*: (published since 2002);
- *Geography*: (focussed on India);
- *Language*: (available in English);
- *Empirical methods*: (based on primary research)
- *Urban focus*: (studies focused solely on the rural informal sector were excluded).

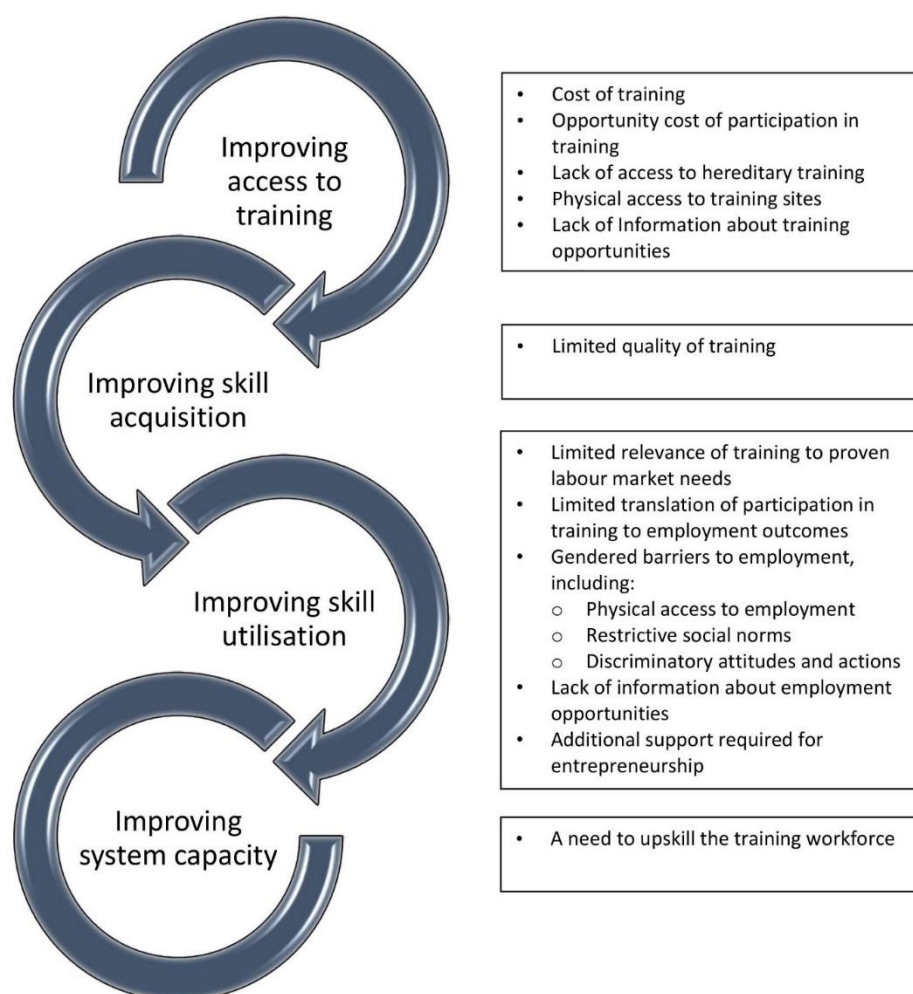
A quality appraisal of the selected studies, based on the framework set out in Dixon Woods et al (2006) and detailed in the appendix, examined how much reliance could be placed on the results of each study. No studies were judged to be such poor quality as to require exclusion from the synthesis completely. Three studies were however judged to be of limited quality (Krishna (2005), Mossige (2005), and Swami Vivekananda (2011)). These studies were qualified primarily because of limitations in their reporting of the methods used, which restricted our ability to fully judge the quality of the study. The details, findings and limitations of each study were individually extracted before being used to populate the synthesis framework. Following the analysis phase, a sensitivity analysis was also conducted to test the evidence base for each finding. None of the findings of the review relies wholly on the three limited quality studies.

Three key research design decisions shaped the scope of this study. Firstly, we chose to adopt a broad and inclusive definition of vocational education and training (VET), considering provision delivered through both formal and informal mechanisms. Whilst historically, VET has often been used principally to refer to provision delivered through formal institutions such as schools and colleges, McGrath (2012) for example has conceptualised it as including “the myriad forms of learning that are primarily aimed at supporting participation in the worlds-of-work, whether in terms of (re)integration into work or increased effectiveness.” Secondly, given the huge number of workers beyond the school leaving age and already in India’s labour market, we chose to focus this study primarily on the skilling of adults. We do not, therefore, consider initial VET provision delivered through the school system, to the next generation of India’s population. Finally, we limited the study to urban contexts, recognising that informal labour markets in rural areas have distinct drivers and characteristics.

5. Findings

Four types of barrier/challenge to the successful skill development of India’s informal sector were identified in the literature. These are summarised in Figure 1 below.

Figure 1: Four challenges for improving skills development in India's informal sector



5.1 First Challenge: improving access to training

Several barriers to accessing training were identified. Firstly, between 49.7% and 75.3% of women and girls surveyed by UNDP (2015) across four urban areas in India perceived the cost of training to be a barrier to participation. It is unclear whether the barrier is an inability to pay – which could be tackled through credit-based solutions – or unwillingness to pay, likely linked to the uncertain returns associated with participation in training.

Secondly, opportunity cost is identified as a barrier, exacerbated by the precarious financial situations of many potential beneficiaries of training initiatives. As Baruah (2010) notes, ‘most women cannot afford to take the time out from their current income-generating activities to learn new skills— however lucrative they may be in the long run.’ Similarly, Noronha and Endow (2011) highlight that informal apprenticeships tend to require trainees to work for long periods, of up to several years, whilst earning very little. This requires apprentices to be supported financially by others and is clearly an obstacle to those from the most disadvantaged households from gaining skills through this route.

Thirdly, in some occupational areas, informal training is restricted to those with familial, caste or social connections to existing practitioners, with training only being given to members of a particular family or community. Mitra (2002) characterises this as a system of 'hereditary training', a subset of informal training which requires both aptitude and 'connections'. In some cases, restricting access in this way may aim to preserve competitive advantage for a particular group: Pilz et al (2015) characterise it as 'hidden knowledge' that workers are trying to protect as a source of competitive advantage. In other cases, this may be related to social structures, and in particular, India's caste system (Nornona and Endow, 2011:115). Restricting access to informal training in this way makes it difficult for workers outside such communities to learn these skills.

The final two barriers identified are both drawn from the UNDP's (2015) survey of women and girls. Lack of information on training opportunities is perceived to be a barrier to participation by between 50 and 75 percent of respondents, while physical access to training, i.e. training taking place in a location inaccessible to women for personal safety or other reasons, was cited by between 52 and 72 percent of interviewees. This highlights a need for training to take place within local communities wherever possible, and for the design of interventions to use a strong gender lens, to reduce the additional barriers faced by women and girls.

Tackling the barriers to accessing training is essential if skill development reforms are to have the intended impact on workers' productivity or prospects for employment in the formal sector. While some of the interventions aim to increase the supply of training, this in itself will not necessarily reduce barriers to training. More training may be available, and yet still be inaccessible to potential beneficiaries.

5.2 Second Challenge: Improving skill acquisition (improving the quality of training)

The poor or variable quality of available training is another barrier to effective skills development, with critiques offered within the synthesised studies of both formal and informal training opportunities. UNDP's (2015:25) survey of women and girls found that a substantial number of respondents - ranging from 29.9% in Hyderabad to 51.0% in Bangalore – perceived finding high-quality training to be a challenge. These perceptions were grounded in feedback from peers in the community, or in their own previous experience, with some reporting that they had previously not found training beneficial. Poor quality training may, in fact, be even more prevalent: the study reports that those who did not perceive quality as a barrier often had the view 'that it is for the trainee to make the most of the opportunity'.

The World Bank (2015) also raises several quality concerns in its evaluation of major Indian government training programmes – in particular, expressing concern around training providers using 'franchising' to sub-contract provision in order to hit targets. Bharti's (2014) evaluation of a small-scale training programme meanwhile reports that less than half of participants thought the training provided was sufficient for success– and all trainees surveyed believed the curriculum required updating.

Quality is also a concern for informal training. Observational studies conducted by Barber (2004:135-6) and Pilz et al (2015) both comment on the breadth of skills

imparted. Barber observes that the informal training imparted to mechanics in a Darjeeling garage is overly narrow; lacking the theoretical basis required for workers to reflect on and improve their practice. Consequently, mechanics are observed struggling with solving new problems and novel situations— leading to repairs which were ‘ineffective and inefficient’ as well as unsafe for both mechanics and customers. The broader implication of the critique is that informal skills development is often focussed on the skills required in the immediate here and now, rather than the transferability of skills and broader problem-solving. Pilz et al (2015:205) draw a similar conclusion, identifying a ‘weak theoretical basis’ in informal training for street food vendors, though conclude, like Barber, that the workers they are observing do have high levels of skill and well-developed practice.

Poor quality training poses a challenge for both the ‘formalisation’ and ‘productivity’ mechanisms of change. Poor quality training means that human capital is boosted by less than it would be otherwise, making workers less attractive to employers (particularly if prospective employers are aware of the limitations of training) and less likely to be retained in formal sector employment. However, the implications of these observations for the productivity theory of change require more careful unpicking. Barber observes that the mechanics perceived to be ‘the best’ were those who quickly undertake common repairs – earning more money for the garage than the others. In the short-term, therefore, development of critical appraisal skills and reflective practice may not lead to a boost in individual productivity, save in cases where novel situations arise. In the medium term, however, as India’s economy evolves, there will likely be a greater variety of vehicles brought into garages for repair than there is currently – which may boost the attractiveness of such transferable skills, and consequently the income premium associated with them.

5.3 Third Challenge: Improving skill utilisation

The acquisition of skills by an informal sector worker is insufficient to realise the individual-level benefits envisaged in the National Policy. The benefits are only realised when as a result of the skills training undertaken, a worker can either (a) deploy the skills learned in their everyday practice – thereby improving their productivity and output and consequently increasing their income and financial security; or alternatively (b) use the skills learned to obtain a job in the (generally higher paid) formal sector. Skills acquisition is not enough – skills utilisation is required. This clearly depends on the demand for skills as well as supply.

5.3.1 Relevance of provision

Four of the studies in the synthesis found substantial evidence to suggest that skills-training provision was insufficiently responsive to proven labour market needs. An evaluation of four of the largest skilling schemes in India – carried out by the World Bank (2015:6), and accounting for US\$500million of public expenditure – found that three of the four schemes assessed had paid ‘insufficient attention’ to labour market demand during the procurement of provision. This led the training to be concentrated in a smaller number of fields than the labour market required, with trainees complaining that choice of courses was limited and that some of the skills being offered were not those in demand by local businesses. Similarly, UNDP (2015:19) observe that NGO-provided training in the localities studied was ‘restricted to computer

operator training, beautician training and tailoring’, unrepresentative of both the aspirations of the local population and the needs of local businesses. Mitra (2002) meanwhile characterises two of the five skills interventions he profiles as being supply-side driven, developed without sufficiently gauging the local labour market: graduates of these programmes struggled to find employment, and in some cases, had been taught skills that are already obsolete (and therefore unproductive). A related challenge can also be found in informal training, where an abundance of accessible informal training in three of the four trades studied had led to an oversupply of trained labour, reducing labour market returns (Noronha and Endow, 2011).

Training which is poorly aligned to the needs of the labour market or the needs of the workforce poses a challenge for both the ‘formalisation’ and ‘productivity’ mechanisms of change. If workers are not being equipped with the skills and capabilities required by formal sector employers, they are less likely to be hired. Similarly, the provision of less relevant training is unlikely to enable workers to improve their practice and become more productive.

5.3.2 Translation of training into employment

Effective skilling does not always lead to improved outcomes. Several studies in the synthesised literature highlight that participation in training may not lead to formal sector employment – or indeed any sort of employment. UNDP’s (2015:1) study highlights that 42.7% of the women and girls in its survey who had already undergone skills training were not in employment. Outcomes from the World Bank’s evaluation of major government-funded skills interventions, extracted below, were even lower – with reported levels of employment or self-employment one to two years after the conclusion of training ranging from 23 to 32 percent.

Table 1: Employment rates from major skill training initiatives

Programme	working 1-2 years After training	of which waged employment	of which self- employment
NSDC	32%	22%	10%
SDIS	26%	18%	8%
STEP-UP	29%	13%	16%
ASDP	25%	10%	15%
RSETI	23%	8%	15%

Source: World Bank (2015:15)

The ILO’s evaluation of the Decent Employment for Women in India Project (Mossige et al, 2005:16) reports higher levels of success – finding that 70% of participants were involved in an income-generating activity six months after completing the training. Of these, the majority were self-employed. However, the data within that study must be qualified, as, in the absence of baseline figures, it is difficult to judge how much of this is attributable to the training undertaken.

5.3.3 Additional gendered barriers to translating training to employment

Three additional gendered factors were also identified which exacerbated the challenges faced in transitioning from training to employment for women and girls. Firstly, physical access to employment opportunities is found to be a constraint.

Geographic immobility restricts female employment, with many women and girls unable to travel long distances to reach employment (Mitra, 2005). Many women have well-founded safety and security concerns that dissuade them from using public transport in Indian cities (UNDP, 2015). Between 45% and 60% of women in UNDP's (2015) survey believe physical access to employment in their desired field constitutes a barrier. This problem is compounded by '*inter-spatial variations in terms of availability of jobs within the city itself*' (Mitra, 2005:292) – a tendency in Indian cities for industries to be clustered together, meaning certain industries can be completely inaccessible for women living in a particular part of a big city. Through reducing employment options and choice, women end up training only for the jobs available in their locality, contributing to an excess supply that hurts employment prospects, and also depresses wage levels by limiting productivity and skills utilisation (and in turn potentially the demand for skills training). Moreover, where significant barriers linked to physical access or discrimination are present, it is unclear that formalisation of skills training could be expected to improve prospects for women in the informal sector.

Secondly, social norms also impact on the employment options available to women – with many of those surveyed by UNDP (2015:34-35) reporting that they look only for paid work located near the home, so that they can undertake the domestic and familial tasks which continue to fall predominantly upon women. Interestingly, UNDP identifies some geographic variation in these norms, with women in Mumbai being significantly less likely to report social norms (13 percent compared to 50-65 percent), or their domestic chores and responsibilities (30 percent compared to nearly 50 percent) as being a barrier to employment than in those in other major urban centres.

Thirdly, women require access to better information about employment opportunities. Mitra (2005) argues that women in the informal sector principally find work through informal contacts: 'networks on the basis of caste, friendship and residence'. This again restricts access to employment opportunities. Supporting evidence is provided by UNDP (2015:22), with between 55% and 80% of interviewees reporting lack of information on employment opportunities as a barrier. Future research might usefully assess whether the growth of 'gig economy' employment platforms in India, which increase the visibility of new, flexible types of work, is helping to overcome this particular challenge and unleash greater productivity.

Finally, several studies highlight discriminatory attitudes and actions. Baruah (2011) highlights discrimination in hiring practices. She reports on the Self-Employed Women's Association's observation that many of the building companies it works with 'repeatedly demanded male workers' and that it had only been able to place female workers as apprentices due to significant labour shortages in the construction industry. Similarly, formal sector employers surveyed by UNDP (2015:20) across several industries reported deliberately not hiring women for certain types of position. This again has the effect of funnelling women and girls seeking employment into a narrower set of roles, reducing productivity and increasing the supply of labour in these roles, with negative effects on employment prospects and wage levels.

5.3.4 Entrepreneurship

The Indian government envisages that some improvement to national productivity could be achieved through the promotion of entrepreneurship. Indeed, this is reflected

in the very title of the government's 2015 skills strategy - the National Policy for Skill Development *and Entrepreneurship*. Entrepreneurship is an established and key part of the informal sector, with entrepreneurs constituting one of the categories of workers in Chandra's (2007) typology of the Indian informal sector. However, support for entrepreneurship is raised in just four of the 13 studies synthesised and there is little evidence on the relationship between entrepreneurship and productivity. Provision of skills training alone is unlikely to be sufficient for informal sector workers to build sustainable enterprises. Other enabling infrastructure and support is required. In particular, lack of access to finance and credit is identified in multiple studies as a major barrier to success. Krishna (2005:204) describes formal sources of credit and microcredit as 'inadequate and underdeveloped in the informal sectors', while Bharti (2014) identifies it as being the most significant barrier to the benefits of skills training in micro-enterprise generating a return. Noronha & Endow (2011) also highlight credit as key to the expansion and growth of micro-enterprises. There is again a gendered element to this, with between 60 and 70 percent of the women interviewed by UNDP (2015) believing that they would face difficulties in accessing credit. Evidence from these studies suggests that a strong *prima facie* case exists for a review of what might be done to loosen access to credit via attention to credit constraints for informal sector entrepreneurs.

5.4 Fourth Challenge: improving system capacity

Two limiters on system capacity are identified implicitly in the studies synthesised. Firstly, studies identify a need to develop the training workforce, confirming an insight highlighted by Chandra (2007) that a large number of new trainers or instructors are needed to meet the skilling challenge. The synthesised literature goes further, indicating that upskilling of those in the workforce who deliver informal training is also required. Krishna (2005:210), for example, recommends that programmes focus on the skills of 'master' craftsmen/women in the informal sector, arguing that the enhancement of their skill levels should lead to higher levels of skills being cascaded to other workers in the sector as they train up the next generation of workers. Noronha and Endow (2011) make the case for trainers themselves to be accredited, while the World Bank (2015) argues that recruitment and training of more assessors would likely provide employers and others with greater assurance and confidence in certifications awarded to trainees.

The second dimension concerns the role of NGOs. The synthesised studies are generally positive on the role that NGOs play – but also highlight where NGO activity has failed. The studies indicate that there is also a need to equip NGOs with the information, funding and frameworks necessary for success, above and beyond the mentorship support promised in the National Policy to help NGOs 'scale and create sustainable models for skill development' (Government of India, 2015:27). Krishna (2005) and Pilz et al (2015) both praise NGO partners that they have observed for their flexibility, with Krishna contrasting this favourably with the lack of responsiveness of formal training institutes, who are criticised consistently throughout the synthesised literature and elsewhere for their failure to engage with the informal sector. However, these comments are principally based upon the authors' observations rather than data contained within studies. Other elements of the literature are more critical: the disconnect between NGO training offering and labour market needs has already been

documented above (see section 5.3.1), while Mitra (2002) argues that many NGO initiatives have failed and urges exploration of different models. Clearly, the capacity of the skills system in India will need to be further developed if the productivity improvements and sector formalisation envisaged in the 'Skill India' programme is to be realised at its intended scale.

6. Sensitivity analysis

Table 2 below presents a sensitivity analysis of the studies findings – demonstrating how the studies analysed contribute to the study's findings on barriers to upskilling the informal sector. The main differences arising from the body of evidence synthesised have arisen from different focuses within the research evidence, rather than the presentation of contradictory evidence. This is to be expected, given the scale of the policy challenge being addressed in the study. The analysis demonstrates that the strongest findings (particularly those around quality, relevance, gendered factors, and entrepreneurship) draw upon multiple sources. Whilst the UNDP perceptions survey makes a contribution to most study findings this simply reflects the breadth of its coverage. Removing it, or any other single study, from the synthesis would not materially change the overall findings of this research. Three of the studies in the synthesis are considered to be of limited quality. All of the findings which draw on these studies also draw on other studies considered to be of sufficient quality to be relied upon. None of the findings of the review rely wholly on the studies deemed to be limited quality.

Table 2: Study sensitivity analysis

[Attached in separate document]

7. Discussion and conclusions: implications for research and policy

The contribution this article makes to VET knowledge is through presenting the first meta-analysis (produced using systematic review methods) of the published empirical literature on barriers to informal sector upskilling in the Indian context. The study identifies and conceptualises the key barriers to upskilling workers, and identifies four challenges which have implications for policy and practice. Whilst much of the existing non-empirical literature on barriers to skills development in the informal sector focusses on the meta-aspects of the challenge faced – for example, the heterogeneity of the sector or the scale of numbers involved - this synthesis identifies numerous much more practical dimensions of the challenge.

The study has been limited by the relatively small number of relevant empirical studies found, indicating a clear need for further research in this field. Few of the 727 studies initially identified met the inclusion criteria, despite the criteria being deliberately drawn broadly to avoid unnecessarily narrowing the research being synthesised. More than a decade ago, Kenneth King(2007:3) observed that, in the Indian context, “there has been relatively little analytical work done on training in the informal sector”. It is clear that, despite the intense policy focus on skills development in the intervening years, there remains a dearth of *published* empirical evidence on training for the informal sector in India. Future research efforts may find it fruitful to seek to grow the evidence base available through proactive outreach to government bodies and stakeholder organisations, who may have holdings of relevant unpublished research and programme evaluations. Additionally, whilst this study is focused on skills development for the informal sector in urban contexts, it would be useful for the study to be

replicated for rural labour markets, which have very different drivers and characteristics, as well as constituting a larger segment of India's population.

There are several areas where future empirical research would be particularly useful. Firstly, given the importance of tackling the barriers identified, there is a need for robust evaluation of current and planned initiatives. Evaluation will allow for learning to take place on best practice in this area and will facilitate the targeting of future investment at the interventions showing greatest promise, impact, and scalability. Secondly, there is a need for further research on the factors which impact, positively or negatively, on the translation of skill acquisition into skill utilisation. Finally, in support of improving access to provision, researchers could also usefully seek to identify examples of best practices that support better access for women and other disadvantaged populations.

Turning to policy implications, a dearth of publicly accessible information of the progress of the 2009 and 2015 reform programmes has made it difficult to make conclusive judgements on the efficacy of these reforms. Encouragingly, several of the challenges identified within this study are, to some extent, already being tackled through strands of Skill India. The relevance of provision, a key element of Challenge 3, is being addressed to some extent through the creation of Labour Market Information Systems (LMIS). By providing more intelligence on skills needs in the labour market need, it is expected that providers will find it easier to adapt provision to known needs. The capacity-building element identified in Challenge 4 is being recognised through the 'recruitment of new trainers' and 'NGO capacity building' elements of the Skill India programme.

Nevertheless, several areas for attention and further action can be identified. One immediate next step would be for both central government and state governments to review and rebalance the mix of public investment in skills interventions, with a greater proportion of funds being allocated to training for workers in the informal sector. Indeed, LiveMint, an Indian daily newspaper, reported in 2019 that central government was considering such a refocusing, with 500 billion rupees of funds potentially available (Nanda 2019), although to date this does not seem to have been realised.

A key focus for any future investment must be making training accessible to a greater number of workers. The evidence reviewed under Challenge 1 suggests that more action is required to reduce the barriers to accessing training, particularly for women and girls. Training programmes need to have a strong gender perspective, designed to reduce the additional barriers faced by women and girls and to address barriers linked to social norms.

The evidence reviewed under Challenges 2 and 3 suggests that more focus is required on improving the quality and relevance of training. Whilst developing quality assurance mechanisms is an element of Skill India, this study suggests there is still some way to go in ensuring all training meets a threshold level of quality. The National Skills Development Corporation should, therefore, explore how training providers could be more strongly incentivised to focus on utilisation of the skills imparted in training. This should include at a minimum the systematic collection and publication of data on worker outcomes and destinations, but could also include shifting incentives within the funding available for training. Linking some element of programme funding to participant outcomes rather than completion of training would likely create stronger

incentives for providers to improve the quality and relevance of their offer, though would need to be very carefully designed in order to avoid perverse incentives.

It is also clear that policymakers cannot look at reforms to the skills system in isolation. Consider the issue of workers' demand for, or 'willingness' to engage in training. Pilz et al (2015) find that half of their interviewees were simply not interested in further training, whilst NCEUS (2008:17) note that workers 'often see little need for further skills acquisition'. Kantor's (2006) survey found that only 63.6 percent of men and 51.6 percent of women thought training would be useful for getting work – with 64.4 percent of men and 55.5 percent of women believing that training would help them to earn more. Two potential drivers of these attitudes can be identified. Firstly, awareness of some of the factors identified above, such as the quality, relevance, and cost of provision, means that some potential learners have, justifiably, a negative view of the usefulness of training. Willingness to train would likely be higher if problems highlighted in those areas are addressed.

But for other workers, unrelated considerations are in play, with the most significant being lack of confidence in the business environment in which they operate. Pilz et al (2015), for example, finds that, in the case of street vendors, licensing difficulties and lack of permanent location are key factors that make the investment of time, money and effort in training a risky proposition, with uncertain returns. This is supported in the wider conceptual literature with Palmer et al, for example, arguing that translating systematic skill acquisition into skill utilisation requires a 'transformative context', encompassing macro-economic and labour market factors; the legal and regulatory environment; access to good infrastructure; market access; and access to credit (Palmer et al (2007:87), King and Palmer (2007)).

Overcoming many of the barriers identified in this study, and thereby ensuring that more of the training delivered is worthwhile and effective, will require changes outside of the skills system. Shifts in socio-cultural norms, enhancement of legal protections, changes to the practices of enterprises, informational improvements, and the development of other supporting infrastructure will all be required. Reforms focussed solely only on skills development, without due regard to this wider operating environment, are unlikely to be sufficient. A more joined-up approach is required, which encompasses efforts across sectors, and recognises the fundamental role that an effective and holistic skills development effort will play in India's economic and social development trajectory.

Appendix: Further details of review methodology

1. Search sources

- Academic databases: ERIC, RePEC IDEAS, Web of Science, Proquest, Scopus, JStor, Ethos.
- Catalogues of the British Library and UCL's Newsam Library.
- Websites: Indian Government; NCEUS; Institute for Human Development, New Delhi; National Council for Educational Research and Training, India; J-PAL; WEIGO Knowledge Base; ILO; UNESCO and International Institute for Educational Planning; UNDP; World Bank Open Knowledge Base; Centre for Global Development; Institute for Development Studies (UK); DfID; and NORRAG.

2. Search strings

The search consisted of two main concepts – from which search terms were developed, tested and refined. A search hit required the presence of both of these concepts and the correct geography.

The following terms were used.

- Concept 1 – the informal sector: Search terms including: “informal sector” OR “unorganised sector” OR “grey sector” OR “informal economy” OR “unorganised economy”
- Concept 2 – training. Search terms include: “vocational training” OR “VET” OR “skills training” OR “training” OR “Skill India” OR “skills development” OR *skill*
- Geography – India

3. Quality appraisal framework

The study assessed the quality of research reviewed using the tests set out by Dixon-Woods et al (2006: Table 1) in their framework for critical interpretive reviews. Namely:

- 1) Are the aims and objectives of the research clearly stated?
- 2) Is the research design clearly specified and appropriate for the aims and objectives of the research?
- 3) Do the researchers provide a clear account of the process by which their findings were produced?
- 4) Do the researchers display enough data to support their interpretations and conclusions?
- 5) Is the method of analysis appropriate and adequately explicated?

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